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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026

Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0093

Comment on FR Doc # 2015-15921

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Submitter Information

Name: Nina Beety

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General Comment

I oppose the continued operation of Diablo Canyon NPP due to its numerous serious hazards and risks to the public and environment.

These include its location near earthquake faults, its ongoing radioactive emissions into the ocean and air, the hacking risk to the plant, its out-of-compliance status on NRC safety rules, and PG&E's deplorable safety record and culture.

Diablo Canyon must be immediately shut down and decommissioned. The danger to the ocean and the West Coast from its continued operation, and the danger from nuclear energy, have been amply demonstrated with the ongoing catastrophe at Fukushima affecting the entire world.

Documentation attached.

Attachments

NRC Comments 8-31-15 - 50-275, 50-323NRC-2009-0552

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Comments

Given the earthquake faults, the ongoing radioactive emissions from the plant, and the hacking risk to the plant, as well as PG&E's deplorable safety record and culture, Diablo Canyon must be immediately shut down and decommissioned. The danger to the ocean, to the West Coast, and the world from nuclear energy has been amply demonstrated with the ongoing disaster at Fukushima.

The NRC allows Diablo Canyon to continue operating despite holding other NPPs to much higher and stricter standards. The Union of Concerned Scientists reported last year that Diablo Canyon does not comply with federal safety standards.ⁱ

Despite the disclosure this year that PG&E used the wrong accident and earthquake data when building safety equipment, and has failed since 1984 to use updated data, the NRC allows Diablo Canyon to remain open.ⁱⁱ

Also disclosed was that PG&E and the NRC altered Diablo Canyon's operating license so it would conform.

Diablo Canyon discharges huge amounts of tritium, strontium and cesium into the ocean continually. PG&E stated in 2014 that Diablo Canyon regularly discharges more tritium than Fukushima NPP in its melted down state is pouring into the ocean.

That water [in 2012] contained 3,670 curies of tritium, or 136 trillion becquerels, according to the company, almost three-and-a-half times the amount released from the Fukushima plant into the ocean in the period starting May 2011. The plant also discharged cesium-137 and strontium-90, though at lower levels than Fukushima.ⁱⁱⁱ

Since it was estimated in June 2014 that 60 PBq of cesium-137 had been released into the ocean from Fukushima^{iv}, and TEPCO announced that 5 billion Bq of Strontium-90 are released daily into the ocean from Fukushima^v, the questions have to be asked:

- How much less?
- Does it really matter how much less when we are dealing with such virulent poisons, poisons that bioaccumulate up the food chain?

Strontium mimics calcium and is known as the bone seeker.

There are unknown normal airborne releases, as well as periodic high releases when the reactors are re-fueled. These releases are averaged over 365 days, rather than given as the figures per release^{vi}. The rain-out amounts from Diablo Canyon emissions combined with Fukushima fallout can only be imagined.

This is very serious and ongoing radioactive contamination of the environment.

In addition, there is the hazard from the power plant's reliance on grid power.
Arne Gundersen:

...the most likely type of a nuclear accident is caused by a loss of offsite power. That is what happened at Fukushima: the power system AROUND the plant broke down. If that happens, not only will the plant not have power, but the street lights won't work. According to the NRC, the street lights DO work. Not only that, but your home lighting won't work and your radio and TV won't work. But according to the NRC, you will be able to contact the outside world by phones or by radio or by television.

But remember the most likely cause of a nuclear accident is loss of offsite power and that has NEVER been part of an emergency plan, assuming that all of that does not work.^{vii}

There are increasing attacks to the power grid. PG&E has played a pivotal role in creating the so-called "Smart Grid", which former CIA director James Woolsey calls a stupid grid because of its vulnerability^{viii}. PG&E has also aggressively installed wireless Smart Meters and encouraged network-connected Smart appliances, creating millions of vectors to the power grid and increasing exponentially the possibilities for hacking^{ix}.

These factors put the residents of the region in increased jeopardy. A hacked power grid disconnects essential power for keeping reactor cores and fuel pools cool. Without power, the power plant must rely on generators to turn on instantly at full power and sustain operation for as long as needed.

Fukushima's troubles started before the tsunami. The earthquake cut off electrical power to the plant, and at least some of the generators failed when they were turned on. Journalist Greg Palast in Vulture's Picnic has a long and detailed section on the vulnerability of generators as backup power.

A page from the notebook of an Emergency Diesel Generator expert, R.D. Jacobs, hired to monitor a test for a nuclear reactor's back-up cooling system.

This is to record that on my last visit,....I pressed [a company executive] saying that we just did not know what the axial vibration of the crankshaft was doing to the [diesel] units. I was unable to impress him sufficiently.

The diesels were "tested" by turning them on for a few minutes at low power. They worked fine. But R.D., a straight shooter, suspected problems. He wanted the motors opened and inspected. He was told by power company management to go to hell.

