

WEATHER AND WIND

Thunder is striking distance. A crane is a rod. The first 30 of 30/30 is not a reason to keep lifting.

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THE JOB

Outdoor crane and rigging when wind, lightning, ice or visibility can take the plan. Method: PROVEN-SWP-023. Environment Canada: when thunder roars, go indoors. Wait 30 minutes after the last rumble.

WHO IS EXPOSED

Operator
Rigger and tag-line hands
Signalperson
Anyone who can touch the crane or the load
Anyone under the boom

A JHA names what can hurt someone and how that risk is controlled. It is not the procedure. Do the work to the matching SWP.

HAZARDS AND RISK

Task is the work being analysed. Controls follow eliminate, substitute, engineer, administer, PPE last. Extreme is the killer with no recovery. High is serious injury or a dropped load you still have a chance to stop.

TASK	HAZARD	LEVEL	RISK	CONTROL
Watch the sky	Forecast ignored. Dark cell treated as rain.	HIGH	Storm arrives with a load in the air and no time to land.	Forecast before the shift. Named abort. Leave time to land and get down. Act s. 21.
Thunder / lightning	Crane as a rod. People on the machine, on the load, or counting to 30.	EXTREME	Direct strike, side flash, ground current. Fatal.	Thunder = stop. Land. Manufacturer shutdown. Shelter in a building or hard-top vehicle. ECCC and CCOHS. Do not wait for 30 seconds of flash-to-bang.
Touching the crane	Hands on the crane, the line or the load during thunder	EXTREME	Current through the person. Fatal.	Nobody touches it. If the operator cannot get down: stay in the cab, hands off metal. Ground crew clear.
Wind	Sail load, gust over the number, no anemometer	HIGH	Side-load, overturn, lost load. Tower: 14.92.	Lower number wins. Tower: 50 km/h if the OEM is silent, or less if the load cannot be handled safely.
Resume	Back on the hook when the rain stops. Struck crane restarted to check the LMI.	HIGH	Second cell. Hidden damage. Collapse or control failure.	30 minutes after last rumble. Then inspect. Strike: 14.16.1 engineer. Electrical hit: owner / Technical Safety BC electrical - not a restart under this procedure.

RESIDUAL RISK

Lightning still strikes after the rain stops. Residual is a second cell, a crane used as a rod, or a restart after a hit. Held by the 30-minute clock and by 14.16.1 - not by blue sky.

THE JOB DOES NOT PROCEED IF

Thunder heard or lightning seen

Wind at or above the lower of manufacturer and plan
Tower anemometer unread or dead (14.92)
Visibility gone and no radio protocol (14.48)
Anyone treating 30-second flash-to-bang as permission to finish the pick
Strike or suspected strike without an engineer

PPE - LAST LINE

Hard hat
CSA-grade footwear
High-visibility clothing
Eye protection
Task-rated gloves
Hearing protection where required
Fall protection where the work exposes a fall

MATCHING SWP

SWP - WEATHER AND WIND -> <https://sin.ae.org/safety/swp/weather-and-wind>

REFERENCES

Workers Compensation Act s. 21(2)(b) - workers made aware of known or reasonably foreseeable hazards
Workers Compensation Act s. 21(2)(e) - information, instruction, training and supervision
OHS Regulation B.C. Reg. 296/97 (in force 15 Apr 1998) Part 3 - program, instruction, inspections (ss. 3.1-3.12)
CCOHS Job Safety Analysis - JSA and JHA are the same method: break the job, name the hazards, select controls
Workers Compensation Act s. 21 - known or reasonably foreseeable hazards; instruction and supervision
OHS Regulation (B.C. Reg. 296/97, in force 15 Apr 1998) Part 3 - OHS program, instruction, inspections
OHS Regulation Part 4 s. 4.13 - risk assessment where rescue or evacuation may arise
OHS Regulation Part 8 - PPE; headwear CSA Z94.1-05 or Z94.1-15
OHS Regulation Part 11 - fall protection
OHS Regulation Part 14 - Cranes and Hoists
14.2(5) - CSA Z150-1998, or ASME B30.5-2004, or ASME B30.22-2005 (articulating boom)
14.2(6) - CSA Z248-2004 for tower, hammerhead and self-erecting tower cranes
14.35 pre-use inspection 14.36 load weight 14.42.1 critical lift 14.44 loads over work areas 14.45 unattended loads
14.47-14.49 signals
OHS Regulation Part 15 - Rigging
Manufacturer load chart, manual and configuration limits
Site lift plan, FLHA and site rules where stricter
Environment and Climate Change Canada - When thunder roars, go indoors. If you hear thunder you are within striking distance. Wait at least 30 minutes after the last rumble.
ECCC dropped the first 30 of the 30/30 rule in 2010. People waited until a 30-second flash-to-bang. That is too late. Do not count to 30 before stopping.
CCOHS Weather - Lightning. ~300 m per second flash-to-bang. No safe place outdoors. Fully enclosed building with wiring and plumbing, or a hard-top metal vehicle.
Workers Compensation Act s. 21 - known or reasonably foreseeable hazards. Lightning on a crane is foreseeable.
OHS Regulation 14.2 - operate as specified by the manufacturer or a professional engineer.
14.12 - manufacturer's manual reasonably accessible. Weather shutdown as that manual.
14.16.1 - misadventure includes any circumstance that may impair safe operation. A lightning strike is that. Crane down until a professional engineer certifies it.
14.34(2) - operator familiar with operating instructions. 14.37.1 - full control while the equipment is in use.
14.48 - atmospheric conditions that make hand signals hazardous. Radios or stop.
14.92 - tower anemometer, stop for wind, 50 km/h if the manufacturer is silent. 14.93 - stop below -18 degC unless the manufacturer or engineer says otherwise.
14.2(5) CSA Z150-1998 / ASME B30.5-2004. 14.2(6) CSA Z248-2004 for tower, hammerhead and self-erect.
Technical Safety BC - Electrical Safety Regulation and BC Electrical Code. Power supply, earthing and lightning-protection hardware on the electrical installation belong to the owner. TSBC does not publish a 30/30 crane rule.