

San Luis Obispo



Why should Diablo Canyon Nuclear Power Plant be closed?

<http://mothersforpeace.org>

P.O. Box 3608
San Luis Obispo, CA 93403



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Questions



- Who are the Mothers for Peace?
- What are the safety issues inherent in all U.S. nuclear plants?
- What are the safety issues specific to the Diablo Canyon plant?
- What legal actions are taken by Mothers for Peace?

Background

Mothers for Peace is a local, non-profit organization concerned with the local dangers involving the Diablo Canyon Nuclear Power Plant, and with the dangers of nuclear power, weapons, and waste on national and global levels.

Additionally, we work on issues of peace, social justice, and a safe environment.



The Mothers for Peace formed in 1969 because of shared concerns regarding the Vietnam War.



We provided draft information and counseling. We held demonstrations and vigils.

When the war ended, the Mothers for Peace turned to other issues. In 1973, we filed as **Intervenors** against the licensing of the **Diablo Canyon Nuclear Power Plant**.

We became the ‘watchdog’ organization of Diablo Canyon, focusing on safe operation.

As legal intervenors, Mothers for Peace utilizes all available legal channels to ensure safe operation and compliance with State and Federal Laws.

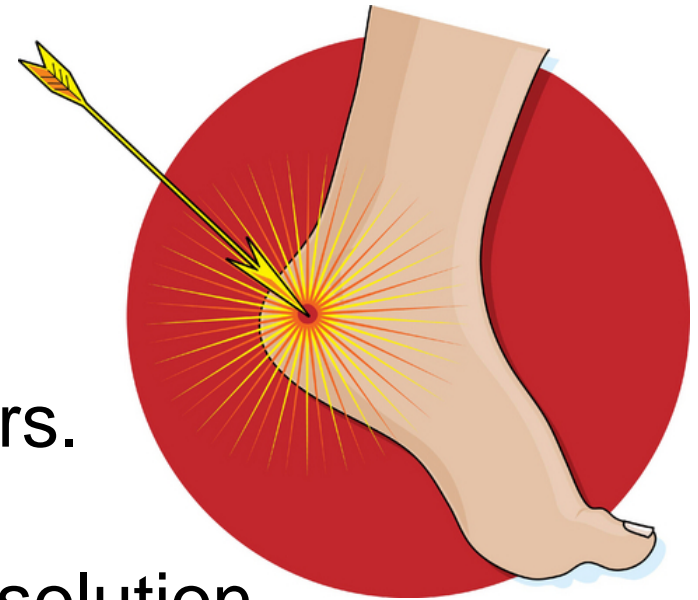


All U.S. nuclear reactors should be shut down because:

- Nuclear reactors create radioactive wastes that will remain deadly for 250,000 years. We have a responsibility to future generations to stop polluting the planet.
- Gregory Jaczko, former NRC chair, says all U.S. reactors have safety problems that cannot be fixed. (NYT April 8, 2013)

High level radioactive waste is the Achilles' heel of the nuclear industry.

- It remains toxic for 250,000 years.
- There is no permanent storage solution.
- Reprocessing is not recycling;
the most dangerous elements still require isolation.





Health Effects of Radiation

- 2,000 rems is instantaneously lethal
 - 1,000 rems will cause immediate symptoms including internal bleeding, and lead to death in 1 – 2 weeks
 - 400 rems death possible in 2 months
- (Statistics from EPA)*

