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CLERK-SUPERIOR COURT  
SAN DIEGO COUNTY, CA

8 Attorneys for Petitioners and Plaintiffs

9 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
10 COUNTY OF SAN DIEGO

11 CITIZENS OVERSIGHT, INC., a  
12 California non-profit corporation;  
13 PATRICIA BORCHMANN, an individual,

14 Petitioners and Plaintiffs,

15 v.

16 CALIFORNIA COASTAL COMMISSION;  
17 SOUTHERN CALIFORNIA EDISON  
18 COMPANY, Real Party in Interest; and  
19 DOES 1 to 100,

20 Respondents and Defendants.

Case No. 37-2015-00037137-CU-WM-CTL

VERIFIED PETITION FOR WRIT OF  
ADMINISTRATIVE MANDATE  
(C.C.P. § 1094.5) AND COMPLAINT  
FOR DECLARATORY RELIEF

21 Citizens Oversight, Inc. and Patricia Borchmann, Petitioners, hereby petition this Court  
22 for a writ of administrative mandamus under California Code of Civil Procedure § 1094.5  
23 directed to the California Coastal Commission as follows:

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1 **INTRODUCTION**

2 By this verified petition and complaint, Petitioners and Plaintiffs allege:

3 1. From 1968 to 31 January 2012, Southern California Edison (Edison) was in the  
4 business of generating and selling electricity from its San Onofre nuclear power plant (plant) in  
5 San Diego County, California. The plant was designed with three units: Unit 1 operated from  
6 1968 to 1992; Unit 2 from 1983-2012; and Unit 3 from 1984-2012. Unit 1 was decommissioned  
7 in 1992.

8 2. Since 1984, the plant generated an average of 16 million megawatt hours of  
9 electricity annually, making it the second largest electric generating facility in California. The  
10 plant generated enough electricity to meet the needs of 2.3 million California households -- about  
11 8 percent (8%) of all electricity generated in the State.

12 3. Since 1992, the plant operated two Units consisting of nuclear Pressurized Water  
13 Reactors (PWRs), each rated at 3358 MWt (1180 MWe). Units 2 and 3 were originally equipped  
14 with two CE Model 3340 recirculating steam generators. These original steam generators (OSGs)  
15 were designed for a 40-year service life.

16 4. To generate electricity, Edison used uranium oxide fuel in the form of small  
17 ceramic pellets that were placed inside metal fuel rods. These rods were grouped into bundles  
18 called assemblies. Assemblies at San Onofre were a structured group of fuel rods (long, slender,  
19 metal tubes containing pellets of fissionable material which provide fuel for nuclear reactors:

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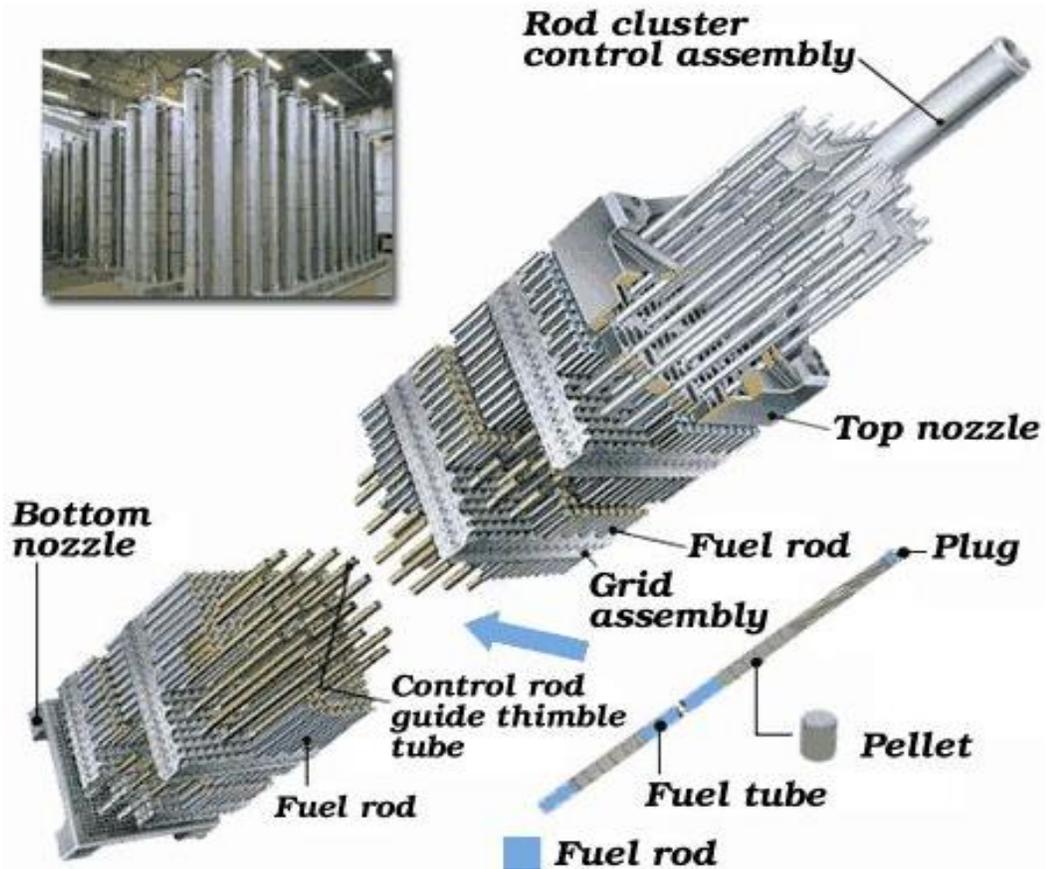
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Figure 3: Schematic view of PWR fuel assembly (Mitsubishi Nuclear Fuel)



5. PWR fuel assemblies like those at San Onofre are comprised of a bottom nozzle into which rods are fixed through the lattice; to finish the whole assembly, it is crowned by a top nozzle. The bottom and top nozzles are heavily constructed as they provide much of the mechanical support for the fuel assembly structure. In the finished assembly, most rod components are fuel rods, but some are guide thimbles, with one or more are likely to be dedicated to instrumentation.

