

Aging Systems and Components

Diablo Canyon Nuclear Power Plant
and the nuclear industry

San Luis Obispo



mothersforpeace.org



Diablo Canyon Nuclear Power Plant is an **old** facility.

Construction began in the late 1960s
and continued into the 70s and 80s.



Diablo didn't begin operation until **1984**.

Do the math! The plant was old before it began operation. It'll be over **60 years old** when its licenses expire in 2024 and 2025.



Exposed to salt air, radiation, and time, many of the components and systems at Diablo are corroding.

December 2008, buried
firewater pipe break
corrosion

**Fire Protection System
Overview Michael
Wright Manager,
Mechanical System
Engineering February
12, 2009**



The utility owner, Pacific Gas and Electric Company, has applied for an additional 20 year license renewal – until the years 2044 and 2045.

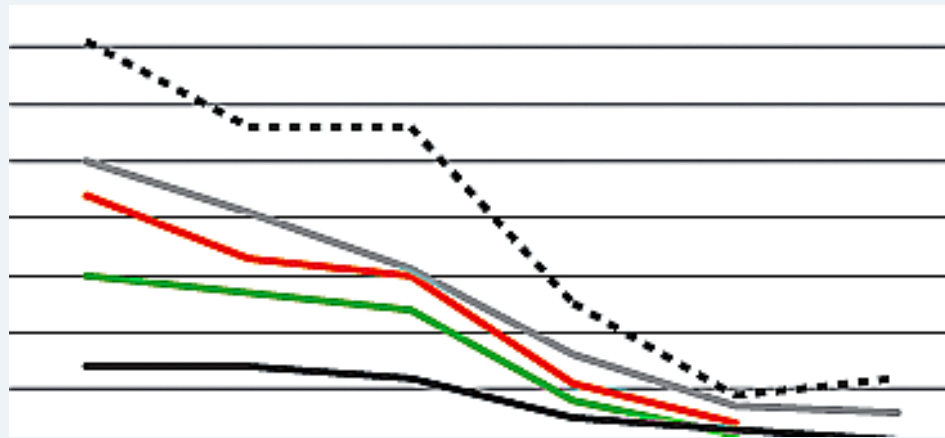


Mothers for Peace has intervened to oppose this extension.

Four contentions have been accepted for litigation – one asserting that **PG&E is incapable of managing the effects of aging on safety equipment**, as shown in Nuclear Regulatory Commission inspection reports.



NRC Inspection Reports from 2008, 2009, and 2010 document an **ongoing failure** of PG&E to properly identify, evaluate, and resolve problems and manage safety equipment.



The inspectors have found an
**“adverse trend in
problem evaluation.”**

The inspectors identified eleven separate examples of this **adverse trend**, thirteen examples of instances of “**poor licensing and design basis management**,” and five instances of **deficiencies** related to other administrative functions.



“The NRC inspectors concluded that some issues identified in the trend could indicate the existence of **a more significant concern** affecting the NRC’s ability to regulate the licensee.”

For documentation, go to -

<http://mothersforpeace.org/data/20100322hearing>

The following slides contain quotes from an Associated Press article (after a yearlong investigation) which appeared in the San Luis Obispo Tribune on June 28, 2011:
“Were Nuclear Power Plants Built to Last?”



There have been 38 leaks from underground piping between 2000 and 2009.

www.presstv.ir/usdetail/185821.html

Rust hole found in the reactor's carbon steel lid at the Davis-Besse Plant.



“When commercial nuclear power was getting its start in the 1960s and 1970s, industry and regulators stated unequivocally that **reactors were designed only to operate for 40 years.**”

Since that time...

“...66 of 104 reactors have been granted license renewals. Most of the 20-year extensions have been granted with scant public attention. And the NRC has yet to reject a single application to extend an original license.”

6x5 inch hole in the Davis-Besse reactor head, caused by a boric acid leak.



BEAVER VALLEY UNIT 1 LINER HOLE



Hole caused by corrosion of the containment building wall.

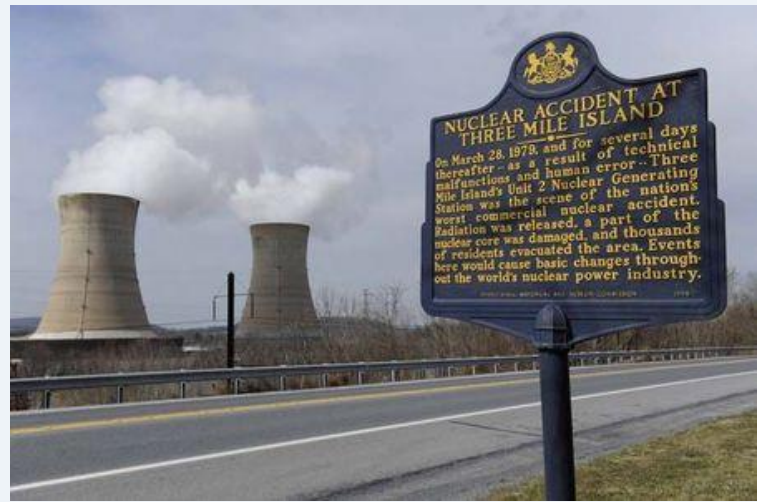
“...the relicensing process often lacks fully independent safety reviews... And under relicensing rules, tighter standards are not required to compensate for **decades of wear and tear.**”

“...it's challenging to keep existing plants safe and up to date.”

“The AP has reported that nuclear plants have sustained repeated equipment failures, leading critics to fear that the U.S. industry is **one failure away from a disaster.**”



Regulators
acknowledge
that:



“Despite the aging problems, relicensing rules prohibits any overall safety review of the entire operation. More conservative safety margins are **not** required in anticipation of higher failure rates in old plants.”

According to a June 20, 2011 news article, the Associated Press found numerous instances of the NRC **loosening regulations or downgrading assessments of safety threats so that many aging reactors could remain in compliance** — a term known as “sharpening the pencil.”



I FIGURE IT'LL BE AROUND
\$700 MILLION TO REPLACE
THE GENERATOR IN THAT
(AHEM) "CLASSIC."

FINE. IT'S GOT
SENTIMENTAL
VALUE. CHARGE
IT TO THE RATE-
PAYERS!





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