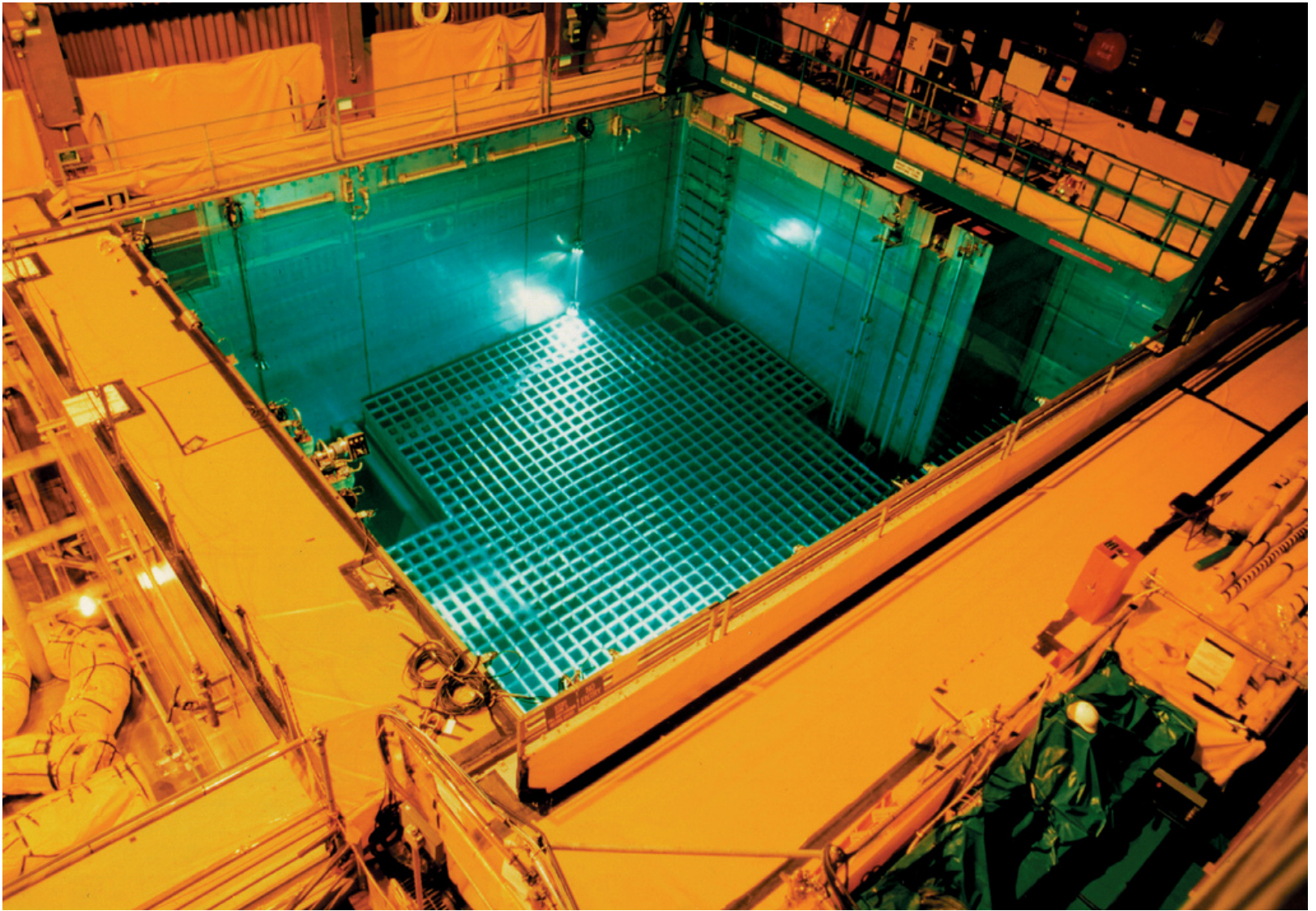
There is no safe level of radiation.

- The unstable elements created by fission do not exist in nature.
- Particles ingested or inhaled become imbedded in tissues and continually radiate surrounding cells for 30 half-lives.
- Damaged cells can lead to cancer or to birth defects.

RADIATION CHARACTERISTICS OF A "SPENT FUEL" ASSEMBLY

AGE (YEARS)	ACTIVITY (CURIES/ASSEMBLY)	SURFACE DOSE RATE (REM/HOUR)
1	2,500,000	234,000
5	600,000	46,800
10	400,000	23,400
50	100,000	8,640

Carole Hisasue



High level radioactive waste is stored onsite in open pools.



These pools are:

- tightly packed with a potential for a severe fire and catastrophic radiological release if partially drained due to terrorism or accident;
- vulnerable to sabotage; there is no containment structure;
- designed for temporary storage only.