6. An 1100 MWe PWR core may contain 193 fuel assemblies composed of over 50,000 fuel rods and some 18 million fuel pellets. Once loaded, fuel stays in the core for several years depending on the design of the operating cycle:

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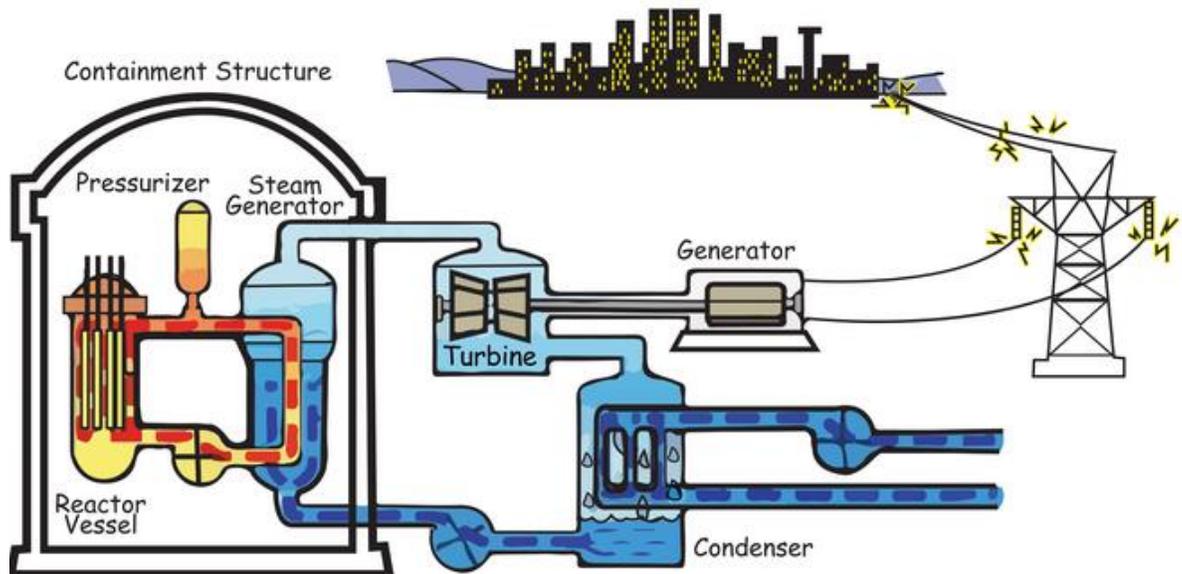
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## The Pressurized-Water Reactor (PWR)



9. During refueling, every 12 to 18 months, some of the fuel - usually one third or one quarter of the core - was removed to storage, while the remainder was rearranged to a location in the core better suited to its remaining level of enrichment.

10. Over time, the nuclear fuel at the plant lost efficiency. Every 18-24 months, Edison shut down the plant to remove and replace about one-third of the fuel, consisting of the oldest assemblies. While the plant was generating electricity, its three (then two) reactors were also producing nuclear spent-fuel waste. The nuclear waste produced at San Onofre looked exactly like the fuel that was loaded into the three reactors - the assemblies of metal rods enclosing stacked-up ceramic pellets. Nuclear fuel spent about three years in the San Onofre reactors to generate heat for electricity.

11. As of October 2014 Edison admitted there were 2,668 in the water pool at San Onofre (approximately 1,100 of them are High Burn -up Fuel). The longer the nuclear fuel remains in the reactor, the higher the burnup. Burnup is a way to measure how much uranium is burned in the reactor. It is the amount of energy produced by the uranium.

12. Following the 18-24 month cycle, Edison installed the newer assemblies and removed some of the spent ones to underwater storage pools:

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13. San Onofre was in the midst of its sixteenth refueling cycle when on 31 January 2012, it experienced an event as follows:

"At 1505 PST<sup>1</sup>, Unit 3 entered Abnormal Operation Instruction S023-13-14 'Reactor Coolant Leak' for a steam generator leak exceeding 5 gallons per day.

"At 1549 PST, the leak rate was determined to be 82 gallons per day. At 1610 PST, a leak rate greater than 75 gallons per day with an increasing rate of leakage exceeding 30 gallons per hour was established and entry into S023-13-28 'Rapid Power Reduction' was performed.

"At 1630 PST, commenced rapid power reduction per S023-13-28 'Rapid Power Reduction'. At 1731 PST, with reactor power at 35% the Unit was manually tripped. At 1738 PST, Unit 3 entered Emergency Operation Instruction S023-12-4 'Steam Generator Tube Rupture'.

"At 1800 PST the affected steam generator was isolated."

All control rods fully inserted on the trip. Decay heat is being removed thru the main steam bypass valves into the main condenser. Main feedwater is maintaining steam generator level. No relief valves lifted during the manual trip. The plant is in normal shutdown electrical lineup.

Unit 2 is presently in a refueling outage and was not affected by this event.

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<sup>1</sup> PST, Pacific Standard Time.

