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Nebraska Nuclear Threat: As Predictable as Fukushima

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Nuclear accidents – like oil spills and financial meltdowns – happen because big companies push to make more money by cutting every safety measure in the books.

The accident at Fukushima was predictable.

Likewise, the potential problem at the Fort Calhoun reactor in Nebraska was predictable. (For background, see this and this.)

As Ketv reported in March:

> Fort Calhoun's nuclear power plant is one of three reactors across the country that federal regulators said they are most concerned about.
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> Last year, federal regulators questioned the station's flood protection protocol. NRC officials said they felt the Omaha Public Power District should do more than sandbagging in the event of major flooding along the Missouri river.
>
> OPPD officials said they have already made amends and added new flood gates.
>
> "We updated our flood protection strategy and have tested and re-tested our new strategy. The issue is operationally resolved, and at no time was there a threat to public safety or was public health at risk," OPPD President and Chief Executive Officer Gary Gates said.

The New York Times noted yesterday:

> Last year, the Nuclear Regulatory Commission cited the Fort Calhoun plant for not being adequately prepared for floods and rated the safety violation in the "yellow" category, the second most serious. The agency ordered changes because it said that under the plan in place at the time …
>
> After initially contesting the findings, the plant's operators, Omaha Public Power District, said that the problems had been resolved.

The Daily Mail writes today:

> A nuclear plant was inches away from being engulfed by the bloated Missouri River after several levees in the area failed to hold back its surging waters, raising fears it could become America's Fukushima.
>
> Dramatic pictures show the moment the plant was threatened with being shut down today, as water levels rose ominously to within 18 inches of its walls.
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> The river has to hit 902 feet above sea level at Brownville before officials will shut down the Cooper Nuclear Plant, which sits at 903 feet. It stopped and ebbed slightly yesterday, a reprieve caused by levee breaches in northwest Missouri – for now.
>
> Flooding is a major concern all along the river because of the massive amounts of water that the Army Corps of Engineers has released from six dams. Any significant rain could worsen the flooding especially if it falls in Nebraska, Iowa or Missouri, which are downstream of the dams.
>
> The river is expected to rise as much as five to seven feet above the official 'flood stage' in much of Nebraska and Iowa and as much as 10 feet over in parts of Missouri. The corps predicts the river will remain that high until at least August.
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> ***
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> The river has risen at least 1.5 feet higher than Fort Calhoun's 1,004-foot elevation above sea level. The plant can handle water up to 1,014 feet, according to OPPD. The water is being held back by a series of protective barriers, including an 8-foot rubber wall outside the reactor building.

(See the Daily Mail article for photos.)

Likewise, the Cooper nuclear reactor – also in Nebraska – is threatened by the flooding as well.

The Nuclear Regulatory Commission reports that flooding has already caused oil to spill:

> Facility: COOPER
> Region: 4 State: NE
> Event Date: 06/19/2011
> Event Time: 19:40 [CDT]
>
> RELEASE OF OIL TO THE MISSOURI RIVER
>
> Notification is being made to the Nebraska Department of Environmental Quality regarding the release of oil to the Missouri River from the Cooper Live Fire Training Facility. Currently, levees separating the Training Facility and the Missouri River are being over topped due to flooding of the Missouri River. This condition has resulted in flooding of the burn pits in the fire training facility, with the subsequent release of the residue which includes unburned fuel oil. Any release of this water containing oil to the Missouri River is uncontrolled at this time. Then is no radiological contamination in this area.

The Lincoln Journal Star notes:

> Nebraska Public Power District officials are concerned rising flood waters could force them to shut down the nuclear power plant if the river reaches a level of

> 902 feet above sea level…
>
> The highest reading at Cooper on Sunday was 900.6 feet above sea level, [Nebraska Public Power District] spokesman Mark Becker] said.

WOWT says that a levy near the Cooper reactor is about to wash away:

And Action 3 News reported on Monday:

> A levee on the other side of the border into Missouri is dangerously close to breaking. Atchison County authorities say it's only a matter of time before a flood of water washes through areas surrounding Highway 136.
>
> ***
>
> Emergency management officials say the area is turning out to be a total loss causing sandbagging to stop. Instead, relief efforts are now more focused on locations to the south of Brownville.

