

Bark Company Owner Dies After Being Crushed By Ecology Block Wall



SUMMARY

In July of 2016, the 70-year-old owner of a bark and wood wholesale and retail company died from surgical complications resulting from injuries he sustained when a wall being constructed from concrete “ecology blocks” collapsed, and a 3600lb. block fell onto him, crushing his legs.

On the day of the incident, the victim and three other employees planned to complete construction of an “L”-shaped material containment bunker on a base of dry, loose sand. They were assembling the bunker using dry-stacked concrete ecology blocks that interlocked on the top and bottom with a tongue and groove system. The blocks were lifted and moved into place using a chain attached to the bucket of an excavator that was looped through a rebar picking-eye on the top of the block. While the employer frequently constructed and used ecology block retaining walls for various purposes, this was to be the first of this height built on sand.

The first section of the bunker had been completed the previous day. It consisted of two adjacent walls, each approximately 21 feet long and 10 feet (5 blocks) high. When completed, employees reported that the walls appeared to be sitting level on the sand. The second section of the bunker was to consist of an 18-foot wall, perpendicular to the first wall, with rows of 6-foot-long ecology blocks horizontally stacked 5 blocks high.

On the morning of the incident, as the excavator operator was lowering the first block of the second bunker section into place, the victim stood near and used a shovel to guide the block’s alignment. The two other employees were working near the victim. As the block was set onto the sand against the base of the inside wall of the first bunker section, both original walls began to destabilize and collapse. The victim and the two employees ran to avoid the falling blocks. At some point, the victim hesitated and turned back to look at the wall and was struck by a falling block, crushing his right leg and pinning him to the ground.

First responders arrived within minutes and transported the victim by helicopter to a local hospital where he remained in critical condition for nearly a month, after which he died due to complications following multiple surgeries.

RECOMMENDATIONS

To prevent similar incidents, Washington State Fatality Assessment and Control Evaluation (WA FACE) recommends that employers engaged in similar work:

- **Plan and design bulk material storage areas for safety and stability. Make sure all walls, whether temporary or permanent, are built on a stable foundation able to support the weight of the structure.**
- **Develop, implement, and enforce a comprehensive written safety program that is tailored to ecology block wall construction. Create Standard Operating Procedures that address hazards in both construction of and working near ecology block walls. Ensure that all employees are trained in and follow the procedures.**
- **Conduct a thorough job hazard analysis (JHA) before construction begins on any project involving stacked ecology blocks.**
- **Encourage employees to recognize and report safety concerns, and train workers on the protocol for reporting hazards. Ensure that all safety concerns are effectively addressed before employees are further exposed to the hazard.**



Collapsed ecology block wall. Arrow indicates block that struck victim

SHARP Publication # 52-39-2016_summary The full version of this investigation report, along with the detailed recommendations and discussions section, can be found at: www.lni.wa.gov/Safety/Research/Face/Files/EcologyBlockWallCollapse.pdf



The Washington State Fatality Assessment and Control (WA FACE) program is one of many workplace health and safety programs administered by the Washington State Department of Labor & Industries' Safety & Health & Research for Prevention (SHARP) program. It is a research program designed to identify and study fatal occupational injuries. Under a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH grant # 2U60OH008487-11), WA FACE collects information on occupational fatalities in WA State and targets specific types of fatalities for evaluation. More information about WA FACE can be found at www.lni.wa.gov/Safety/Research/FACE.