1 The licensee has notified the NRC Resident Inspector. The licensee has issued a press  
2 release.

3 14. As a result of the failure of its steam generators after only 11 months of joint  
4 operation, the plant was closed permanently on 31 January 2012. When the plant closed, Edison  
5 had over 2,668 fuel assemblies in the spent fuel pools for Units 2 and 3. These assemblies must  
6 be cooled in the spent fuel pools for five to seven years or more. Edison has removed some of the  
7 assemblies from the pools and stored them in dry cask storage. About 800 Unit 2 and 3 fuel  
8 assemblies are stored in above-ground dry cask storage at the plant. In addition, there are about  
9 400 Unit 1 used nuclear fuel assemblies in dry cask storage on site.

10 15. During decommissioning of Unit 1, the nuclear spent fuel was originally spread  
11 between all three units' spent fuel pools. All Unit 1 fuel has now been transferred to dry cask  
12 storage (five casks from the Unit 3 pool were loaded between October and December 2003; nine  
13 casks from the Unit 1 pool were loaded in May 2004; and three casks from the Unit 2 pool were  
14 loaded in June 2005). Transfer of Unit 2 & Unit 3 fuel to dry cask storage began in 2006.

#### 15 **THE PERMIT AND THIS CHALLENGE THERETO**

16 16. Edison applied to the Coastal Commission for a permit to bury close to 3,600,000  
17 lbs. of nuclear waste on a San Diego beach, calling the project an "Independent Spent Fuel  
18 Storage Installation," or an "ISFSI." The permit was approved on October 6, 2015.

19 17. Unless the permit is revoked, Edison will be permitted to bury at least 75 storage  
20 modules filled with the nuclear waste produced by Edison as part of its business operations.  
21 There are 2,668 spent fuel assemblies in wet storage pools in buildings in which Edison  
22 conducted the business that produced the nuclear waste. The fuel is highly radioactive and will  
23 remain so for thousands of years.

24 18. Plaintiffs seek an administrative writ of mandate, or a declaration, directing  
25 Respondent and Defendant California Coastal Commission (CC) to set aside its 6 October 2015  
26 decision to grant Southern California Edison (Edison) a permit to construct and operate a facility  
27 to store nuclear waste produced by Edison as part of its business operations.

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1           19.     Edison’s decision to establish an Independent Spent Fuel Storage Installation, or  
2 ISFSI, just 100 feet from the shore of a San Diego beach is the worst alternative:

- 3           \* The location of the ISFSI is within a few dozen yards of the ocean;
- 4           \* It is designed to be built entirely below-grade, but the water table is so high, it can be  
5 only partially buried and then a berm added around it;
- 6           \*The water table is only inches from the bottom of the ISFSI structure;
- 7           \* This area of the coast will likely erode one third of the way to the ISFSI within 35 years,  
8 according to estimates in the CC staff report;
- 9           \* This is in a tsunami inundation zone;
- 10          \* This is on the moving Pacific Plate and is therefore subject to earthquakes;
- 11          \* A major freeway (Interstate 5), transporting over 147,000 vehicles per day, runs within  
12 the exclusion zone, unlike all other nuclear plants in North America;
- 13          \* LOSSAN (LA-San Diego & San Luis Obispo) Rail Corridor; 351 miles, 6 counties,  
14 servicing 41 stations, 150 daily passenger trains and the only viable freight rail link to the  
15 rest of the nation.
- 16          \* 8.4 million people live within a 50-mile evacuation area;
- 17          \* The relatively thin canisters (only 5/8 inch thick) are subject to salt-air corrosion and  
18 may last only a few decades before cracking due to chlorine-induced stress corrosion  
19 cracking (CISCC);
- 20          \* Once corrosion starts, transporting the canisters becomes difficult;
- 21          \* The canisters are too large to transport economically using conventional rail cars, which  
22 are limited to 286,000 pounds net weight, while the canisters plus the transportation  
23 overpack can weight well over 400,000 pounds; and
- 24          \* The canisters are not compliant with size and weight standards to insure safe and  
25 economical transfer to a permanent storage solution.

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1           20.     Edison’s reckless and knowing conduct in deploying defective steam generators  
2 that caused the plant to close brought the need to find an intermediate storage to a head. Edison  
3 was repeatedly warned that there were fatal flaws in the design Edison chose for its new steam  
4 generators deployed by Edison at the San Onofre plant in 2010 and 2011. The warnings were in  
5 Edison emails, action items, minutes, reports, and letters. The new steam generators suffered  
6 from very high void fraction and produced steam too hot for the new steam generators to handle.  
7 It was these defects that caused the Unit 3 generators to spring a leak. Similar tube wear was then  
8 discovered in Unit 2 and the plant was closed, precipitating the need to find an intermediate  
9 storage site for the spent fuel.

10           21.     In approving the permit to allow 3,600,000 lbs of high level nuclear waste to be  
11 buried on the beach 100 feet from the shoreline with no plan for removal, despite storm  
12 warnings, and without requiring Edison to show it had exhausted other reasonable alternatives,  
13 the Commission (1) proceeded without, or in excess of, jurisdiction; (2) did not provide a fair  
14 hearing because of rampant and widespread ex parte communications with Edison; and (3) abused  
15 its discretion because the Commission failed to proceed in the manner required by law, which  
16 requires the Commission to protect the California Coast lines from such hazardous waste.

17           22.     The Commission’s decision finding that there are no alternatives is not support by  
18 substantial evidence. The whole record and the relevant evidence demonstrates that the  
19 Commission’s reliance on Edison’s statements -- in light of Edison’s habitual misrepresentations  
20 and reckless conduct in deploying the failed steam generators that closed the plant -- was wholly  
21 unjustified. No reasonable person would have granted a permit to store the nuclear waste on the  
22 beach 100 feet from the shoreline on this record.

23           23.     Edison did not adequately and in good faith attempt to investigate or develop any  
24 other alternatives to the coastal site, other than those already in the licensed area.

