



Australian Rail Track Corporation Ltd

# SAFETY ALERT



**ARTC NSW No. 15**  
ISSUED 19<sup>TH</sup> JUNE 2006

## Track Vehicle Movements - Automatic Crossing Loops

### Incident:

On the 25<sup>th</sup> August 2005, 5BS7 collided with a track vehicle at Greenbank at the NSW – QLD border (Queensland Rail Operations applying the NSW Network Rules and Procedures), where a hi-rail vehicle was authorised to traverse the Bromelton - Greenbank section with insufficient controls to prevent an opposing movement approaching from Acacia Ridge.

### Findings:

ATSB investigations had identified that there was an incorrect assumption that the authority of the electric staff (issued as a TOA) for the section allowed entry into the Yard Limits at Greenbank for a track vehicle that did not operate track circuits reliably. This combined with insufficient controls being in place to prevent an opposing movement into the Greenbank yard limits from Acacia Ridge resulted in the collision between the track vehicle and 5BS7.

The interlocking at Greenbank is configured as an automatic crossing location, allowing the Home Signal to clear automatically for approaching rail traffic if the line between that Home Signal and the opposing landmark or location sign is unoccupied. The hi-rail vehicle involved did not effectively operate the track circuitry and the home signal cleared to admit 5BS7 into the mainline at Greenbank whilst the hi-rail vehicle occupied the line.

Due to approach-clearing home signals the requirement for the train controller to place blocking facilities before a TOA is issued cannot be met at the staff station where the intended cross is to take place and the only way to hold the opposing movement is by placing blocking facilities on the starting signal at Acacia Ridge. *The hi-rail vehicle operator believed that the token for the section when taken as a TOA would provide the same level of protection that would be afforded to a normal train movement, i.e. the section and the portion of line up to the staff hut.* The network control officer did not apply or ensure blocking facilities were placed to prevent an opposing movement.

### Actions Required:

*Qualified workers responsible for operating and authorising track vehicle movements should be aware that some track vehicles do not operate track circuits reliably. This means that the presence of such vehicles can go undetected in Rail Vehicle Detection systems (RVD) and Automatic Crossing Locations and creates the risk of a conflicting movement.*

*Qualified workers responsible for operating and authorising track vehicle movements are to ensure strict adherence to controls defined in the ARTC Network Rules and Procedures ANWT 316 (Track Vehicles), ANWT 304 (Track Occupancy Authority), ANTR 418 (Yard Limits) in order to effectively mitigate the risk of an opposing movement at locations stated above.*