When we forced the plant builder [in Suffolk County, New York] to test the three Emergency Diesel Generators in emergency conditions, one failed almost immediately (the crankshaft snapped, as R.D.[Jacobs] predicted), then the second, then the third. We named the three diesels "Snap, Crackle, and Pop."

...I knew that all these diesels were basically designed, or even taken from, cruise ship engine rooms or old locomotives. . I'm not an engineer, but I suspect a motor designed for a leisurely

float n Bermuda is not fit for a life-and-death scramble. So, I asked [an industry insider], "They really can't work at all, the diesels, can they?"

That's when he introduced me to the phrase "crash start."

On a ship, he explained, you would take half an hour to warm up the bearings, and then slowly build up to "critical" crankshaft speed, and only then add the "load." the propeller...

That's for sailing. But in a nuclear emergency, "the diesels have to go from stationary to taking a full load in less than ten seconds."

Worse, to avoid having to buy additional diesels, the nuclear operators turbo-charge them, revving them to 4,000 horsepower in ten seconds when they are designed for half that output.

The result: snap, crackle, pop.

I learned that, at Fukushima, at least two of the diesels failed before the tsunami hit. What destroyed those diesels was turning them on. In other words, the diesels are junk, are crap, are not capable of getting up to full power in seconds, then run continuously for days....

"So, you saying emergency diesels can't work in an emergency?"

"Actually, they're just not designed for it."

Vulture's Picnic, p. 294-297

Scientific American had a very telling graphic with a computer keyboard, a time bomb, and a power plant^x.

I would not visit San Luis Obispo County nor would I live there because of this resident hazard.

The U.S. government is ultimately at fault for promoting these hazardous power plants in the first place. But even with safety regulations in place, the NRC clearly cannot police itself, and it certainly cannot provide even a bare minimum of safety for the nuclear power plants under its jurisdiction and the people who live in the vicinity.

It is lunacy to continue this extremely toxic method for generating electricity, when the current costs to society and the environment from its continuance are so high and go on permanently into the future. Solar is coming online in increasing levels, and Californians' energy use has been dropping. The cost is too great to allow its continuance one more day.

Shut down Diablo Canyon now.

Nina Beety

Monterey, California

www.smartmeterharm.org

www.healfukushima.org

ⁱ http://www.ucsusa.org/news/press_release/diablo-canyon-report-0381.html

ⁱⁱ <http://www.foe.org/news/news-releases/2015-03-diablo-pge-secretly-used-wrong-data-for-safety-equipment#sthash.8DQl1Rel.dpuf>

ⁱⁱⁱ <http://www.telegram.com/article/20140203/NEWS/302039780/1052>

^{iv} <http://www.nature.com/srep/2014/140304/srep04276/full/srep04276.html>

^v At press conference 8/25/14 <http://www.tepco.co.jp/tepconews/library/archive-j.html>

^{vi} https://www.youtube.com/watch?v=Tk7xzg1T0kk&feature=player_detailpage#t=1574

^{vii} <http://fairewinds.com/content/white-house-nrc-recommend-50-mile-fukushima-evacuation-yet-insist-us-safe-only-10>

^{viii} <http://www.youtube.com/watch?v=1IF3eywqD-l>

^{ix} http://www.smartgridnews.com/artman/publish/End_Use_Smart_Homes/Are-smart-homes-a-security-threat-to-electric-power-utilities-5914.html

<http://www.forbes.com/sites/kashmirhill/2013/07/26/smart-homes-hack/>

<http://www.sfgate.com/technology/article/Security-lags-in-protecting-Internet-connected-5153837.php#photo-5734988>

<http://www.bloomberg.com/news/articles/2015-04-01/turkish-blackout-shows-world-power-grids-under-threat>

“More and more attacks are targeting the industrial control systems that run the production networks of critical infrastructure, stealing data and causing damage,” said David Emm, a principal researcher at Moscow-based security company Kaspersky Lab Inc., which advises governments and businesses.

All power use was previously measured by mechanical meters, which were inspected and read by a utility worker. Now, utilities are turning to smart meters, which communicate live data to customers and the utility company. This opens up the systems to hackers...

“Introducing smart meters means you install access points to the electricity grid in private homes,” said Reinhard Gruenwald, an energy expert at the Office of Technology Assessment at the German Bundestag, a scientific institution advising German lawmakers. “You can’t physically protect those. If criminals are smart enough, they may be able to manipulate them.”

<http://www.abs-cbnnews.com/business/tech-biz/07/16/14/smart-technology-could-make-utilities-more-vulnerable-hackers>

<http://www.csmonitor.com/USA/2011/1206/Cyber-security-Power-grid-grows-more-vulnerable-to-attack-report-finds>

Massachusetts Institute for Technology -- "Millions of new communicating electronic devices ... will introduce attack vectors -- paths that attackers can use to gain access to computer

systems or other communicating equipment. That increase[s] the risk of intentional and accidental communications disruptions," including "loss of control over grid devices, loss of communications between grid entities or control centers, or blackouts."

^x <http://www.scientificamerican.com/article/power-hackers/>