Incident whilst recommissioning a bitumen storage tank

WHAT HAPPENED

A bitumen storage tank was taken out of service to replace faulty heating elements. New heating elements were installed with the tank out of service for over 9 months.

To recommission the storage tank the plan was to load 5 tonnes into the tank and allow this bitumen to circulate to ensure that the pipelines were clear and the pumps and valves were operating correctly. The connection was made to the inlet flange and the line was blown which confirmed it was clear.

The driver started the delivery and after discharging approximately 1 tonne of bitumen the driver heard a loud bang. The driver stopped the discharge.

The investigation revealed the bang was from the inspection hatch on the tank roof.

The root causes of this incident were:

- Condensation accumulating in the tank during the 9-months the tank was out of service. This was not accounted for in the recommissioning risk assessment.
- A blocked vent pipe which prevented the release of steam created causing it to escape through the inspection hatch. The vent pipe was not checked prior to recommissioning.

LEARNING POINTS / ACTIONS TAKEN

The following actions were taken as a result of this incident:

- The tank recommissioning risk assessment was revised to include assessment if condensation may be present in a bitumen storage tank after a period out of service.
- Ensure vent and overflow pipes are clear prior to recommissioning bitumen storage tanks.

Key learning points:

- The importance of ensuring that ‘empty’ bitumen storage tanks are free of water before starting to load hot bitumen into an empty tank.
- The importance of planned maintenance and post engineering work release systems to ensure that vent pipes are clean and operating correctly.

‘Guidance for Returning Bitumen Storage Tanks to Service’ can be viewed by clicking on the additional pdf.

LOCATION:	**ASPHALT/COATING PLANT**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**MAINTENANCE & HOUSEKEEPING**	**DATE ISSUED:**	**12/10/2020 22:44:12**
SUB ACTIVITY:	**N/A**	**INCIDENT No:**	**03571**