

Learning from Normal Work

Injury to Hand During Brine Mixing

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DrillSafe Forum

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What Was Normal Work Telling Us?

Signals Present During Normal Work

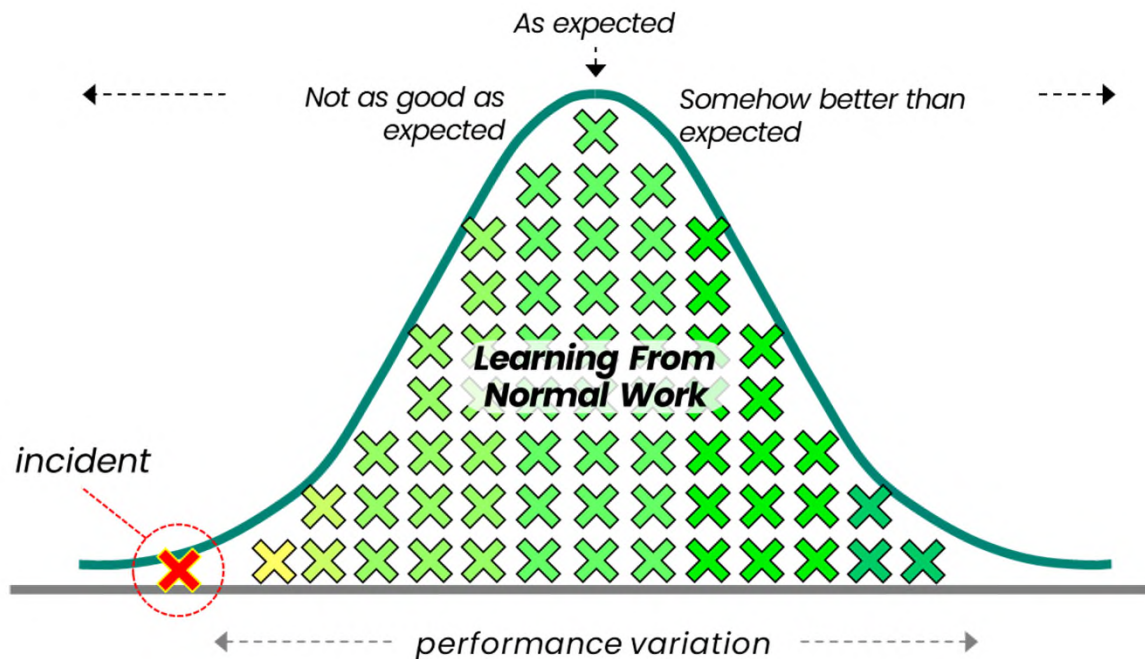
- Salt regularly formed lumps in the hopper.
- Operators occasionally had to intervene to maintain product flow.
- Access and visibility were not ideal.
- Existing vibration systems were not always effective.
- The pyramid piercer remained exposed during intervention activities.



BB pyramid piercer



Should we wait for an incident?



Or should we learn proactively?

At Baker Hughes we believe we can learn even when things don't go wrong.

Learning from Normal Work allow us to learn proactively before things go wrong.

Baker Hughes is adopting different tools for Learning from Normal Work.

Learning Teams has been adopted as one of the global leading indicators.

What Conditions Increased Exposure?

- Lumpy salt increased intervention requirements.
- Hopper vibration was insufficient.
- Platform design reduced visibility and access.
- Personnel worked close to an exposed piercing hazard.
- Operational requirements encouraged restoration of product flow.

What Did We Learn About The System?

Immediate Improvements

1. Increased vibrator settings.
2. Brine flushing process
3. Improved work platform.
4. Enhanced hand protection requirements

Longer-Term Learning Opportunities

1. Eliminate manual intervention.
2. Improve product conditioning.
3. Improve hopper design.
4. Investigate guarding solutions.
5. Remove hand exposure to internal hazard

If We Had Conducted A Learning Team Earlier

What workers may have told us

- Salt often arrives damp
- Flow regularly slows
- Material sometimes bridges
- Visibility is poor
- Hands occasionally enter hopper

Potential Learning Opportunities

- ✓ Product conditioning
- ✓ Improved vibrator performance
- ✓ Automated lump breaker
- ✓ Guarding or Platform redesign
- ✓ Eliminated intervention

The Injury Is Not The Learning.

The Learning Is:

- The process occasionally required adaptation.
- Product conditions created intervention requirements.
- Equipment limitations increased exposure.
- The hazard was tolerated because work was normally completed successfully.

Learning From Normal Work Enables Us To:

- ✓ Learn without injury
- ✓ Identify error traps earlier
- ✓ Improve equipment design
- ✓ Remove manual intervention
- ✓ Strengthen the system before someone gets hurt

“The real value of Learning from Normal Work is that it allows us to learn before an injury, not because of one”

Baker Hughes 

