



Five Myths About the Fukushima Disaster

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Not long after the 9.0 earthquake and subsequent tsunami struck Japan on March 11, 2011, the nuclear industry began spin doctoring the ongoing disaster and perpetuating myths. Here are some of the myths and the facts that disprove them.

1. Nobody could have seen this coming. This was a natural disaster that exceeded the worst scenario that we could have foreseen.

Aside from being a remarkably lame excuse, this claim is at odds with the facts. TEPCO submitted a report to the Japanese nuclear safety regulators the week before the earthquake, predicting the possibility of a 10.2 meter tsunami in the event of a 7.2 magnitude earthquake. The plant was designed to withstand a tsunami of only 5.7 meters. Additionally, a Kobe University seismologist, Katsuhiko Ishibashi, had been warning of a “nuclear earthquake disaster” for two decades.ⁱ

2. No one was killed in the immediate aftermath of the Fukushima disaster.

The nuclear industry is fond of saying that nobody has been killed by the production of nuclear power, but this is not true. The truth: thousands of deaths are expected to occur over time from radiation exposure at Fukushima. Two workers died on March 11. They were ordered into a basement to attempt to restore power to the diesel generators when they were caught by flood waters after the tsunami. Additionally, at least two workers were admitted to a local hospital with radiation exposure levels that were likely to be lethal. No information on these individuals has been released. Maseo Yoshida, the plant manager who was exposed to 70

millisieverts, was also hospitalized after the disaster with esophageal cancer. 1600 cleanup workers at Fukushima have been exposed to radiation in excess of the annual exposure standards for nuclear employees. Many had inadequate protective gear. ⁱⁱ

3. Radiation from the Fukushima disaster was localized and not that severe.

The truth: Radiation from Fukushima was dispersed by wind and water and has spread around the globe. The full long-term effects may not be known for decades. Radiation was detected across Japan, including in Tokyo, a city of almost thirteen million people. Radiation has turned up in crops including rice and in cattle. There is evidence that radioactive beef may have been exported. Fish and seaweed have also yielded high radiation levels. ⁱⁱⁱ

“The radiation effects from the Fukushima Daiichi nuclear disaster are the results of release of radioactive isotopes from the crippled Fukushima Daiichi Nuclear Power Plant after the 2011 Tōhoku earthquake and tsunami. Radioactive material has been released from the Fukushima containment vessels as the result of deliberate venting to reduce gaseous pressure, deliberate discharge of coolant water into the sea, and associated uncontrolled events. Concerns about the possibility of a large scale radiation leak resulted in 20 km exclusion zone being set up around the power plant and people within the 20–30 km zone being advised to stay indoors. Later, the UK, France and some other countries told their nationals to consider leaving Tokyo, in response to fears of spreading radioactive contamination. The Fukushima incident has led to trace amounts of radiation, including iodine-131 and cesium 134/137, being observed around the world (New York State, Alaska, Hawaii, Oregon, California, Montreal, and Austria). Large amounts of radioactive isotopes have also been released into the Pacific Ocean.

In March 2011, Japanese officials announced that "radioactive iodine-131 exceeding safety limits for infants had been detected at 18 water-purification plants in Tokyo and five other prefectures".^[7] As of July 2011, the Japanese government has been unable to control the spread of radioactive material into the nation's food. Radioactive material has been detected in a range of produce, including spinach, tea leaves, milk, fish and plant, all farming has been abandoned.

As of February 2012, the crippled Fukushima nuclear plant is still leaking radiation and areas surrounding it could remain uninhabitable for decades due to high radiation. It radiation readings of 200 millisieverts per year, and a decade for areas at 100 millisieverts per year". The incidents are rated at level 7 rating on the International Nuclear Event Scale. The total amount of iodine-131 and cesium 137 and released into the atmosphere has been estimated to exceed 10% of the emissions from the 1986 Chernobyl disaster."^{iv}

Like Fukushima, the Chernobyl accident in 1986 was a level 7 nuclear disaster. Some researchers now say that Chernobyl has cost 985,000 lives, most of which have been cancer related deaths.

4. Despite initial dangers, the Fukushima reactors are now stable.

Again, the facts don't support this. On Feb. 8, 2012, The Telegraph in Britain reported that temperatures at the Unit 2 reactor at Fukushima have risen 20 degrees in the past week, although the reactor was supposed to be in cold shutdown since December 16, 2011, nine months after the nuclear crisis began. Boric acid had to be injected in an effort to prevent a chain reaction.

"Current temperatures remain lower than the 93 degree limit that is used to define cold shutdown at a nuclear reactor, although experts warned that further problems remained likely. "It was too early to say the plant is safe in December," Tetsuo Ito, the head of the Atomic Energy Research Institute at Kinki University in western Japan, told Bloomberg. "A similar incident will probably occur again."

The temperature problems coincided with reports that the government is aiming to restart the first two (Fukushima) nuclear reactors since last year's nuclear crisis as early as April."^v

5. Japanese reactors are inherently less safe than American reactors, due to age, design and seismic activity, and the same thing can't happen here.

The truth: Any reactor can have a meltdown and risks increase as reactors age. Any reactor can have problems with diesel generators and flooding can occur as a result of heavy rainstorms or hurricanes.

The NRC's 1982 CRAC-2 study, done by Sandia Labs, found that there would be as many as 18,000 early deaths from a serious accident, such as a meltdown, at the South Texas Nuclear Project, 10,000 peak early injuries, and 11,000 cancer deaths, along with a price tag of \$104 - 112 billion, in 1982 dollars. Exposure to radioactivity, whether as a result of terrorist activity, transportation, fuel handling, or lesser accidents, can result in various forms of cancer, genetic damage and birth defects.

Many U. S. nuclear plants are built on fault lines and are subject to disruption by earthquakes. On August 23, 2011, a 5.8 magnitude earthquake closed both units at the North Anna nuclear power plant for several months. The earthquake was felt at a total of 21 U.S. nuclear power plants. Many U.S. reactors are as old or older than the Fukushima reactors, and a number have recently been relicensed for another twenty years. Comanche Peak and STP reactors are seeking another 20 years through relicensing as well.^{vi}

Texas has recently had earthquakes in unexpected locations that may have been induced by fracking and new analysis of seismic risks for reactors is warranted.

ⁱ www.jaif.or.jp/english/news_images/pdf/ENGNEWS01_1317702304P.pdf and

www.businessweek.com/news/2011-11-21/nuclear-regulator-dismissed-seismologist-on-japan-quake-threat.html

ⁱⁱ <http://www.japantimes.co.jp/text/nn20111115f1.html>

<http://mdn.mainichi.jp/mdnnews/news/20110727p2a00m0na016000c.html>

www.voanews.com/english/news/asia/east-pacific/Repair-Work-Resumes-at-Crippled-Japanese-Nuclear-Plant-118563704.html

www.businessweek.com/news/2011-11-28/fukushima-dai-ichi-plant-chief-to-undergo-medical-treatment.html

<http://www.japantimes.co.jp/text/nn20111210a3.html>

ⁱⁱⁱ http://www.youtube.com/watch?v=cRmqf10_PQ

www.FukushimaFacts.com

^{iv} http://en.wikipedia.org/wiki/Radiation_effects_from_Fukushima_Daiichi_nuclear_disaster

^v www.telegraph.co.uk/news/worldnews/asia/japan/9066687/Rising-temperatures-trigger-concern-at-Japans-Fukushima-nuclear-plant.html

^{vi} <http://wvgazette.com/ap/APTopStories/201108230835>

<http://www.nirs.org/reactorwatch/accidents/gemk1reactorsinus.pdf>