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Docket Number:	17-IEPR-01
Project Title:	General/Scope
TN #:	221317
Document Title:	9.26.17 Harvey Sherback Email re Diablo
Description:	9.26.17 Harvey Sherback Email re: Diablo
Filer:	Raquel Kravitz
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	9/26/2017 11:00:30 AM
Docketed Date:	9/26/2017

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Date: September 26, 2017 at 1:07:25 PM EDT

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Subject: Re: Better Safe Than Sorry.....It's Time To Close Diablo Down!

Reply-To: Harvey Sherback <harveysherback@yahoo.com>

State of California
California Energy Commissioners
Robert B. Weisenmiller, Ph.D.
Chairman

September 26th, 2017

Hello Chairman Weisenmiller, California Energy Commission Members & Staff,

Thanks for your many efforts to create a better, safer world for us, our children and future generations.

On Tuesday, September 7, 2017, a powerful offshore magnitude 8.2 earthquake shook Mexico City making it one of the largest quakes to hit Mexico in the last century. This was followed on September 19th by a magnitude 7.1 shaker that struck central Mexico, collapsing buildings in plumes of dust and killing more than 300 people. Two more earthquakes shook southern Mexico on Saturday, September 22nd, further upsetting a country still coming to grips with the devastation from the strong temblors earlier this month.

Here in California, we are told to get ready for "The Big One", a possible 9.0 Fukushima-like earthquake. Unfortunately, a quake of this magnitude would be compounded by the threat it poses to PG&E's Diablo Canyon nuclear power plant. Originally designed to withstand a magnitude 6.75 earthquake and later reconstructed to tolerate a magnitude 7.5 quake, the nuclear plants' tolerances underestimate the true seismic potential of today's mega-thrust shakers.

In September 1981, Pacific Gas & Electric engineers discovered that the blueprints used for the Diablo Canyon nuclear plant's structural supports were supposed to be reversed for the second reactor, but regrettably, they were not. The resulting error was that many parts of the power plant were needlessly reinforced, while others, which should have been strengthened, were left untouched and as a consequence, vulnerable to strong earthquakes. Nonetheless, on March 19, 1982, with this information at hand, the Nuclear Regulatory Commission decided not to review its 1978 decision approving the plant's safety, despite these dangerous defects.

Additionally, a previously well-documented zone of faulting called the Diablo Cove Fault extends through the foundation, under the power plants' Unit One turbine generator and reactor containment vessel. The east-west trending Diablo Cove Fault runs offshore and intersects with the nearby Shoreline Fault which in turn is

connected to the Hosgri Fault Line, a component of the San Andreas Fault System. The power stored within this network of seismically linked faults could creating an earthquake sufficient to exceed Diablo Canyon's safeguards.

Sadly, President Trump and his Administration are going after hundreds of millions of acres of protected marine sanctuaries including California's Channel Islands, the Greater Farallones National Marine Sanctuary and the Monterey Bay National Marine Sanctuary. If the Trump Administration has their way, these protected areas will be opened to offshore drilling and hydraulic fracturing on and around a plethora of stressed fault lines which could trigger a meltdown at the thirty-two-year-old, brittle Diablo Canyon nuclear power plant.

Since June 6, 2016, the California State Lands Commission has overseen "forty" offshore mapping surveys from San Diego County to San Francisco County. Many of these "publicly financed" surveys were done with the same underwater sonar equipment that is used for oil and gas exploration. The problem is that the petroleum and methane extraction companies will use these sonar maps to stake their claim for both drilling and fracking rights.

Because California's coastline lies along the "Pacific Ring of Fire" earthquake zone, it's imperative that we close Diablo down as soon as possible to avoid a replay of the deadly Fukushima-Daiichi nuclear plant's disastrous ongoing meltdowns.