The Missouri News Horizon notes today:

> [NPPD] insists the 37-year-old Cooper Nuclear Station in Brownville, which sits on the raging Missouri River, is as secure as they come.
>
> On a scale of 1-10, with 10 being the safest, Alan Dostal who is NPPD's nuclear expert says, "We are an absolutely safe plant, that's a 10."
>
> Dostal's comments came during an interview with Nebraska Watchdog on March 29, five days before three workers at Cooper were exposed to radiation. According to the Nuclear Regulatory Commission (NRC) a fuel rod accident triggered alarms that are worn by the workers. NPPD says the incident which is still under investigation did not cause any apparent injuries but was "unacceptable." The NRC wants "to understand why normal work practices were not followed" …
>
> [T]he federal government's own Sandia National Laboratories has concluded that similarities between the Dai-Ichi plant and reactors like Cooper pose a significant problem: specifically that a lengthy loss of electrical power could cause a nuclear meltdown.

Hopefully, both Nebraska reactors will ride out the storm without any major problems.

But as I have documented in detail, our nuclear policy has never paid any attention to safety, and has been a disaster waiting to happen from day one. If one of the Nebraska reactors (or another American plant) leaks, it will be entirely predictable … like Fukushima.

Indeed, as shown by the Center for Public Integrity , many American reactors are built on earthquake faults:

> What are the risks of an earthquake beneath a reactor near you? This image combines a 2006 map by the United States Geological Survey showing varying

seismic hazards across the U.S. with locations of nuclear reactors. Reactors in black are active; reactors in blue are proposed sites for the new model known as the AP1000. Probability of strong shaking increases from very low (white), to moderate (blue, green, and yellow), to high (orange, pink, and red). Kimberly Leonard/Center for Public Integrity.

Nearly six years before an earthquake ravaged Japan's Fukushima Daiichi nuclear power plant, U.S. regulators came to a sobering realization: seismic risks to nuclear plants in the eastern two-thirds of the country were greater than had been suspected, and engineers might have to rethink reactor designs.

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Earthquakes can occur in all sorts of locales. In January 1986, a late-morning quake measuring 4.96 on the Richter scale was blamed for cracks in the Perry Nuclear Power Plant on Lake Erie near Cleveland. At first, people thought it wasn't a quake; speculation focused on an explosion somehow related to the Challenger space shuttle disaster or an attack on New York City. The newly licensed plant's reactor was to be fueled for the first time the next day. Officials and the public were caught by surprise; few suspected Northeastern Ohio was in an active seismic zone. But it is. Experts determined that the quake's epicenter was 11 miles from the plant, which has been dogged by controversy ever since.

A previously unknown fault line also runs near the Indian Point plant, 24 miles north of New York City. Indian Point's two units are up for relicensing by the NRC in 2013 and 2015, respectively, and a fierce battle is expected. New York Gov. Andrew Cuomo, while campaigning last year, called for Indian Point to be closed. Now he has ordered a safety review of the plant. In a 2008 paper, four researchers from Columbia University reported that "Indian Point is situated at the intersection of the two most striking linear features marking the seismicity and also in the midst of a large population that is at risk in case of an accident at the plants." Indian Point's two reactors, the researchers noted, "are located closer to more people at any given distance than any other similar facilities in the United States."