25           24.     The Coastal Commission (CC), in connection with the issuance of the permit,  
26 accepted an agreement with Edison under which Edison would pay the CC in excess of  
27 \$5,000,000. The CC Commissioners also obtained an unenforceable indemnity agreement from  
28 Edison in which Edison agreed to indemnify the CC Commissioners for the intentionally

1 unlawful act of issuing the permit.

2 25. This action is brought pursuant to Code of Civil Procedure sections 1094.5 and  
3 1060, and Public Resources Code sections 30801 and 30804. All further statutory references are  
4 to the Public Resources Code, unless otherwise indicated.

5 **THE PARTIES**

6 26. Petitioner and Plaintiff Patricia Borchmann is an individual who participated in the  
7 permit proceedings.

8 27. Petitioner and Plaintiff Citizens Oversight, Inc, a 501(c)3 corporation with offices  
9 in California and members that reside near the San Onofre facility, participated in the permit  
10 proceedings.

11 28. Respondent Southern California Edison Company, a California corporation, is a  
12 real party in interest and a necessary party as the applicant for the permit that is at issue in this  
13 petition.

14 29. Respondent and Defendant California Coastal Commission recently granted a  
15 permit to SCE to bury close to 3,600,000 lbs. on the beach in San Diego County. The plaintiffs  
16 live in and/or operate out of San Diego and are aggrieved persons with the right to judicial review  
17 of the Commission's decision. Pub. Res. Code § 30801.

18 30. Respondent California Coastal Commission (CC) is the state administrative body  
19 authorized to enforce the California Coastal Act (Pub. Res. Code §§ 30000, etseq.) consistent  
20 with the constitutional rights of private property owners (id. §§ 30001.5(c)).

21 31. The CC Commissioners were appointed by Governors Jerry Brown and Arnold  
22 Schwarzenegger, Assembly Speakers John A. Pérez (December 2009), and Toni G. Atkins  
23 (March 2014), and President Pro Tempore Kevin de Leon (October 2014) and Darrell Steinberg  
24 (November 2008). The following CC Commissioners were appointed to the following terms by  
25 the following appointing authorities:

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**Gov. Arnold Schwarzenegger**



**Gov Jerry Brown**



**Wendy Mitchell  
(12/10)**



**Martha McClure  
(5/11)**



**Senate Pro Tem  
Darrell Steinberg  
(2008-2014)**



**Effie  
Turnbull-Sanders  
(1/14)**



**Mary K.  
Shallenberger (5/13)**



**Erik Howell  
(2/14)**



**Pres Pro Tem  
Kevin Leon**



**Roberto Uranga  
(3/15)**

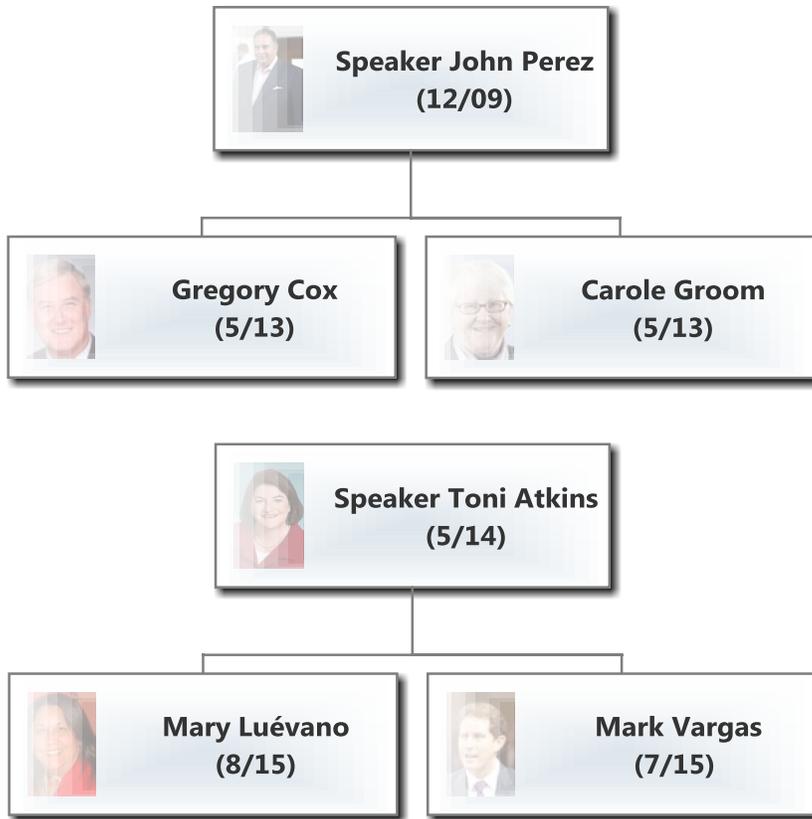


**Steve Kinsey  
(5/15)**



**Dayna Bochco  
(5/15)**

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32. Does 1 through 50 are persons or entities unknown to the Plaintiffs and Petitioners at this time who may have some interest that may be affected by this action sufficient to render them necessary parties. Plaintiffs will amend this petition to specifically identify each such person or entity as a respondent and/or real party in interest, if and when their identities become known.

**VENUE**

33. Venue is proper in this Court, because the property that is the subject of this litigation is located in the County of San Diego.

**ABANDONMENT OF SAFETY OBLIGATION**

34. A Memorandum of Understanding (MOU) has been entered into by a 7-member Interjurisdictional Planning Committee (IPC) which includes the Counties of Orange and San Diego; the Cities of Dana Point, San Juan Capistrano and San Clemente; Camp Pendleton; California, (local jurisdictions) and California State Parks. Under the MOU, local jurisdictions prepare annual budgets identifying specific baseline activities related to radiological emergency planning. Although each of the local jurisdictions are well-intended, none have the infrastructure

1 capability to provide meaningful emergency services in the event of a major nuclear event at San  
2 Onofre. These jurisdictions do not have established and understood emergency protocols; they do  
3 not have the training in nuclear emergency procedures, and they lack the staff and equipment  
4 needed for a radiation emergency event at San Onofre. The Coastal Commission decision to issue  
5 the permit for Edison's nuclear waste site at San Onofre leaves Southern California families living  
6 under a nuclear Sword of Damocles.