Harvey Sherback
Berkeley, California

Additional Information:

April 26, 2017 - Headline: Trump to Order Oil Drilling Study Off California Coast, Sources Say

<https://www.bloomberg.com/news/articles/2017-04-25/trump-said-to-order-review-of-oil-drilling-off-california-coast>

September 19th, 2016 - Headline: Restore the Offshore Fracking Moratorium

<http://www.independent.com/news/2016/sep/19/restore-offshore-fracking-moratorium/>

August 2nd, 2016 - Headline: Diablo Nuclear Plant Faces Threats and Threatens: Part I

<http://www.independent.com/news/2016/aug/02/diablo-nuclear-plant-faces-threats-and-threatens-p/>

August 4th, 2016 - Headline: Diablo Nuclear Plant Faces Threats and Threatens: Part II

<http://www.independent.com/news/2016/aug/04/diablo-nuclear-plant-faces-threats-and-threatens-p/>

June 25th, 2016 - Headline: Earthquake Dangers at Diablo Worsened by Fracking

<http://www.independent.com/news/2016/jun/25/earthquake-dangers-diablo-worsened-fracking/>

October 22nd, 2015 - Headline: Diablo Danger Underestimated?

<http://www.independent.com/news/2015/oct/22/diablo-danger-underestimated/>

January 22nd, 2013 - Headline: No Longer a Rational Option

<http://www.independent.com/news/2013/jan/22/no-longer-rational-option/>

December 13th, 2012 - Headline: So Many Faults

<http://www.independent.com/news/2012/dec/13/so-many-faults/>

September 4th, 2016 - Headline: Oklahoma Orders 37 Fracking Wells Shut Down In Wake of Record-Tying 5.6 Magnitude Quake

"The move comes just months after a March 2016 report by the U.S. Geological Survey that said hydraulic fracking practices, which is used by oil and gas producers to extract oil from the ground, has increased the risk of earthquakes in several states, including Oklahoma."

<https://weather.com/news/news/earthquake-oklahoma-texas-nebraska>

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

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>

According to PG&E, the Diablo Canyon nuclear power plant can withstand earthquakes up to magnitude of 7.5. A USGS seismologist, Jeanne L. Hardebeck, believes that a joint seismic event of the Hosgri and Shoreline faults could exceed the plant's design capacity for safe operation, possibly reaching a magnitude 7.7.

http://docketpublic.energy.ca.gov/PublicDocuments/16-IEPR-07/TN212309_20160715T101025_Some_of_the_Many_Reasons_Why_It%27s_So_Important_to_Close_Diablo.pdf

Bulletin of the Seismological Society of America 103 (2013): 447, 458. Print. Public Broadcasting Service. (2011, July 11). Diablo Canyon [Video file]. 8:40-9:19; 12:20-13:55.

Retrieved from <http://www.pbs.org/video/2056655205/>

As of June 6, 2016, there has been "forty" California State Lands Commission offshore mapping surveys up and down the California coastline.

(1) A offshore survey in the Northern Channel Islands, offshore of Santa Barbara and Ventura Counties from June 6-10, 2016,

(2) A offshore survey offshore of Oceano and Vandenberg Air Force Base in San Luis Obispo and Santa Barbara Counties between July 11-20, 2016.

(3) A offshore survey near the Northern Channel Islands, offshore of Santa Barbara and Ventura Counties from July 15-29, 2016.

(4) A offshore survey from Año Nuevo Island to Santa Cruz, offshore of San Mateo and Santa Cruz Counties from July 20-29, 2016.

(5) A offshore survey offshore of Oceano and Vandenberg Air Force Base in San Luis Obispo and Santa Barbara Counties between July 11-20, 2016 and July 29, 2016.

(6) A offshore survey near the Northern Channel Islands, offshore of Santa Barbara and Ventura Counties from July 27 to August 5, 2016.

(7) A offshore survey offshore of Goleta in Santa Barbara County between August 31 and September 16, 2016

(8) A offshore survey within the Santa Maria Basin offshore of Santa Barbara County between September 1-30, 2016.

(9) A offshore survey within the Santa Barbara Basin offshore of Santa Barbara County from September 11 through October 1, 2016.

(10) A offshore survey from Santa Cruz to Moss Landing offshore of Santa Cruz County during one of the following time-frames: September 12-21, 2016; September 26 to October 7, 2016; or October 11-21, 2016

(11) A offshore survey of Ocean Beach in San Francisco County from September 12, 2016 through March 10, 2017,

(12) A offshore survey from Goleta to Pt. Mugu offshore of Santa Barbara County between September 26 through October 21, 2016; and February 3 through April 28, 2017

(13) A offshore survey in Dana Point in Orange County between September 28 to October 15, 2016.

