

Step 1. Outline

What	Problem(s)	Bluff collapse, release of coal ash
When	Date	October 31, 2011
	Time	~11:00 a.m.
	Different, unusual, unique	Ravine filled in the 1950s with coal ash; no impact studies performed prior to construction
Where	State, city	Oak Creek, WI
	Facility, site	Power plant
	Task being performed	Construction of air quality control system

**Bluff Collapse Releases Coal Ash
Lake Michigan, October 31, 2011**

On October 31, 2011, a bluff collapsed at a power plant on the shores of Lake Michigan. The resulting mudslide took trailers, storage units, at least one truck and an unknown amount of coal ash into the lake, which provides drinking water for more than 40 million people. Cleanup is ongoing, but the overall impact to the environment has not yet been determined. Fortunately, no personnel were in the objects that ended up in the lake, so there were no injuries.

Although the safety goal was not impacted by this incident, there was the potential for personnel injury. Additionally, the environmental, customer service, property and labor goals were impacted by the pollution of the lake, loss of property and necessary cleanup. The causes for these impacts to the goals can be examined in a Cause Map, or visual root cause analysis.

Impact to the Goals

Safety	Potential for personnel injury
Environmental	Pollution in Lake Michigan
Customer Service	Potential to affect drinking water for 40 million
Production-Schedule	None - power output unaffected
Property, Equip, Mtls	Loss of property
Labor, Time	Cleanup

Step 2. Cause Map

