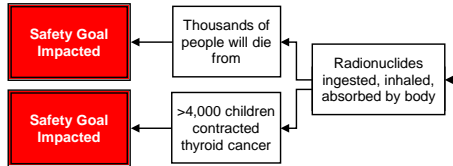
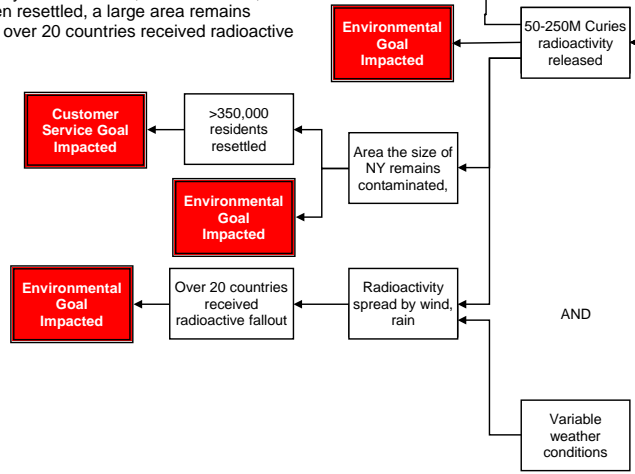


# Chernobyl Reactor Explosion

On April 26, 1986, reactor #4 at the Chernobyl Power Plant exploded, spreading radioactive contamination. There is much debate about the effects, the magnitude of the effects, and the causes, but we can put together a summary here. A thorough root cause analysis built as a Cause Map can capture all of the causes in a simple, intuitive format that fits on one page.



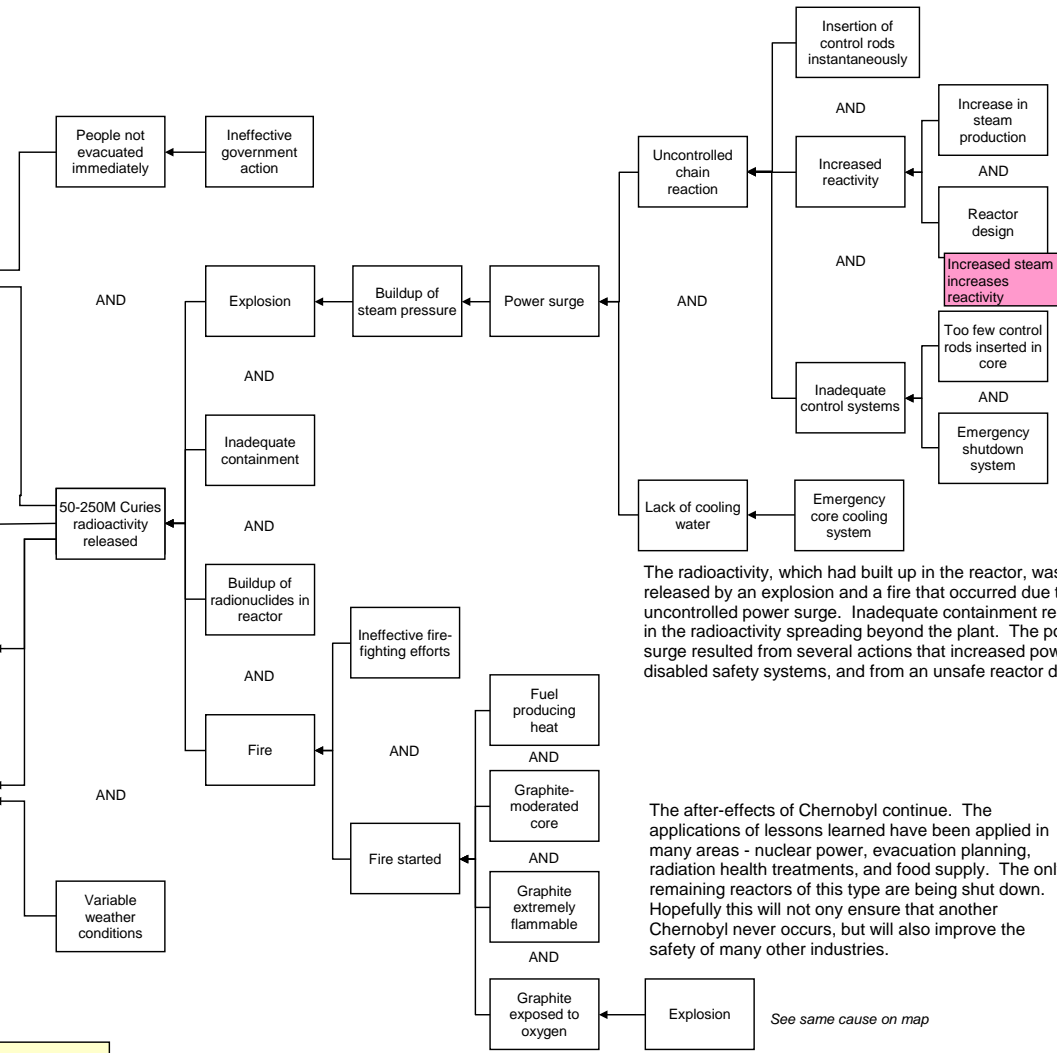
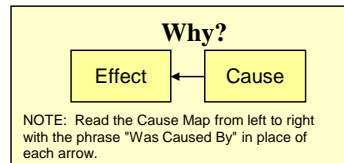
It is estimated that thousands (perhaps tens of thousands) of people will die from the aftereffects of Chernobyl. More than 4,000 children have contracted thyroid cancer. Additionally, between 50 and 250 million Curies of radioactivity were released, more than 350,000 residents have been resettled, a large area remains contaminated, and over 20 countries received radioactive fallout.



Cause Map  
Detail Level

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The radioactivity, which had built up in the reactor, was released by an explosion and a fire that occurred due to an uncontrolled power surge. Inadequate containment resulted in the radioactivity spreading beyond the plant. The power surge resulted from several actions that increased power and disabled safety systems, and from an unsafe reactor design.

The after-effects of Chernobyl continue. The applications of lessons learned have been applied in many areas - nuclear power, evacuation planning, radiation health treatments, and food supply. The only remaining reactors of this type are being shut down. Hopefully this will not only ensure that another Chernobyl never occurs, but will also improve the safety of many other industries.

Even more detail can be added to this Cause Map. This cause map has approximately 30 boxes; the more detailed map has more than 180. As with any investigation the level of detail in the analysis is based on the impact of the incident on the organization's overall goals. Because of the magnitude of this incident, a very large and detailed map is appropriate; this map is just a summary.