(14) A offshore survey between Santa Barbara and Morro Bay in Santa Barbara and San Luis Obispo Counties between October 3-21, 2016.

(15) A offshore survey offshore in El Segundo in Los Angeles County between October 15 and November 23, 2016.

(16) A offshore survey between Carpinteria, Mandalay, and Huntington Beach in Santa Barbara, Ventura, and Orange Counties from October 31 to November 30, 2016

(17) A offshore survey from County Line Beach to Pt. Dume (Ventura and Los Angeles Counties), Oct. 31 to Nov. 30, 2016

(18) A offshore survey from North Beach to Mariposa Point (Orange County) is scheduled to occur between Nov. 2, 2016 to Feb. 28, 2017

(19) A offshore survey between Encinitas and Del Mar, San Diego County is scheduled to occur between November 7 and December 30, 2016.

(20) A offshore survey of Carlsbad, San Diego County is scheduled to occur between November 7 and

December 30, 2016.

(21) A offshore survey of Long Beach, Los Angeles County is scheduled to occur between November 28 and December 30, 2016.

(22) A offshore survey of Santa Cruz County near the San Lorenzo River and Soquel Creek mouths, Santa Cruz County is scheduled to occur on January 13, 2017.

(23) A offshore survey from Santa Cruz to Moss Landing offshore of Santa Cruz Count is scheduled to occur during one of the following time frames: March 8-15; March 23-29; September 4-8; September 18-22 2017.

(24) A offshore survey in Santa Monica Bay, Los Angeles County is scheduled to occur between March 18-26, 2017.

(25) A offshore survey of San Clemente, Orange County is scheduled to occur from April 4 to May 5, 2017.

(26) A offshore survey of Encinitas to Del Mar, San Diego County is scheduled to occur from April 24 through July 24, 2017.

(27) A series of offshore surveys of Ocean Beach in San Francisco County from April 20 through October 20, 2017.

(28) A offshore survey in the Northern Channel Islands, offshore of Santa Barbara and Ventura Counties is scheduled to occur from June 1-30, 2017.

(29) A offshore survey of the northern Channel Islands, Santa Barbara County is scheduled to occur from June 18-27, 2017.

(30) A offshore survey of Santa Monica, Los Angeles County from July 7-27, 2017

(31) A offshore survey of the Big Sur coast, Monterey County from July 10-14, 2017

(32) A offshore survey of Hermosa Beach, Los Angeles County from July 17-30, 2017

(33) A offshore survey of Santa Monica, Los Angeles County from August 8th and 11th, 2017

(34) Up to two six-day surveys will be conducted around Goleta to Point Mugu offshore of Santa Barbara County during each of the following operational survey windows: Sept. 4-10, 2017; Sept. 18-26, 2017; Oct. 2-11, 2017; Feb. 12-16, 2018; Feb. 26 to Mar. 2, 2018; Mar. 12-16, 2018; and Mar. 26-30, 2018.

(35) A offshore survey of Santa Cruz to Moss Landing offshore of Santa Cruz and Monterey Counties will last approximately 5 days and is scheduled to occur from September 18-22, 2017.

(36) A offshore survey of Encinitas to Del Mar, San Diego County will last approximately 6 days and is scheduled to occur between September 14 and November 14, 2017.

(37) A survey from Santa Cruz to Moss Landing offshore of Santa Cruz and Monterey Counties which will last approximately 5 days, was originally scheduled to occur from September 18-22, 2017; however, due to large swell conditions beginning mid-week, the U.S. Geological Survey will begin surveying on Sunday, September 17, 2017. If weather conditions change and the survey is unable to take place, additional survey windows are as follows: October 1-7, 2017, and October 15-21, 2017.

(38) A offshore survey within the Sacramento-San Joaquin River Delta is scheduled to occur between September 29 and October 9, 2017.

(39) A offshore survey of the San Elijo Lagoon, San Diego County is scheduled to occur between September 27 and October 4, 2017.

(40) A offshore survey of Carlsbad, San Diego County is scheduled to occur between September 25 and 30, 2017.