Problem

What

When

Date: January 29, 2015
Time: 7:15 AM

Where

Facility, site: Mexico City, Mexico
Unit, area, equipment: Maternity hospital
Task being performed: Gas tanker delivering liquefied petroleum gas (LPG) to stationary tank in hospital

Impact to the Goals

Patient Safety: 2 infants killed; dozens injured
Hospital Employee Safety: 2 nurses killed; many injured
Delivery Employee Safety: 3 delivery workers injured
Environmental: Gas leak
Compliance: 3 workers arrested
Patient Services: Evacuation from hospital
Schedule/Operations: Serious damage to hospital
Property/Equipment: Rescue efforts

Frequency: Explosions occur “frequently” in Mexico

Gas leak, explosion

Analysis

Cause Map - Add detail as information becomes available.

What's the Problem? Why did it happen? What will be done?

1. Problem
2. Analysis
3. Solutions

Problem Solving • Incident Investigation • Root Cause Analysis

GAS EXPLOSION AT MATERNITY HOSPITAL

“Workers had noticed a leak in the hose connecting the tanker to the hospital, and immediately notified firefighters. The explosion occurred before the leak could be contained, as firefighters evacuated people from the hospital.”

-Mexico City Mayor Miguel Mancera

Any time deaths or injuries result from an explosion, it is important not only to determine what caused the explosion, but whether the response could have been improved. Further analysis into the evacuation will help determine whether improvements could have saved lives.

In the case of the explosion, the fuel was provided by the leaked gas. The gas leaked due to a faulty gas delivery hose. When a faulty part contributes to a tragedy such as this one, it's important to determine not only how the damage occurred (if possible), but whether inspections or maintenance could have reduced the risk of an incident.

A broader issue for the entire country is the question of why gas leaks and explosions are fairly common. Part of this is because there is no infrastructure to pipe gas underground and it instead has to be delivered by truck. Clearly more effort needs to go into making sure that the impact on...