Fatal 6 - Receiving hopper collapse

WHAT HAPPENED

Sand was being discharged by an articulated tipper truck into the receiving hopper at a Readymix plant. Due to the restricted size of the hopper, only part of the load could be tipped. It is difficult to judge the amount of sand tipped, as it can surge. While the vehicle was tipping off the second part of the load, the hopper supports suddenly gave way and the hopper fell into the pit below, crushing the conveyor structure beneath.

KEY FINDINGS

- The plant is 51 years old and initially designed for a 17 year service life; it is thought that the hopper was the original

- Deliveries to site were changed to articulated tipper trucks 3 to 4 years ago; however, the hopper was originally designed for Rigid 8-wheel trucks.

- A structural survey had recently been carried out, where repairs had been highlighted to be completed within 3 months, and the removal of platework was recommended to allow investigation and repair of corrosion and checks on the hopper support brackets.

- The design of the support brackets meant if it became detached the hopper could fall away unsupported.





LEARNING POINTS / ACTIONS TAKEN

HOW COULD THIS HAVE BEEN AVOIDED?

- Prior to a structural survey, ensure all areas of the plant are cleared and additional supports are removed to assess the plants physical condition.
- Use trucks with a smaller payload as per the original design of the hopper.

KEY REVIEW POINTS:

- Structural survey programmes should be in place for all plants by competent engineers
- Ensure engineers have access to fully assess structures
- Complete structural repairs on time
- Consult with the engineers if any repairs are to be deferred
- Restrict access beneath hoppers while they are loaded / being loaded.

LOCATION:	**READYMIX OR MORTAR PLANT**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**PRODUCTION AND PROCESSING**	**DATE ISSUED:**	**14/08/2019 16:07:59**
SUB ACTIVITY:	**READYMIX**	**INCIDENT No:**	**01524**