

1 Problem

What	Problem(s)	Fire, deaths of firefighters
When	Date	March 26, 2014
	Time	~2:42 PM
	Different, unusual, unique	Lack of safety precautions, no permit; wooden shed nearby
Where	Facility, site	Boston, MA
	Unit, area, equipment	Residential building
	Task being performed	Welding iron railings

Impact to the Goals

Safety	2 firefighters killed	
Environmental	Rapid spread of fire	
Customer Service	Civil lawsuits by owners of area buildings	? (pending)
Regulatory	Fined by OSHA for 10 violations of federal workplace safety standards	\$58,000
Production/ Schedule	?	
Property/ Equipment	Serious damage to area buildings	?
Labor/ Time	Response, investigations	?

Frequency: This incident \$58,000
 30 firefighters killed directly as a result of fire on the job in 2013

IMPROPERLY CONTROLLED WELDING KILLS TWO FIREFIGHTERS

Cause Map

"This company's failure to implement these required, common-sense safeguards put its own employees at risk and resulted in a needless, tragic fire."

- Brenda Gordon

OSHA's director for Boston and southeastern Massachusetts

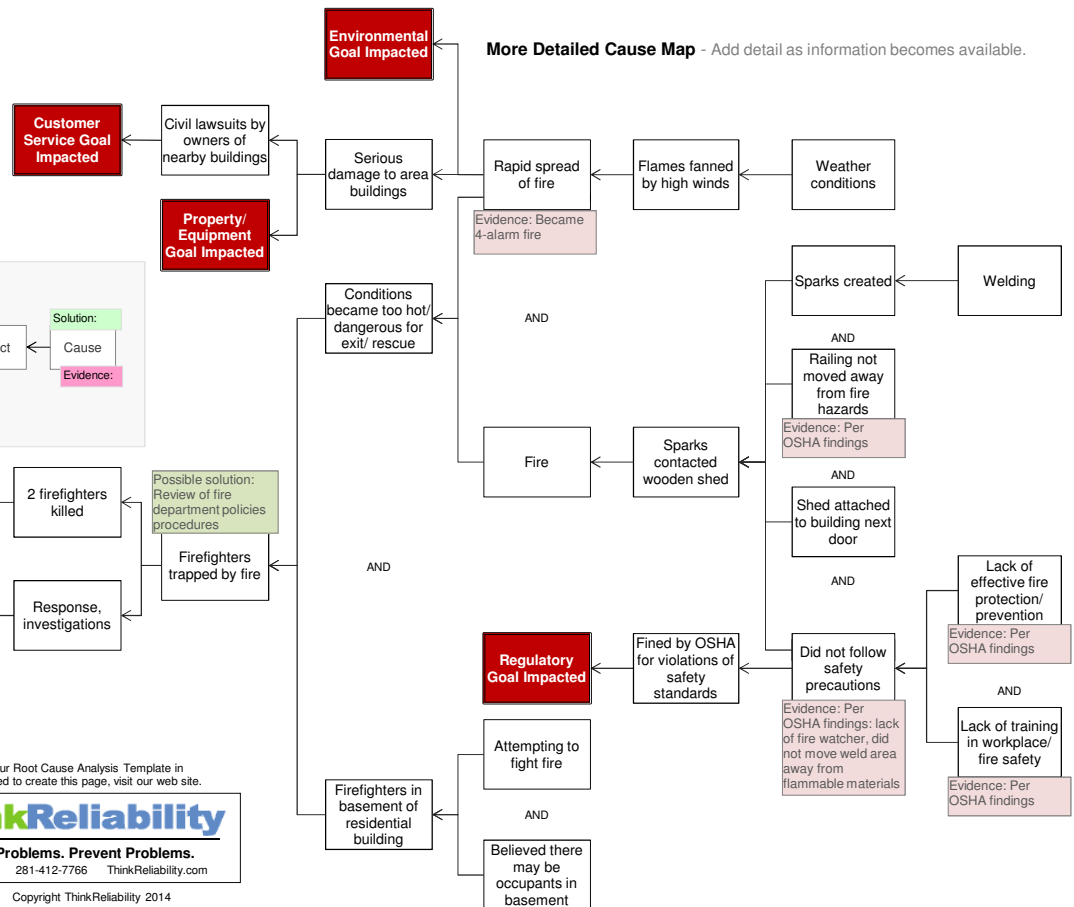
Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

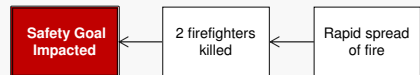
- Step 1 Problem** - What's the Problem?
- Step 2 Analysis** - Why did it happen?
- Step 3 Solutions** - What will be done?

More Detailed Cause Map - Add detail as information becomes available.



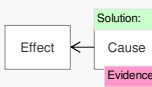
2 Analysis

Basic Level Cause Map - Start with simple Why questions.



Basic Cause-and-Effect

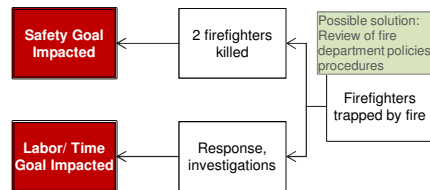
Extremely windy conditions spread the fire caused by a welding spark that struck a nearby wood shed. The fire rapidly became so dangerous that firefighters in the basement of the building weren't able to escape . . . and rescuers weren't able to get in to help



3 Solutions

Ideally the fine levied by OSHA will encourage the company involved to increase its methods of fire protection, not only to protect its own workers, but also to protect the public. In addition, the Boston Fire Department is conducting an internal review to improve firefighter safety. Says Steve MacDonald, spokesman, "What they're doing is looking at policies and procedures. They're reviewing everything, reviewing weather, radio communications, anything and everything having to do with the fire."

On July 5th, another firefighter died after being trapped in a building while looking for occupants during a fire in Brooklyn, New York. On July 9th, a firefighter in Houston, Texas was killed of smoke inhalation inside a burning building. A firefighter died in a building collapse due to fire in New Carlisle, Indiana on August 5, 2014, making a total of 5 firefighters who have died as a direct result of smoke/fire injuries while on the call of duty so far in 2014. In



For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

ThinkReliability

Investigate Problems. Prevent Problems.
 Houston, Texas 281-412-7766 ThinkReliability.com

Copyright ThinkReliability 2014