HSEQ ALERT

SAFE FOR THE JOB

Type:	**Health** ☐	**Safety** ☒	**Environment** ☐	**Quality** ☐
Title:	**PLANT DAMAGE – 6.5T HITACHI EXCAVATOR TIP-OVER**			
Date:	27th of January 2021	**Alert No:**	**003- 2021**	

Photographs:

Incident Details:

On the 27th of January at approximately 12:30hrs, an incident occurred along Centre Dandenong Road whilst a Service Authority subcontractor's 6.5t Hitachi Excavator was undertaking lifting operations to install a 300mm x 22m main gas pipe.

Prior to the incident occurring, the Operator was tracking parallel to the excavation (approximately 1.2m in depth) with a 22m length of pipe with an approximate weight of 1100kg. The lift involved landing the pipe on a battered edge within the excavation prior to moving the excavator into a front facing position for the final lift into the bottom of the excavation. The load was rigged by a licensed dogman who had used rated chains connected to a spreader bar and two rated soft slings.

The excavator Operator attempted to land the pipe on preplaced dunnage located along the battered edge within the excavation when the excavator has tipped onto its side whilst lowering and placing the load.

Immediate Project action:

- Works in the area were ceased.
- MCDDJV Area Superintendent and HS Team attended and secured the site.
- WorkSafe were notified and the scene secured until inspectors attended.
- ICAM investigation commenced.

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Causal Factors:

Initial assessment of incident has identified the following causal factors:

- **Risk Management |** Work Crew failed to control identified risks associated with the safe use of earthmoving equipment used as a crane to lift loads, specifically the lifting of loads within the equipment's Rated Capacity.
- **Change Management was not addressed |** Changes to work activity were recognised but hazards associated with change were not fully addressed and/or managed.
- **Task Planning / Preparation |** Less than adequate planning and task preparation, it was assumed that there would be an alternate means of lifting available (specific crane).

Root Cause:

Lifting of load approximately 200% (1100kgs) higher than the Rated Lifting Capacity (SWL Static 640kgs / Dynamic 560kgs) of the Hitachi ZX65USB-5A 6.5t Excavator.

Mandatory Actions:

Project Actions:

- Subcontractor stood down pending the outcome of the investigation
- MCDDJV Full Site Review of Earthmoving Equipment used as a crane
- Project wide communication shared across every site prestart to communicate the conditions of using an excavator for lifting – Rated Capacity

BU Actions:

- All projects review incoming plant procedures to ensure all earthmoving equipment that is intended to be used for lifting operations (i.e. used as a crane), complies with the requirements of the Crane and Lifting Safe Operating Procedure MMS # HSEQ-HS-SOP001-GEN-ALL Sections 6 and 8

Key Learning:

Earthmoving equipment including backhoes, front-end loaders, and excavators can be used for lifting freely suspended loads. Where it is intended to use earthmoving equipment for cranage operations, Safe Operating Procedures and Australian Standards for rated capacity apply and the earthmoving equipment **must** only lift loads that are within its **Rated Capacity** (the mass of the lifted load and the lifting attachments at maximum lift point radius) and, the plant **must** comply with all aspects of earth moving equipment used for lifting.

Rated Capacity is displayed near the lifting point as the Working Load Limit (WLL) or Safe Work Limit (SWL) and states the maximum load weight which may be applied to the earthmoving equipment.

When operating earthmoving equipment, it is imperative that loads greater than the **Rated Capacity** limit are never lifted.

Load charts **cannot** be used to lift weights greater than the weight stipulated on the boom unless a proprietary crane system has been installed within the cabin for the operator to use.