After approximately 5 years in the pools,
the waste is placed in **dry casks**.

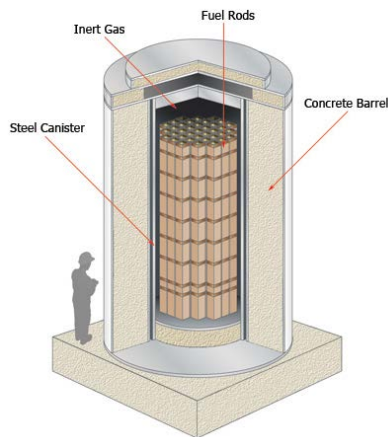
These casks are:

- vulnerable to sabotage;
- designed for temporary storage only.



Best Option: Hardened On-Site Storage

- Transport by truck, rail, or barge is vulnerable to accident or terrorism
- Reprocessing yields materials that can be used for weapons
- Dry Casks are less vulnerable to accident or terrorism



* Passively cooled

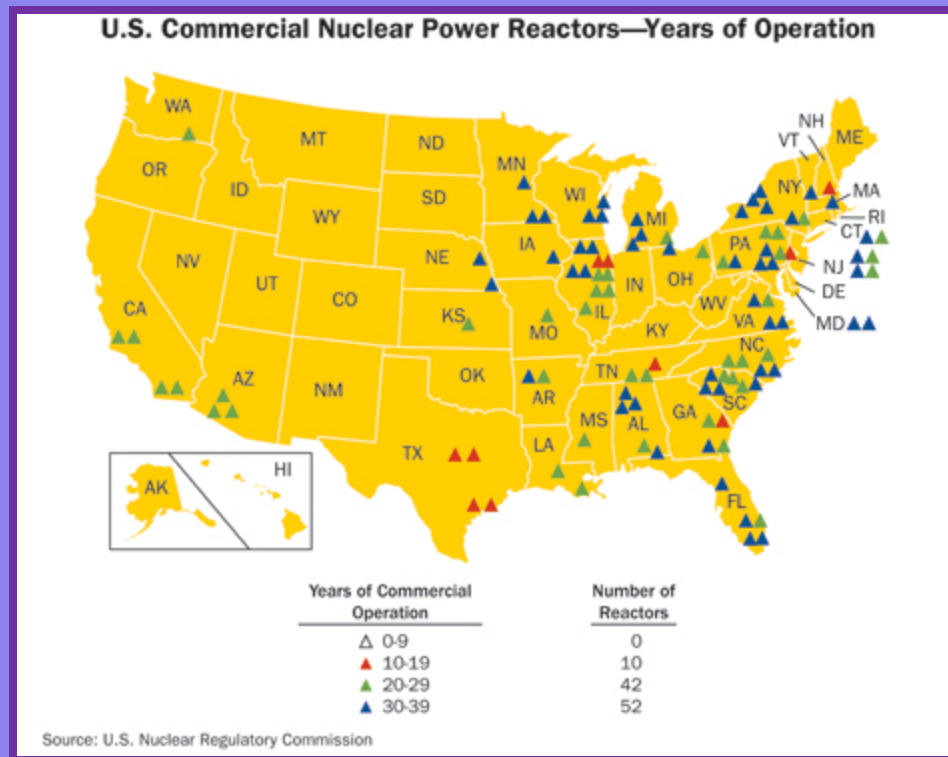
* Survived Fukushima intact

NO

Insurance

- No insurance companies will take on the risks of insuring property against a release of radiation.
- Under the Price Anderson Act, the nuclear industry self-insures, with a maximum annual liability of \$111.9 million. This is less than 2% of the potential damages of an accident. (Public Citizen)
- Individuals and the taxpayer would be left holding the bag for remaining losses.

The Department of Homeland Security, the CIA, and the FBI have determined that **nuclear facilities are targets of terrorists.**



They offer “the potential for widespread health and economic damage.”

