



# HAZARD ALERT

## Fatal Incident Involving a Recovery Boiler and Salt Cake Engulfment at a Paper Mill

Two USW mechanics were attempting to replace a broken drag chain conveyor inside the economizer ash hopper of a recovery boiler on the third floor, when they were engulfed by falling salt cake approximately 40-50' above from the fifth floor. The recovery boiler had been down for three days due to a smelt (molten salt) leak. While the recovery boiler was water washed, some hard to reach areas of the economizer and associated outlet ductwork were not sufficiently cleaned. A contractor had been called in to clean out the salt cake around the drag chain. Unfortunately, one of the mechanics died as a result of the incident, the other was taken to an area hospital where he was treated and released, but will miss days of work.



### Considerations to Prevent an Occurrence:

- Identify all areas where salt cake can build up on tapered walls, in ductwork, etc. Working with the recovery boiler manufacturer, eliminate and/or control these areas with the hierarchy of controls.
- Work with the recovery boiler manufacture to have sufficient access doors available in the duct work and other hard to see/cleaning areas for maintenance and inspections.
- Explore options to prevent salt cake build up i.e. vibrators, blowers and air cannons.
- All employees must be task trained, provided with written procedures that calls for opening all access doors, on all floors, for inspection and complete water washing from the top floor down to the bottom floor, including outlet ductwork.
- Develop training materials, videos, photos, etc., to aid with hazard identification and controls needed for safe operation, servicing and maintenance of recovery boilers, including water washing inside all areas of the recovery boiler and problem areas.
- Install scaffolding where possible to provide overhead protection for work crews.
- Ensure a robust Permit-Required Confined Space program and procedures.
- Ensure effective communications are established and maintained with contractors when their services are needed.
- Maintain an experienced workforce of both salaried and hourly employees.
- Evaluate Management Of Change for both processes and personnel changes.



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This hazard alert is based on an actual incident, and reflects our best understanding of the incident at the time it was written. However, many incidents have multiple causes; this alert may not cover all of them. The purpose of the alert is to illustrate workplace hazards; it is not intended to be a comprehensive report on the incident.