

MNM Fatal 2014-21

- Falling, Rolling or Sliding Rock Material
- November 18, 2014 (Louisiana)
- Alumina Milling
- Job Site Supervisor
- 42 years old
- 19 years of experience

Overview

Jerry L. McClelland, Contract Superintendent for Turner Industries Group LLC (Contractor ID# HPQ), age 44, was killed while installing a door on the side of a digester filtrate tank on November 18, 2014. McClelland was standing in front of the suspended door when the lifting lug broke, causing the 2,620 pound door to fall and strike him.

The accident occurred due to management's failure to ensure persons were clear of the suspended load. Management also failed to ensure the door was securely rigged before being lifted. Furthermore, management also failed to ensure that the lug and welds were not used beyond the design capacity intended by the manufacturer where such use created a hazard to persons.

The door fell because the welds attaching the lug to the door stiffener were undersized for the encountered stresses. Further, the welds were irregular in shape and contained defects, such as lack of fusion, porosity, and undercutting, which adversely affected the weld's capacity. .



Root Causes

Investigators conducted a root cause analysis to identify the underlying causes of the accident. Listed below are the root causes identified and the corresponding corrective actions implemented to prevent a recurrence of the accident:

Root Cause: Management failed to ensure miners stay clear of suspended loads while conducting work activities requiring items to be hoisted or swung into place before being secured.

Corrective Action: Management established safe work procedures to be followed when persons work near suspended loads. All persons working near suspended loads were provided training regarding these procedures.

Root Causes (conti.)

Root Cause: Management failed to ensure proper rigging procedures were followed when lifting heavy loads.

Corrective Action: Management established safe procedures to be followed when rigging loads prior to lifting. All persons involved with rigging a load were provided training regarding these procedures.

Root Cause: Management also failed to ensure the lug and welds were not used beyond the design capacity intended by the manufacturer where such use created a hazard to persons.

Corrective Action: Management established safe procedures to be followed when rigging loads prior to lifting. All persons involved with rigging a load were provided training regarding these procedures.

Best Practices

- Establish and discuss safe work procedures before beginning work.
- Identify and control all hazards associated with the work to be performed.
- Task train all persons to understand safe job procedures and to stay clear of suspended loads.
- Use welded lifting eyes that are specifically intended for lifting and adequately rated for the loads being lifted.
- Use certified welders and good quality welds when attaching lifting eyes or lugs.
- Ensure the weld metal is compatible with the base metal of the connecting components and thoroughly clean any rust or scale from a surface prior to welding.
- Carefully inspect all rigging prior to each use.
- Attach taglines to loads that may need steadied or to be guided while suspended.
- Avoid extreme side loading on a lifting eye or lug unless it is designed to handle such loading.
- Monitor persons routinely to determine safe work procedures are followed.