### 7 **EDISON FAILED TO CONSIDER ALTERNATIVES**

8 35. SCE's current plan is to transfer the fuel assemblies from two spent fuel pools  
9 (SFPs) to dry cask storage, creating an on-site ISFSI, or indefinite nuclear waste site, at San  
10 Onofre. There are several reasons why the Coastal Commission should not have rushed to grant  
11 Edison permission to store its nuclear waste at the location of the decommissioned San Onofre  
12 plant on the San Diego coastline:

13 \* SCE's Aging Management Program (AMP), required by the NRC and by Special  
14 Condition #2 by which the California Coastal Commission permit was granted, is still "in  
development"

15 \*SCE's AMP, not available at present nor expected to be developed within the next 20  
16 years, is needed for monitoring and inspection of the storage casks to ensure the long-term  
transportability and eventual removal of the casks ISFSI from the site

17 \*SCE's AMP, the utility mechanism for monitoring and maintenance of the spent fuel  
18 casks, has not been previously demonstrated nor is it clear when these techniques, tools  
and standards would become available for use at San Onofre.

19 \*SCE's yet undeveloped AMP is required to provide the monitoring of environmental  
20 conditions, i.e. temperature and humidity, the influencing risks of corrosion and  
degradation of the casks hence prohibiting SCE's removal the casks as planned in 2051

21 \*SCE's undeveloped AMP is also required to provide structural integrity validation of the  
22 casks planned for removal by visual observation, surface measurements, and other  
inspection techniques related to the physical condition of the casks

23 \*SCE's intended but yet undeveloped AMP cannot deliver the combination of the  
24 inspections required by the NRC and Special Condition #2 of the California Coastal  
Commission's permit, to monitor and maintain the condition of the casks throughout their  
25 service life, provide assurance they are performing as designed and allowing the spent fuel  
to be safely removed when the DOE provides an interim storage facility or permanent  
26 repository

27 \* Due to SCE's inability to develop and deliver the required AMP, if the steel fuel storage  
casks should degrade becoming unsafe to transport, the proposed ISFSI would be possibly  
28 be required for many decades and the temporary permit would consequently transition San  
Onofre to a permanent nuclear waste storage site continuing and accelerating increased

1 risk to public safety and the potential to adversely affect marine and visual resources and  
2 coastal access

3 \* The California Commission own 'Potential for Reasonably Foreseeable Impacts' within  
4 the Conclusion of the permit states. "Therefore there is the potential that the proposed  
5 ISFSI site will be undermined by shoreline retreat and/or subjected to flooding as a result  
6 of sea level rise, storm waves or a tsunami event. Despite the claim of the facility's robust  
7 design, these geologic forces would eventually result in a loss of stability and structural  
8 integrity, and cause the discharge of debris into the coastal ocean to the detriment of water  
9 quality and marine organisms."

10 36. First, dry casks on nuclear reactor sites stored in ISFSI were originally intended as  
11 a temporary solution until the Department of Energy (DOE) developed a permanent disposal in a  
12 deep geologic repository. However, due to the DOE's failure to establish a permanent nuclear  
13 waste repository, on-site storage of nuclear waste on a somewhat permanent basis has become a  
14 dangerous default situation, especially when the nuclear reactors are located on the coastline in a  
15 high-density population area.

16 37. Second, the original site decision for San Onofre was chosen for the purpose of  
17 being within close proximity to population centers, and thus, close to the users of the energy  
18 produced. However, the same reasoning does not apply for siting decisions for nuclear waste  
19 storage as, in the event of an emergency, there is greater per capita risk in siting the ISFSI near  
20 densely populated areas -- a risk that only increases with the length of time nuclear waste remains  
21 in the populated area.

22 38. Third, the general public did not agree to indefinite nuclear waste storage at the  
23 nuclear plant site when the plant was originally approved and put online.

24 \*Although available by the SCE filing date (6-15-2015) the CA Coastal  
25 Commission staff permit application review did not include the NRC approved  
26 SCE Emergency Planning (EP) exemptions for San Onofre (6-4 and 6-5 2015).  
27 These NTC EP exemptions were not disclosed in the public review process nor  
28 included in the documentation encompassed by CA Coastal Commission staff in  
the permit's application under IV Finding and Declarations, **B. OTHER  
AGENCY APPROVALS U.S. Nuclear Regulatory Commission; Federal Pre-emption.** Those NRC EP approvals were also accompanied by a Federal Pre-emptive notification to U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA), on June 5, 2015, that FEMA is no longer required to review, monitor and report activities associated with off-site radiological emergency planning and preparedness as they relate to San Onofre under the provisions of 44 CFT 350. The NRC further requested FEMA notify the appropriate state and local governments that off-site radiological emergency plans and preparedness, as described in 44 CFR 350, are no longer required.