FBI Testimony before the Senate Committee on Intelligence (February 16, 2005)

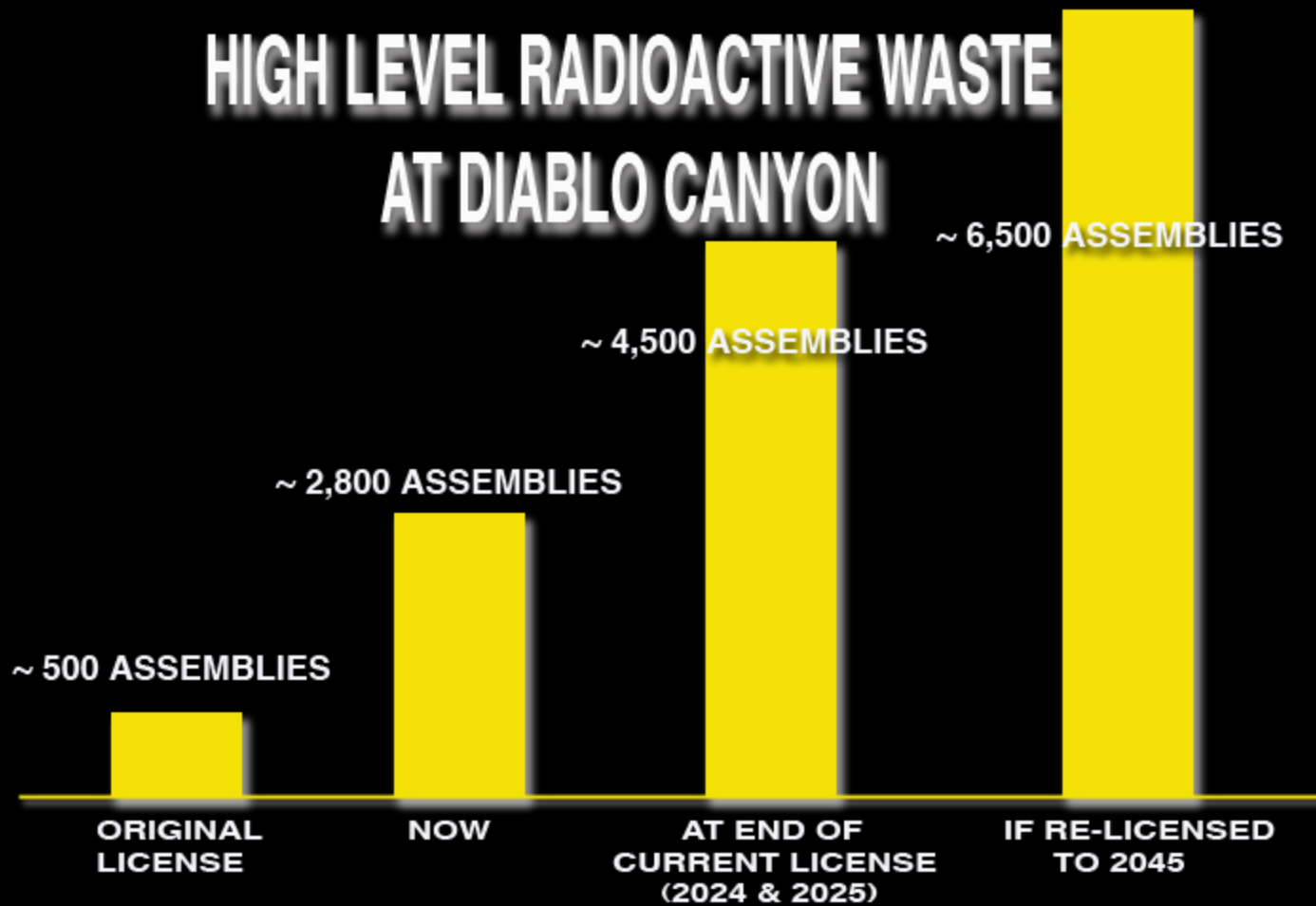
Why, specifically, should the Diablo facility be closed?



