

COMPLIANCE PRIORITIES OUTCOMES

Articulated truck rollovers and falls from mobile plant

Improving safety in access to mobile plant and rollover prevention methods

Issue: Several incidents at NSW mines recently have highlighted the need for suitable controls to manage the risk of falls from mobile plant and the risks associated with the rollover of mobile plant.

Analysis of these incidents identified that appropriate safe systems of work had not been developed, implemented or maintained for the activities associated with the operation of articulated trucks at some mine sites in NSW.

What we did

The NSW Resources Regulator's small mines team conducted inspections of mobile plant as part of planned inspection activities.

These inspections resulted in 47 notices being issued to mine operators.

The [*Health and safety at quarries guide*](#) was developed and published on the NSW Resources Regulator's website.

A small mines roadshow was conducted across the state to promote the *Health and safety at quarries guide*, safe access to mobile plant and mobile plant rollovers.

The NSW Resources Regulator undertook a compliance campaign across all sectors targeting mines who were using articulated trucks, with a specific focus on articulated water tankers and service trucks.

The compliance project also focused on how manufacturers and suppliers of articulated trucks were managing the risks associated with falls from height and truck rollovers, specifically addressing the design, manufacture and supply phases of an articulated truck's lifecycle.

An education program on articulated truck safety was rolled out by the small mines team as part of safety roadshow.

Figure 1: Articulated water cart roll-over



What we found

There was a widespread lack of understanding regarding safe systems of work for accessing mobile plant.

Onsite inspections of equipment identified shortfalls in fall protection controls on various types of plant and vehicles. Specifically:

- damaged or missing steps
- inadequate height to handrail and fall protection
- poorly maintained fall protection
- fall protection not extended to all areas where work would be carried out (for example during maintenance or refuelling)
- poor design on fitted fall protection that effectively reduces fall risks (original equipment manufacturer OEM issue).

Outcomes

During planned inspections in small mines several notices were issued:

- 37 improvement notices for access systems
- two improvement notices for articulated water carts
- eight prohibition notices for access to plant were handed out for issues with plant access systems and design concerns on articulated water carts.

During meetings between the NSW Resources Regulator's inspectors and representatives from the key OEMs (Caterpillar, Westrac, Clarke equipment, Liebherr, Komatsu, Hitachi, CJD and Sandvik) expectations regarding designer and manufacturer obligations, were reaffirmed. A better understanding around these obligations was achieved.

The NSW Resources Regulator will continue to work with OEMs to ensure improved compliance to the obligations as set in Work Health and Safety Regulations for designers, manufactures and suppliers of plant.

The compliance program included the development and communication of several resources, and this was well received by the sector. These are available via the website and promoted during the small mines roadshows:

- [Health and safety at quarries guide](#)
- [MDG 15 Mobile and transportable plant for use on mines and petroleum sites](#)
- Safety bulletin [SB 18-07 Safe systems of work for mobile plant](#)

Conclusion

The inspection program identified and highlighted gaps in both the OEM and mine operator's understanding of their requirements to provide safe systems of work for accessing mobile plant and conducting design risk assessment to ensure articulated trucks are fit for their intended purpose.

Recommendations

The following recommendations should be considered to improve safety in the areas of access to mobile plant and rollover prevention methods for mobile plant:

- update to MDG 15 to include further guidance for access systems and roll over prevention
- take enforcement action (e.g. issuing of improvement notices) against original equipment manufacturers for failures to meet their design obligations under the legislation
- critical control templates should be developed for mobile plant. These templates will include access system requirements and rollover prevention
- continued inspection of all sectors based on the existing mobile plant inspection template. This will be replaced by the new critical control templates when they become available.

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