1           \*As such, these approved NRC EP exemptions:

- 2                   • eliminate the breadth of SCE's obligations to keep the State
- 3                   emergency response organizations and the general public informed
- 4                   in the event of an emergency;
- 5                   • decrease the safeguards to public health and safety in the event of a
- 6                   credible and foreseeable accident scenario i.e. cask drop;
- 7                   • discontinue the federal requirement for support to State planning
- 8                   and monitoring activities resulting in a clear reduction in State's
- 9                   emergency plan effectiveness by reducing the ability to effectively
- 10                  respond to an emergency;
- 11                  • propose notification and interaction procedures with State and
- 12                  local agencies are eliminated almost in their entirety, based on the
- 13                  erroneous assumption that San Onofre, in its present state with
- 14                  spent fuel in the cooling pool, be viewed only as an ISFSI;
- 15                  • fail to adequately analyze a number of credible scenarios and
- 16                  consider circumstances unique to California's coastal nuclear
- 17                  facilities: risks to public health and safety associated with and
- 18                  exacerbated by the state's seismicity and risk of tsunami;
- 19                  • provide reasonable assurance that the health, safety, common
- 20                  defense and security of the public will be endangered.

21           39.       Fourth, the highly-concentrated salt air environment at the San Onofre site poses

22           increased degradation risks of chloride-induced stress corrosion cracking (CISCC) due to the close

23           proximity to the ocean and prevailing winds. Furthermore, while the San Onofre nuclear plant

24           needed cold ocean water to condense steam back to water, the ISFSI does not need to be located

25           within close proximity to the ocean. In fact, coastal sites are more likely to result in CISCC as the

26           CISCC process does not begin until the surface temperature of the canisters drops below 85

27           degrees C (185 degrees F). It likely that during the fourteen (14) – to - thirty (30) year cooling

28           period planned by Edison, the canisters will have cooled enough for CISCC to commence and

          early cracking could occur.

          40.       In a staff review of the proposal, the Coastal Commission itself stated “it cannot be

          ignored that the proposed ISFSI location within the NIA lies just over 100 feet from the shoreline,

          at some of the lowest grade elevations present at the San Onofre site....the site could potentially be

          exposed to several coastal hazards depending on how long the facility were to remain in place.”

          41.       Most importantly, the Coastal Commission presented the alternative of “shipping

          the material to an off-site ISFSI to be developed by SCE.” Under this alternative, Edison could

          apply for a specific license to develop its own ISFSI away from the San Onofre licensed area.

1 However, Edison admitted it did not investigate any alternative locations away from coastal  
2 environments due to permitting restrictions. Below are examples of proposed off-site alternatives:

3 **THE PALO VERDE ALTERNATIVE**

4 42. Moving Edison’s nuclear waste at San Onofre to Edison’s nuclear waste site at  
5 Palo Verde is a better alternative than leaving it on San Diego’s shoreline. As these pictures show,  
6 trucks can move nuclear waste:



17 43. As this picture below shows, there is a remote area at the Palo Verde nuclear plant  
18 (Edison holds 15% ownership) in the desert where nuclear waste is already stored. The Palo  
19 Verde Nuclear Generating Station is a nuclear power plant located near Tonopah, Arizona in  
20 western Arizona:



1 **FISHEL CALIFORNIA ALTERNATIVE**

2 44. Fishel is located in East San Bernardino County, CA. Fishel has a population of  
3 zero (0); the closest improved property, a water pumping plant, is thirteen (13) miles away, and it  
4 is located next within close proximity to a railroad line. Railroads have been demonstrated to be  
5 one of the safest ways to transport nuclear waste and other hazardous material. Fishel is not a  
6 designated wilderness area and is comprised of land mostly owned by the Federal Government.

7 **EAST CAMP PENDLETON ALTERNATIVE**

8 45. One potential location evaluated by Edison and the Coastal Commission was the  
9 San Onofre "Mesa" location, which is an Edison-operated, non-nuclear auxiliary facility located  
10 within Camp Pendleton. The Mesa location has the advantages of being a previously-developed  
11 site under Edison ownership, but like San Onofre, it is located on an easement granted by the Navy  
12 to be terminated in 2017.

13 **EDISON HAD NO PLAN TO CLEAN UP**  
14 **THE WASTE ITS BUSINESS PRODUCED**

15 46. Edison's nuclear power reactors at San Onofre were licensed based on a set of  
16 requirements called the plant's "licensing basis." A principal licensing basis document is the  
17 plant's final safety analysis report (FSAR). The FSAR and the plant's Nuclear Regulatory  
18 Commission (NRC) license and associated technical specifications are the principal regulatory  
19 documents describing how the plant is designed, constructed, and operated.

20 47. Because a plant's design and operation are not static, certain changes are necessary  
21 over the course of a facility's operating life. Reactor licensees must follow NRC regulations to  
22 justify and implement changes in the design basis and licensing basis for their facilities, and are  
23 required to document such changes in the FSAR. 10 CFR 50.71(e) requires the FSAR to be  
24 periodically **updated**. The objectives of 10 CFR 50.71(e) are to ensure that licensees maintain the  
25 information in the Updated FSAR (UFSAR) to reflect the current status of the facility and address  
26 new issues as they arise so that the UFSAR can be used as a reference document in safety analysis.

27 48. The NRC has defined the changes that a licensee may make to a licensed facility  
28 without prior NRC approval. Pursuant to 10 CFR 50.59(c)(1), without obtaining a license

1 amendment, the holder of a license may: (1) make changes in the facility as described in the FSAR  
2 (as updated), or (2) make changes in the procedures as described in the FSAR (as updated), and (3)  
3 conduct tests or experiments not described in the FSAR (as updated) only if a change to the  
4 technical specifications incorporated in the license is not required, and the change, test or  
5 experiment does not meet any of the eight 10 CFR 50.59(c)(2) criteria.