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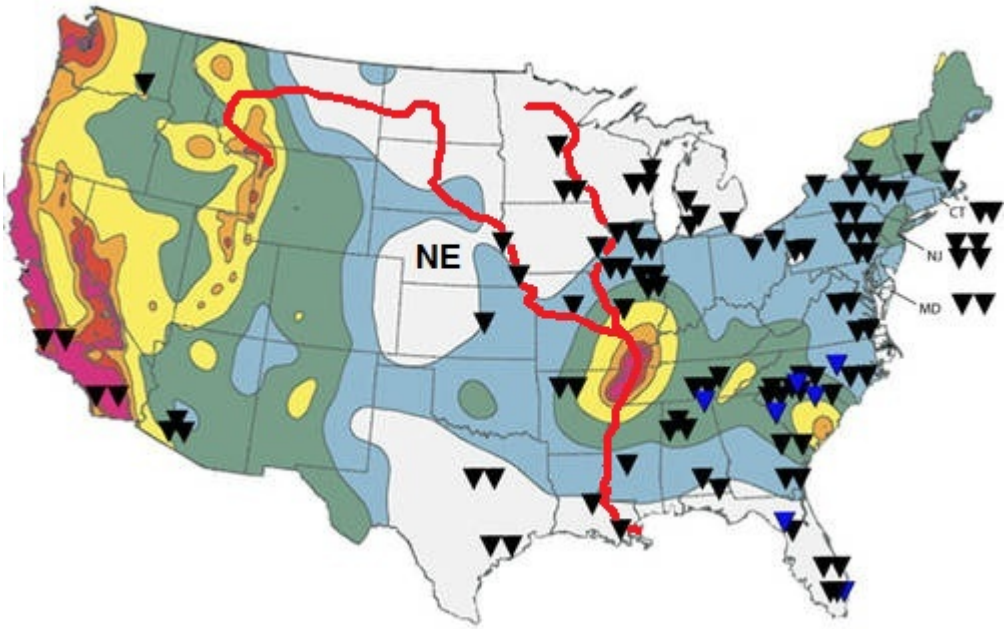
Joe Litehiser, a Bechtel Corp. researcher, has studied the implications of earthquakes on licensing of proposed new nuclear plants in the central and eastern U.S. Litehiser said there is more seismological information available now than there was decades ago, when the existing plants were built. Scientists now believe, for example, that major earthquakes occur around Charleston, S.C., every 550 years instead of several thousand years apart, as industry models had assumed.

This is relevant not only because South Carolina has seven active reactors, but because four more units are planned for the state. Applications filed by the proposed operators, Duke Energy and South Carolina Electric & Gas, seek NRC permission to build Westinghouse Advanced Passive 1000 (AP1000) reactors in Fairfield and Cherokee counties. In a March 7 letter to NRC Chairman Gregory Jaczko, U.S. Rep. Edward Markey, D-Mass., wrote that one of the agency's own experts believes the AP1000's shield building could "shatter like a glass cup" in the event of an earthquake or a similar disaster.

Rady Ananda adds the Mississippi and Missouri rivers in red to show the risk of flooding to numerous American reactors:



(See this.)

As I noted last month:

- The NRC won't even begin conducting its earthquake study for Indian Point nuclear power plant in New York until after relicensing is complete in 2013, because the NRC doesn't consider a big earthquake "a serious risk"

- Congressman Markey has said there is a cover up. Specifically, Markey alleges that the head of the NRC told everyone not to write down risks they find from an earthquake greater than 6.0 (the plant was only built to survive a 6.0 earthquake)

- The budget for the NRC comes from the nuclear power companies [just like banks fund the Federal Reserve]

- The NRC is wholly captive to industry

- The NRC has never turned down the request of a nuclear power plant to be relicensed in the United States. Relicensing is solely a paper process; there is no safety review.

- The NRC's assumptions regarding a worst-case accident are ridiculous. For example, the NRC assumes only 1% of the fuel could meltdown, while 70% melted down at Fukushima. The NRC assumes no loss of containment, while there has been a major loss of containment in reactors 1-3 (especially 2) at Fukushima.

- "If there was a free market in energy, nuclear power would be over ... immediately". Nuclear plant owners can't get insurance; they can only operate because the U.S. government provides insurance on the taxpayer dime. The government also granted a ridiculously low cap on liability

- If we had no subsidies for nuclear, coal or oil, we'd have a clean

energy economy right now

- We have 4 reactors in California – 2 at San Onofre 2 at San Luis Obisbo – which are vulnerable to earthquakes and tsunamis.

No state or federal agency knows who would be in charge in case of an accident at Indian Point. It's like the Keystone Cops

Rolling Stone writes:

> The NRC has long served as little more than a lap dog to the nuclear industry, unwilling to crack down on unsafe reactors. "The agency is a wholly owned subsidiary of the nuclear power industry," says Victor Gilinsky, who served on the commission during the Three Mile Island meltdown in 1979. Even President Obama denounced the NRC during the 2008 campaign, calling it a "moribund agency that needs to be revamped and has become captive of the industries that it regulates."
>
> In the years ahead, nuclear experts warn, the consequences of the agency's inaction could be dire. "The NRC has consistently put industry profits above public safety," says Arnie Gundersen, a former nuclear executive turned whistle-blower. "Consequently, we have a dozen Fukushimas waiting to happen in America."

And remember that a major nuclear accident – such as one at Indian Point – could bankrupt a nation.

Articles by: **Washington's Blog**