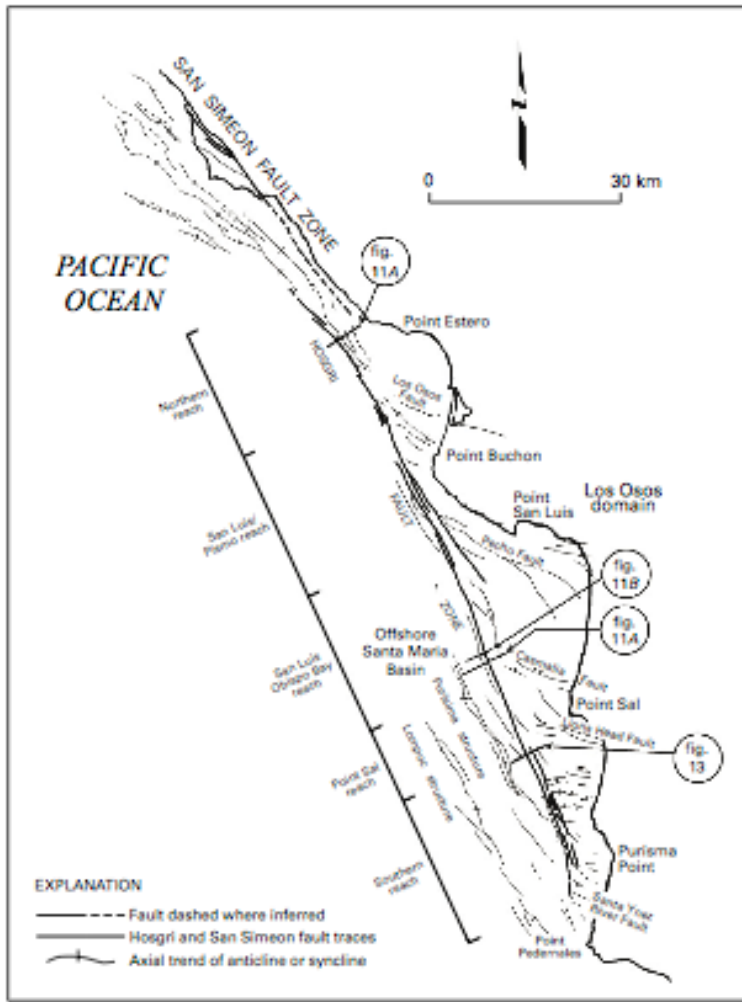
Aerial View of Diablo Canyon



HIGH LEVEL RADIOACTIVE WASTE AT DIABLO CANYON



Diablo Canyon is located in a **seismically** active zone.



- Current NRC regulations prohibit nuclear facilities from being built next to active, major earthquake faults.
- The recently discovered Shoreline Fault has not been thoroughly studied. It is located 300 meters from the intake structure and 600 meters from the power block.
- There are multiple faults in the area – a minimum of 13.

Diablo Canyon is an old plant with **aging components**.