6 49. In 2004, Edison applied to the California Public Utilities Commission (CPUC) for  
7 an order permitting Edison to install new steam generators at its San Onofre plant. In December  
8 2005, the CPUC decided to allow Edison to proceed with the new steam generators at San Onofre.  
9 On 30 November 2004 Edison's Vice President, Dwight Nunn, described the significant design  
10 issues and the increased safety threat of the new steam generators in a letter (Nunn Letter). The 30  
11 November 2004 Nunn letter provides in pertinent part:



Dwight E. Nunn  
Vice President

November 30, 2004

14 Mr. Akira Sawa  
15 General Manager  
16 Mitsubishi Heavy Industries, LTD  
17 Kobe Shipyard & Machinery Works  
18 1-1, Wadasaki-Cho 1-Chome  
19 Hyogo-Ku  
20 Kobe 652-8585  
21 Japan

Dear Mr. Sawa:

Subject: Replacement Steam Generators  
San Onofre Nuclear Generating Station, Units 2 & 3

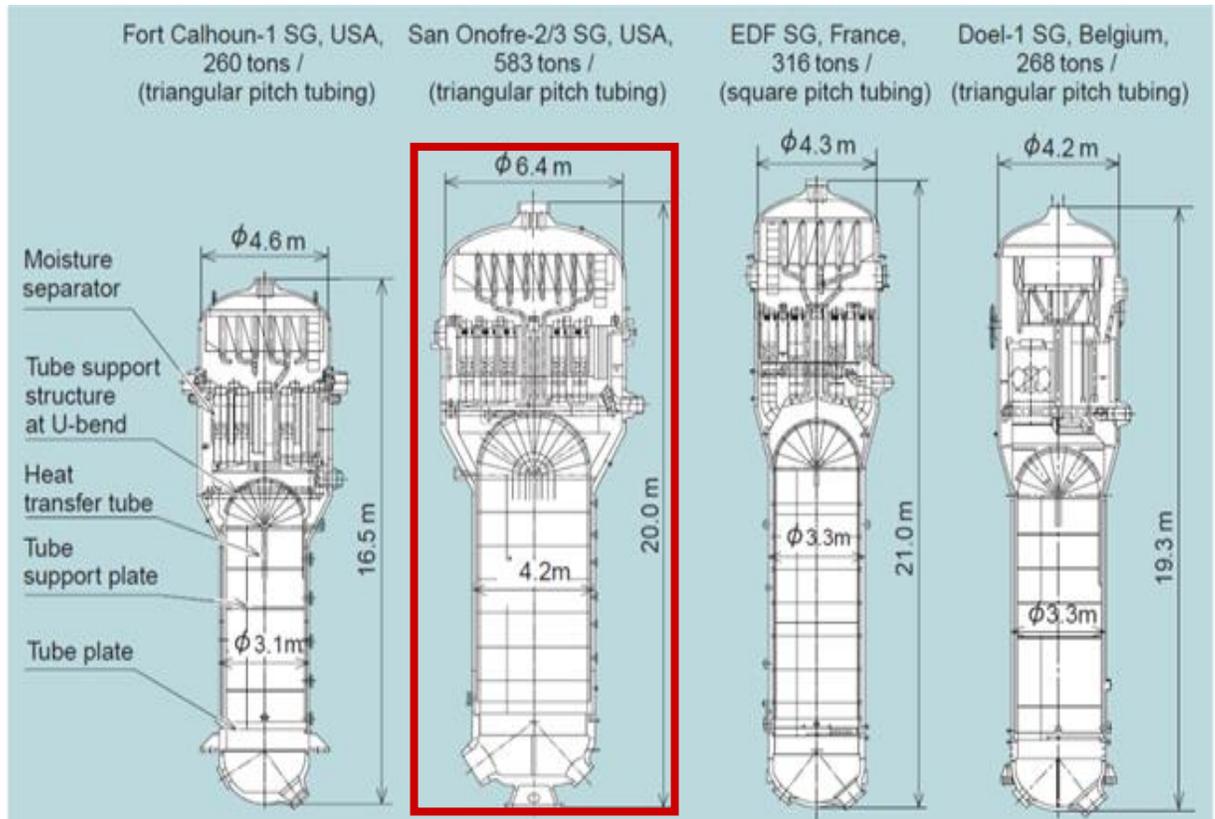
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22 This will be one of the largest steam generators ever built for the United States and  
23 represents a significant increase in size from those that Mitsubishi Heavy Industries has  
24 built in the past. It will require Mitsubishi Heavy Industries to evolve a new design beyond  
25 that which they currently have available. Such design evolutions require a careful, well  
26 thought approach that fully evaluates the risks inherent in creating a new and significantly  
27 larger steam generator. Such design evolutions tend to challenge the capability of existing  
28 models and engineering tools used for proven steam generator designs. Success in  
developing a new and larger steam generator design requires a full understanding of the  
risks inherent in this process and putting in place measures to manage these risks.

1 Based upon these observations, I am concerned that there is the potential that design flaws  
2 could be inadvertently introduced into the steam generator design that will lead to  
3 unacceptable consequences (e.g., tube wear and eventually tube plugging). This would be a  
4 disastrous outcome for both of us and a result each of our companies desire to avoid. In

5 50. Edison “souped-up” the new steam generators with 9,727 tubes -- 377 more than  
6 were in the original generators. In order to make room for the increased tubes, Edison had to  
7 remove stabilizing components such as the stay cylinder, supporting the tube sheet, and the “egg  
8 crate” tube support.

9 51. The drawings below illustrate how much bigger the new steam generators were in  
10 comparison to any generators previously manufactured by the company Edison hired:



23 52. After the defective steam generators deployed by Edison at its San Onofre plant  
24 failed eleven (11) months into their joint use, the Atomic Safety and Licensing Board found  
25 Edison’s new steam generators “differed in design from the original steam generators.” For  
26 example, each new steam generator (1) has 9,727 tubes, which is 377 more than are in the  
27 original; (2) does not have a stay cylinder supporting the tube sheet; and (3) has a broached tube  
28

1 design, rather than an “egg crate” tube support.”

