

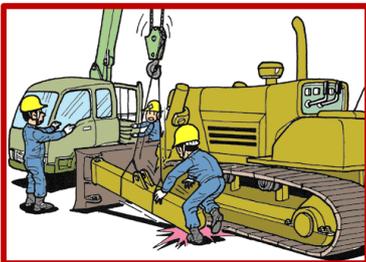
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Every employee and contractor, working for Northern Powergrid, should go home at the end of each shift uninjured and in good health after a productive days work

Crane Operations / Line-of-Fire incidents

Two recent and serious accidents in BHE U.S. operations remind us of the necessity to robustly control all lifting and moving activity involving cranes. Sadly, one of these accidents resulted in the tragic death of a contractor. The other accident resulted in a 90 ton rough terrain crane overturning. Fortunately no one was injured in this latest incident. Both incidents are under investigation and information is limited at this stage.

In the first accident we believe an unexpected movement of the crane resulted in an extremely large and heavy counterbalance weight hitting the cab of the crane resulting in the crane operator receiving fatal crush injuries. In the second and most recent incident (picture above right), a large crane overturned whilst the boom was in operation but without the stabiliser legs being deployed.



As a result of these two accidents which have occurred in relatively quick succession, this briefing is being issued to raise general awareness of the hazards associated with the use of cranes and lifting operations in general.

Crane operations are a specialist activity and we must ensure that we have qualified and competent contractors undertaking this work. Some key factors to consider when managing crane operations are as follows:

- General loading and off-loading and plant movement / operations are managed / supervised by site staff.
- Ground conditions are suitable and weather conditions are factored into the risk assessment.
- A pre-lift briefing has been held with all involved in the lifting operations.
- The Lift Supervisor has established, and has control of, the safe working area during lift operations.
- Crane setup is consistent with the crane hire company's crane / lift study.
- The crane is being operated by the trained individuals noted in the site documentation and supervised by the documented lift supervisor.
- Lifting operations are consistent with the documented method statements and risk assessments.
- Crane outriggers are fully extended and load spread with ground mats or blocks.
- Lifting equipment, slings / chain legs etc. are fitted with details of inspection dates, the details are consistent with the documentation held on site, and are being used within their capacity.

There have been instances in the past involving mechanical plant (cranes / excavators / forklifts etc.) where the failure to spot the line-of-fire situations when operating large items of plant has resulted in serious accidents. Thankfully, these instances are rare but they nevertheless highlight why we need to be alert to the possibility of placing our body, or body parts, in areas where they could be at risk. These are commonly referred to as **'line of fire'** incidents.

With regard to 'line-of-fire' hazards, by taking a few considered precautions we can avoid a potential risk of trap or crush injury. This means positioning yourself so you won't be hit by either an object moving in an unexpected direction, or one that could move if energy was either inadvertently applied or suddenly released. This risk exists in every workplace and, while it might appear to be reasonably obvious, people right across our business could be unintentionally exposing themselves to 'line-of-fire' situations every day. We wouldn't put ourselves in an obvious 'line of fire' situation, e.g. a loaded gun, stand in the arc of a tree or large branch that is being cut down or walk in front of a moving vehicle. Typically work scenarios could involve loading/offloading of transformers and switchgear, moving and erecting poles or working in proximity to a moving excavator arm.

It is all too easy to become engrossed in the work we are undertaking and lose sight of the changing circumstances around us and the hazards these changes may give rise to. We must be vigilant to changing circumstances and spot the potential hazards associated with plant and line of fire situations.

Line-of-fire precautions:-

- **Workings around mobile equipment. Make sure the operator knows you are there.**
- **Never put yourself in a position where you are between a piece of mobile equipment and another object.**
- **Never walk behind mobile equipment. When moving mobile equipment in tight areas always use a spotter.**
- **Never walk under suspended loads.**
- **Only approach a vehicle if are sure that the operator / driver knows you are there and has given you clear instruction to move closer.**
- **Discuss and agree every manoeuvre with the driver or operators before an activity starts.**
- **Never work directly under other employees, if you must work at elevated heights barricade the area below you. (Create a safety drop zone).**
- **Never pull equipment or tools towards your face or body, position yourself so if the equipment or tool slips it would not hit you.**

It is important that all lifting operations are undertaken by trained and competent operatives in a well-planned and carefully executed. Any lifting activity involving plant has the potential for life threatening injury should something go wrong.