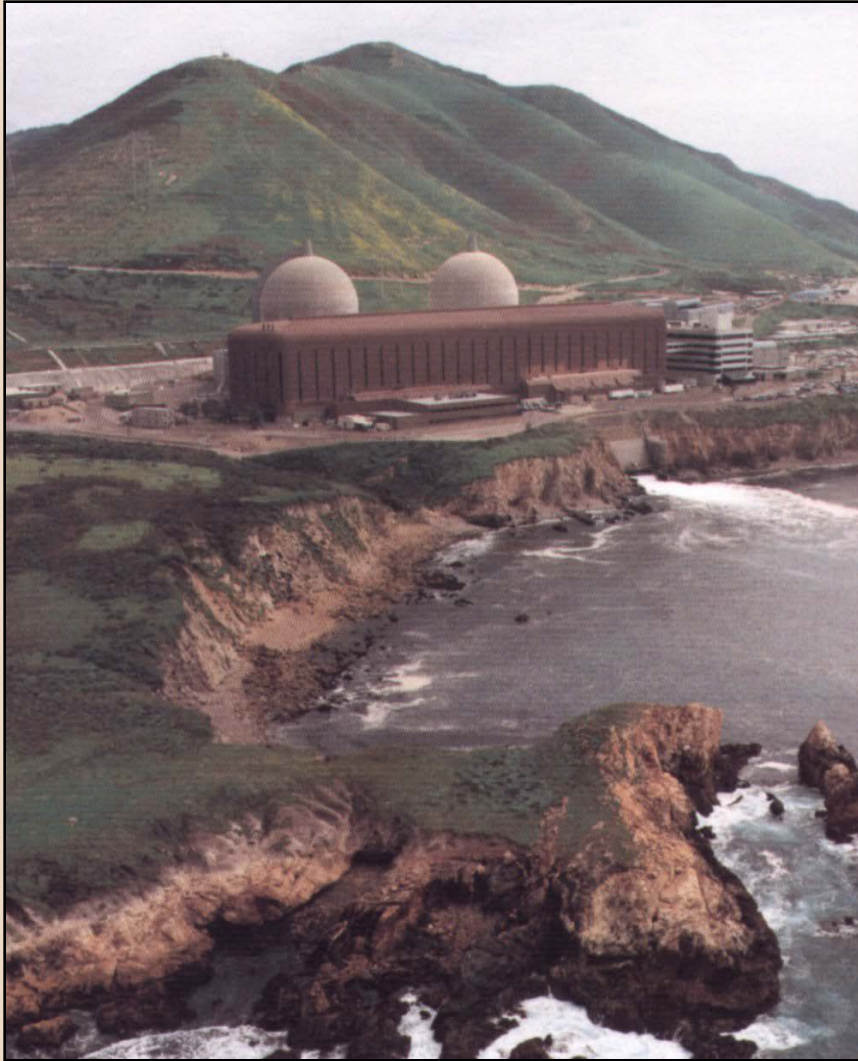
- Diablo was designed in the 1960s.
- Construction began in the late 1960s and continued into the 70s and 80s.
- Diablo didn't begin operation until 1984.

Do the math!

The plant was old before it began operation. It'll be over 60 years old at the end of the license renewal period.



Diablo Canyon is a particularly **vulnerable** target of terrorism because it is:



- located on an exposed and unprotected portion of the California coast
- susceptible to airborne and waterborne assaults
- not a no-fly zone



'Good Neighbor' policy

Legal Challenges pressed by Mothers for Peace



- Since 1973 MFP has filed cases disputing Nuclear Regulatory Commission (NRC) regulation of Diablo.
- Cases are filed based on specific failures of Pacific Gas and Electric Company and the NRC.
- Since Fukushima, MFP has collaborated with dozens of like-minded organizations to challenge NRC failures to act on “lessons learned” from the Fukushima disaster.

Mothers for Peace plays a unique role as Intervenor in litigation involving:

- seismic safety
- high level radioactive waste storage
- consequences of a terrorist attack
- opposition to license renewal for Diablo Canyon



Current Intervention:

opposition to license renewal

at Diablo Canyon Nuclear Power Plant



PG&E currently has licenses to operate the two reactors at Diablo until 2024 and 2025.

In November of 2009, PG&E applied for 20 additional years, until 2044 and 2045.

Legal Intervention is led by Mothersfor Peace

Attorney **Diane Curran**, an NRC law expert from Washington, D.C.

She has taken leadership in coordinating legal challenges of the NRC by dozens of intervenors.

- 37 groups demand the NRC expand evacuation zones and improve emergency planning for all reactor sites.
- 26 groups successfully demanded the NRC complete a thorough study of the environmental effects of storing spent radioactive fuel before issuing any licenses.



In its opposition to license renewal, Mothers for Peace asserts that PG&E:



- lacks essential information about potential environmental impacts of earthquakes, as required under the National Environmental Policy Act
- is out of compliance with federal law, which requires the NRC to take into account severe accident risks that have been recognized by NRC staff studies of the on-going Fukushima disaster

What's our alternative?

- **conservation and energy efficiency**
- **multiple sources of sustainable energy**, as supported by the California Energy Commission
- **Community Choice Aggregation**: go to SLOCleanEnergy.org
- See mothersforpeace.org for more information on **Sustainable Energy**



You can support our work:

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<http://mothersforpeace.org>