

Could your plant be impacted by a natural disaster?

January 2018



In recent years, many natural disasters have been in the news all over the world. The pictures show some examples:

1. May 2016 satellite photo of wildfires in near Fort McMurray, Alberta, Canada, showing the location of nearby oil processing facilities.
2. The Fort McMurray fires.
3. Hurricane Harvey at near maximum strength in August 2017 as it approaches the Texas coast.
4. Flooding in Houston, Texas caused by rain from Hurricane Harvey.
5. Trailers containing organic peroxides in a process plant exploded because refrigeration systems were out of commission due to loss of electric power following Hurricane Harvey.
6. The Fukushima Daiichi nuclear power plant in Japan lost power in March 2011 as a result of a major earthquake and subsequent tsunami. Insufficient cooling caused three nuclear reactor meltdowns, hydrogen-air explosions, and the release of radioactive material.

These events and others like them had, or could have had, significant impacts on process plants.

What can you do?

- Know your plant emergency procedures for natural disasters and understand your role in preparing for, responding to, and recovering from the event. The type of disaster which can impact your plant will depend on where your plant is located and what kind of natural events might happen in that place.
- Check that your emergency procedures take into consideration that some natural events such as earthquakes and tornadoes may occur with little or no advance warning.
- Confirm that plans consider workers who remain on site during and immediately after a natural event. The workers require support (food, shelter, communications, etc.), and roads and other public infrastructure may be out of service.
- Understand how your area of responsibility could be impacted by a natural event, especially where there are specific process hazards – for example, the organic peroxide decomposition described in item 5 above. Review the disaster response plans and check that they are thorough and complete for your work area.
- If you identify something which you think is important, and which is not covered by the existing plans, bring your concerns to the attention of your supervisors so the plans can be improved.
- Recognize that employees may not be able to report to work after a natural disaster, and that workers on site may not be able to go home. Be sure your plans consider these possibilities, as well as the potential of limited staffing.
- Develop a personal emergency plan for yourself and your family for the kinds of disasters which can occur where you live and work. You won't be able to work effectively if you are worried about your family!
- Read the November 2005 and June 2011 Beacons for more advice on natural disaster preparation.

Be prepared for natural disasters!