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Subject: Re: Diablo Danger Underestimated?
Reply-To: Harvey Sherback <harveysherback@yahoo.com>

California Environmental Protection Agency
Climate Change Policy and Climate Action Team Members
Matthew Rodriquez
Secretary for Environmental Protection

November 30, 2015

Hello Secretary for Environmental Protection Rodriquez, Climate Action Team Members & Staff,

New studies, using state of the art seismic mapping technology, show that fault lines threatening the Diablo Canyon nuclear power plant are more complex and interconnected than Diablo's designers could have known. This complexity negates the seismic predictions used to justify the plant's location. Unfortunately, we now know that the network of faults nearby and underneath PG&E's nuclear facility could be activated by a mega-thrust earthquake far to the north, at the Cascadia Subduction Zone. Subduction Zone earthquakes are the most powerful quakes in the world and can exceed magnitude 9.0.

The Cascadia, which begins near Vancouver Island, is a 620 mile long fault line that intersects the San Andreas Fault just off of Cape Mendocino in Northern California. This region of powerful and unpredictable earthquakes connects directly to the Diablo Canyon site. After evaluating America's nuclear power facilities in the wake of the Fukushima disaster, the NRC has recently ranked the aging Diablo Canyon nuclear plant as uniquely vulnerable to unanticipated seismic activity, a "Group One...hazard."

In the early 60's, Pacific Gas & Electric first chose Bodega Bay as the site for their proposed nuclear plant. They began excavating the foundation, but then a fault line was discovered on site, and that nixed the plan for Bodega Bay. PG&E then proposed a spot fairly close to where the Diablo Canyon plant sits today. This second location also got crossed off the list because of faults. When, finally, construction of the Diablo Canyon nuclear facility began near Avila Beach,

PG&E maintained that there were no active faults within 30 miles of the facility. The plant was originally designed to withstand a magnitude 6.75 earthquake but was later upgraded to weather a magnitude 7.5 shaker. Unknown at the time, the plants' two reactors were situated near undiscovered faults.

For over 30 years, seismologists have argued that the utility companies have underestimated the seismic threat to their nuclear facilities, especially Diablo Canyon's redesigned structural supports. In 2011, the Nuclear Regulatory Commission (NRC) ranked Diablo Canyon as the nation's nuclear plant most vulnerable to earthquakes. In 2012, Michael Peck, who for five years was lead NRC inspector at Diablo Canyon, argued that the plant was no longer operating within its license and that it should be shut down until PG&E demonstrated that the reactors and other equipment could survive earthquakes on the newly discovered faults. In a letter sent to PG&E on May 13, 2015, the NRC revealed that Diablo Canyon is classified as one of the nation's two "Group One" nuclear facilities, "that have the highest re-evaluated hazard relative to the original plant seismic design."

Recognized only recently, the Diablo Cove Fault Line runs east to west directly under the Unit One Reactor and turbine building! The fault underneath the facility is connected to the entire network of faults. About a quarter mile west of the facility, the Diablo Cove Fault cuts across the seismically active Shoreline Fault, itself only recently discovered. The Shoreline is connected to the feared Hosgri Fault, a component of the San Andreas Fault System. Because this location is so tectonically active, and the system of faults is so complex, no one can predict safety with confidence. The Diablo Cove Fault, the Shoreline Fault, the Hosgri Fault, the San Andreas Fault and the Cascadia Subduction Zone are all seismically linked, and the power stored within the combined network of fault systems could create an earthquake sufficient to exceed Diablo Canyon's safeguards.

Harvey Sherback
Berkeley, California

April 8, 2008 - Title: Earthquakes Along The Cascadia And San Andreas Faults May Be Linked, Affecting Risk To San Francisco Bay Region

"Seismic activity on the southern Cascadia Subduction fault may have triggered major earthquakes along the northern San Andreas Fault in California, according to new research."

http://www.sciencedaily.com/releases/2008/04/080403131923.htm

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The Diablo Cove Fault:

From the first establishment of Pacific Gas & Electric's Geoscience Department in 1985 through its presentation at its Senior Seismic Hazard Analysis Committee workshop in the late 2011, the previously well-documented zone of faulting extended through the foundation of the Diablo

Canyon nuclear power plant's Unit One's turbine generator and reactor containment was never mentioned.

http://a4nr.org/wp-content/uploads/2012/02/021012-Hamilton-testimony-014-Full.pdf

Note: Maps and pictures of Diablo Cove Fault Line:

Page 56 - Figure 1
Page 57 - Figure 2
Page 58 - Figure 3
Page 64 - Figure 9
Page 68 - Figure 13
Page 72 - Figure 17

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Headline: Geometry And Earthquake Potential Of The Shoreline Fault, Central California

The Optimal Anisotropic Dynamic Clustering results show that the Shoreline Fault is a single continuous structure that "connects" to the Hosgri Fault.

http://www.bssaonline.org/content/103/1/447.short

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Radio Broadcast: July 22, 2015 - Headline: The Really Big One' That Will Hit the Pacific Northwest

"There's a fault line that should strike greater fear in your heart than the San Andreas or the Hayward. The Cascadia Subduction Zone runs off the U.S. West Coast from Cape Mendocino in California north to Vancouver Island in Canada. The 700-mile fault zone has the potential to unleash such an enormous earthquake and tsunami that, in the words of one expert, "everything west of Interstate 5 will be toast."

http://www.kqed.org/a/forum/R201507220930

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March 24, 2015 - Headline: Doomsday Clock Moves Closer To Midnight As California’s Last Active Nuke Plant Puts Millions At Risk

"The Diablo Canyon Power Plant near scenic San Luis Obispo on the Golden State’s central coast sits in an area where several new fault lines have been discovered over the decades. Controversy flared in 2014 due to revelations about regulatory safety questions from the plant’s former senior resident inspector Michael Peck, who served in that role from 2007-12. Peck became concerned that new seismic data suggested the plant was operating outside the safety

margins of its license. He issued a non-concurrence in 2012, a Dissenting Professional Opinion in 2013 and a DPO Appeal in 2014."

http://ecowatch.com/2015/03/24/doomsday-clock-diablo-canyon/

2012 Title: Michael Peck Diablo Canyon Nuclear Power Plant Non-Concurrence NCP-2012-001.

http://pbadupws.nrc.gov/docs/ML1215/ML12151A173.pdf

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UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20555-0001
The Power Reactor Licensees on the Enclosed List May 13, 2015

Subject: Screening And Prioritization Results For The Western United States Sites Regarding Information Pursuant To Title 10 Of The Code Of Federal Regulations 50.54(f) Regarding Seismic Hazard Re-Evaluations For Recommendation 2.1 Of The Near-Term Task Force Review Of Insights From The Fukushima Daiichi Accident.

http://webiva-downton.s3.amazonaws.com/877/24/5/5751/NRClettoPGEMay132015.pdf