



PCL CONSTRUCTORS CANADA INC.

#0800623 Riel Station PTH 207 @ Suthwyn Road

Date: December 9, 2010

To: Superintendents, Foremen, Leadhands and workers

Re: Safe Work Procedure #1 Hoarding and Heating

GENERAL TASK DESCRIPTION:	Hoarding, heating and erection of hoarding
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HAZARD IDENTIFICATION: A PSI is to be completed and understood by all workers involved with this procedure which includes reviewing and understanding this safe work procedure. USE all on site required PPE and any other task specific PPE that may be required to complete the task. The PSI is to be reviewed a total of four times throughout the course of the day unless your task changes. Also note on your PSI conditions that change when reviewing I.E. Weather conditions ETC

ALL HAZARDS ARE TO BE CLASSIFIED AS ONE OF THE FOLLOWING:

“A” **Hazard:** a condition or practice likely to cause permanent disability, loss of life or body part, or extensive loss of structure, equipment or material.

“B” **Hazard:** a condition or practice likely to cause serious injury or illness, resulting in temporary disability or property damage that is disruptive but not extensive

“C” **Hazard:** a condition or practice likely to cause minor (non-disabling) injury or illness or non-disruptive property damage.

ITEM	HAZARDS IDENTIFIED	HAZARD CLASS	CONTROLS
1	Uneven surfaces	C	<ul style="list-style-type: none"> ▪ Ensure ground is level or use other means to level hoarding panels
2	Spacing between existing structures (confined areas – tripping hazards)	C	<ul style="list-style-type: none"> ▪ Ensure there is enough space to allow for the hoarding and workers to move in between the hoarding and existing structure(s)
3	Fire, asphyxiation, and tripping hazard	A	<ul style="list-style-type: none"> i) Ensure adequate spacing between heater(s) and fuel sources are maintainable which is a minimum of 10’ (10 feet) ii) Ensure fuel supply lines are no longer then the code allows for in the geographical area you are working in. Manitoba = Max of 75’ (feet) iii) Ensure heater placement area(s) have adequate spacing for ventilation and exhaust. Also ensure combusted fuel exhaust is not placed near any existing intake vents or other existing exhaust vents. iv) Ensure power supply lines meet or exceed heater manufacturer specifications and are not located where a fire or electrical hazard may occur due to the heater(s) combusted fuel exhaust, heater intake and heat exhaust. v) Have electrical cords located/placed in such a way to prevent tripping and slipping hazards. If the electrical cords are being hung over head, be sure they clear the workers heads. vi) Test area for CO/LEL/CO2 before entering any restricted area with an approved/calibrated meter/gas-oxygen tester



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			<p>by sticking your arm/hand into the restricted area and checking the (lower level - 2' – 4' off the ground, mid level - 4'-6' off the ground and upper level - 6'-8' off the ground) Hold the meter in these areas for approximately 1-2 minutes. You may have to lower the meter using a rope if accessing from above.</p> <p>vii) Meter is to be Bump Tested (calibrated) on a daily basis if unit is used on a daily basis. Otherwise do a bump test before each use. Calibration gas has to be the right gas for the meter being calibrated. MSA meters have to be sent out for calibration. Industrial Scientific M40 meters can be calibrated with calibration gas purchased from Century Vallen and can be done on site</p> <p>viii) Meters are to be set at the average head height (Approx 5' off the ground or connected to the worker at shoulder height.)</p>
4	Falls, slips, debris falling and property damage	B	<ul style="list-style-type: none"> ▪ When erecting hoarding panel walls or framing, in the area to have tarps installed after frame work is complete. Be sure panels and or frame work will support all expected weights/elements that they may encounter. <ul style="list-style-type: none"> a) The frame work is to be designed to handle the weight of the worker(s), tools and weather elements. b) If the frame work/walls are to meet or exceed the height of the allowable height limit that workers do not need to be tied off, provisions must be made to ensure the workers safety. ▪ When erecting the roof or ceiling try and set it to a height that does not exceed heights where workers need to be tied off under or on top of roof/ceiling: <ul style="list-style-type: none"> a) Ceiling/roof must be able to support snow fall and other elements (I.E. wind and rain) for the geographical area you are working in. b) The ceiling/roof it must be designed to handle the weight of the worker(s), tools, snow accumulation. c) Provisions have to be made so workers do not walk on the tarps, but walk on a clearly visible solid structure when walking/working (I.E. the spacing/width of roof trusses/joists which the workers can stand on). d) When conditions allow, set roof/ceiling at a pitch to allow snow and other weather elements to run off. Also have signage stating possible run off (where applicable) or a protected walkway erected (where applicable)
5	Pokes	C	<ul style="list-style-type: none"> ▪ When tarps /poly are being installed be sure where two tarps are joined the joint material is placed/installed in such a way that nails or wire do not protrude in any way causing a poke hazard.
6	Getting lost	C	<ul style="list-style-type: none"> ▪ When entrance areas are being located, be sure they are clearly



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			marked on both inside and outside of the hoarding.
7			
8			

IST OF TOOLS/EQUIPMENT:

ITEM	TOOLS/EQUIPMENT	DESCRIPTION/COMMENTS
1	PPE	<ul style="list-style-type: none"> Approved PPE for the tasks being completed I.E. Approved full body harness and lanyard, regular PPE – CSA boots, hardhat, safety glasses, high visibility vest where required, gloves and hearing protection.
2	Heaters	<ul style="list-style-type: none"> Approved/approved heaters and ducting for the type of hoarding being erected
3	Tarps/other hoarding covers I.E. poly	<ul style="list-style-type: none"> Acceptable tarps/material for the type of hoarding being erected
4	Lumber	<ul style="list-style-type: none"> Acceptable lumber for the type of hoarding being erected
5	Extension cords	<ul style="list-style-type: none"> Acceptable/approved extension cord(s) for the types of heaters and fans being used
6	Fire extinguisher(s)	<ul style="list-style-type: none"> To be located within 10’ (ten feet) of the heater
7	Oxygen/gas detector	<ul style="list-style-type: none"> Approved and calibrated Oxygen/CO tester.
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WORK PROCEDURE: Hoarding setup and heater use		
ITEM	PROCEDURES	NOTES/COMMENTS
1	PSI to be performed with all personnel involved in the task	<ul style="list-style-type: none"> ▪ PSI to be reviewed at each break when task is ongoing. Any new hazards should be added and reviewed with all workers. ▪ Hazards on PSI document are also to be classed as “A”, “B”, or “C” hazards ▪ Secondary PSI is to be performed with workers who change their tasks throughout the day
2	Level ground	<ul style="list-style-type: none"> ▪ Use approved methods for levelling the ground I.E. sand, clay and other lumber
3	Erect hoarding	<ul style="list-style-type: none"> ▪ Use approved tarps, lumber and steel beams and fasteners as required
4	When entering a hoarded area in a structure always test the air quality before you enter the structure.	<ul style="list-style-type: none"> ▪ See #3 in the first section of this JHA/SWP. ▪ Always test the air/oxygen in the hoarding area before workers enter the hoarding. As a rule CO is heavier than air but can accumulate and mix with the air over time and will also mix with the air rapidly especially when fans are running. So having the monitor at or just below breathing height is a good practice to follow when testing. Periodic testing should be carried out throughout the day while workers are working in the hoarding. Keep the meter in the hoarding set at the height listed in #3 in the first section of this JHA/SWP.
5	When heaters (direct and indirect) are placed inside a hoarding structure ensure:	<ol style="list-style-type: none"> a) Intake area has to be ducted to the outside fresh air unless circulation of the internal air is required (constant monitoring is required when workers are in the hoarding). b) Combusted fuel exhaust has been located or directed out of the hoarding area: <ol style="list-style-type: none"> i) If the combusted fuel exhaust has to be ducted out of the hoarding an approved metal ducting pipe is to be used. ii) If ducted, the area where the piping is located must be clearly visible and or marked. iii) Where exhaust piping exits the hoarding a metal or fireproof flashing/fireproof material must be used to prevent the tarp(s) from catching fire. The piping is to be located in the center of the flashing/fire proof material. iv) The flashing/fireproof material is to be large



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		<p>enough to allow a safe distance between combustible exhaust piping and the tarp attached to the flashing/fireproof material.</p> <p>v) Again exhaust must not be placed near any existing intake or exhaust venting.</p>
<p>6</p>	<p>Entry is Prohibited when levels are not within acceptable range. Acceptable limits for Oxygen, CO, LEL, and H2S are: >>>>>>>></p>	<ul style="list-style-type: none"> ➤ Oxygen (O2) - 19.5 to 23% total volume ➤ Lower Explosive Limit (LEL) – (Less than) <10% of the LEL ➤ Carbon Monoxide (CO) - 0 to 25 parts per million (ppm) ➤ Hydrogen Sulfide (H2S) - 0 to 10 parts per million (ppm) <p><u>LOW ALARM LEVELS ARE</u></p> <ul style="list-style-type: none"> ➤ 35 PPM <u>CO (Carbon Monoxide)</u> ➤ 10 PPM <u>H2S (Hydrogen Sulfide)</u> ➤ 19.5and > <u>O2 (Oxygen)</u> ➤ 10% <u>LEL(Lower Explosive Limit – combustible products such as Fuel)</u>

***A PRE-JOB SAFETY INSTRUCTION (PSI) MUST BE COMPLETED FOR EVERY TASK BEING PERFORMED THROUGHOUT A WORK DAY. REMEMBER TO COMPLETE ANOTHER PSI IF A WORKERS TASK CHANGES OR THEIR WORK ENVIRONMENT CHANGES. ALWAYS REVIEW THE PSI'S THROUGHOUT THE DAY TO ENSURE WORKERS ARE KEPT AWARE OF THE HAZARDS PRESENT AND CONTROLS THEY MUST USE.**



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WORKER REVIEW & SIGN-OFF:

By printing my name and signing I am acknowledging that I have reviewed this procedure in detail and understand the identified hazards, required tools/equipment and the safe work procedures as outlined here within. If I am unsure of anything in this procedure, I will ask for clarification from my Foreman/Superintendent.

	WORKER NAME (Please Print)	SIGNATURE	POSITION
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5			
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7			
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CREATED BY:	Ken Pull	DATE:	December 9, 2010
SIGNATURE:			
REVIEWED BY:		DATE:	
SIGNATURE:			
REVIEWED BY:		DATE:	
SIGNATURE:			



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