2 53. In order to make room for the 377 new and longer tubes, Edison removed key  
3 mechanisms from the stabilizing components of the new steam generators. The following  
4 diagrams illustrate the location of the additional 377 tubes, the removed stay cylinder, and the  
5 removed egg crate tube support.

6  
7 **Edison’s Overloaded Steam Generators**  
8 **(377 More Tubes than in Original)**



20  
21 54. In order to make room for the 377 tubes, Edison removed the egg crate tube  
22 support and stay cylinder parts of the steam generators stabilization system:

23 ///

24 ///

25 ///

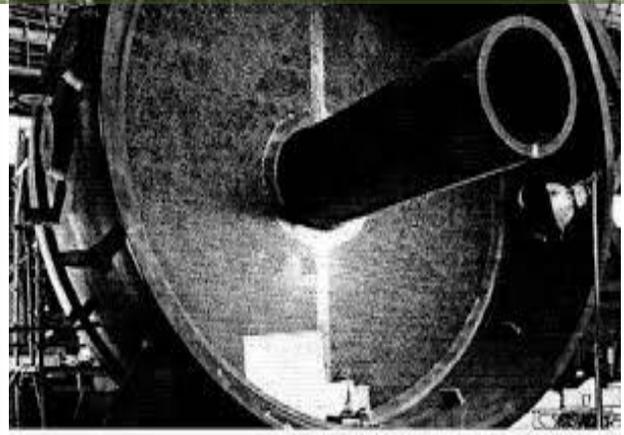
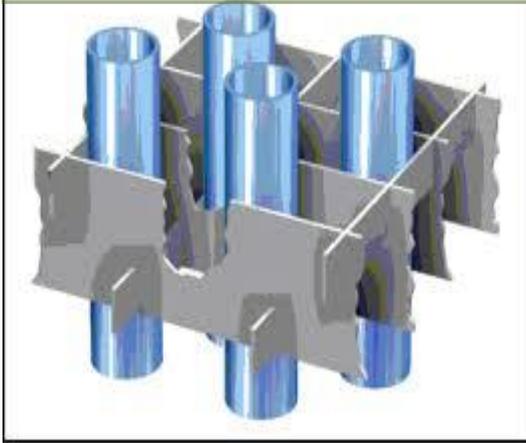
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Edison removed egg crate support

Edison removed massive stay cylinder



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55. Section 10 CFR 50.59 stipulates that the FSAR (as updated) is expected to include FSAR changes resulting from evaluations performed pursuant to the regulation (10 CFR 50.59(c)(3)) such as Edison’s plan to alter the design of the new steam generators with more tubes and reduced structural protections. Edison was required under this provision and directed to maintain records of changes in the facility (10 CFR 50.59 (d)(1)) and to submit a report containing a brief description of any changes, tests, and experiments made under this regulation, including a summary of the evaluation of each (10 CFR 50.59 (d)(2)). According to 10 CFR 50.59(d)(2), this report must be submitted to NRC at intervals not to exceed 24 months.

56. Because the new design’s additional tubes and reduced stabilization increased safety risks, the safety license exemption was not available under 10 CFR 50.59. Edison’s changes resulted in more than a minimal increase in the likelihood of the occurrence of a malfunction in the consequences of an accident, and increased the consequences of a malfunction of a structure, system and components (SSC).

57. Edison crossed over the line and went from avoidance, to evasion, of § 50.59 even before the “AVB Design Team recognized that the design for the San Onofre RSGs resulted in higher steam quality (void fraction) than previous designs;” Edison did not implement “changes in design to reduce the void fraction” because the potential changes “could impede the ability to justify the RSG design under the provisions of 10 C.F.R. 50.59.”<sup>2</sup>

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<sup>2</sup> Mitsubishi Heavy Industries (MHI) Root Cause Report p.22

1           58. Edison’s failure to obtain a safety license amendment was not excused by the  
2 §50.59 exemption. Edison’s Boguslaw Olech, a key engineer who worked for Edison on the  
3 design and deployment of the new steam generators, admitted that Edison adopted the policy to  
4 evade the safety license amendment under the veil of §50.59. According to Olech, the new steam  
5 generators’ design requirements and improvements had to be solved so they could be installed  
6 under the § 50.59 rule.<sup>3</sup>

7           59. The former Deputy Regional Administrator of the Nuclear Regulatory  
8 Commission, Elmo Collins, admitted that Edison should have requested a license amendment  
9 from the NRC prior to deploying the defective steam generators at San Onofre. Collins also  
10 admitted “the steam generator design was fundamentally flawed and would not have been  
11 approved as designed.”

12           60. The CC Commissioners knew Edison had operated its nuclear waste-producing  
13 business for over 40 years but failed to develop a plan to locate the Edison nuclear waste to a safe  
14 location not on San Diego’s coastline. The CC Commissioners knew Edison could not state it  
15 could remove its nuclear waste it seeks to bury on the beach by even as late as 2051. The 75  
16 modules will be buried below sea level in concrete, making their safe removal infeasible. The CC  
17 Commissioners knew Edison had no plan to relocate Edison’s nuclear waste from the beach in  
18 San Diego.

19           61. It appears that on 7 June 2006, Edison notified the NRC of Edison’s plan to install  
20 new steam generators at San Onofre. Edison did not inform the NRC that the AVB Design Team  
21 had discovered a void fraction problem and Edison had limited correctives to those that would not  
22 alert the NRC. Instead, the SCE briefing to the NRC indicated there would be no associated  
23 power uprate (i.e. there was to be no increase in San Onofre’s maximum power level).

24           62. The briefing document identified the changes as key design “improvements.”  
25 Edison referred to the limited anti-vibration bar changes as “**improved** anti-vibration bar design.”  
26 The briefing document also falsely identified that both the original and replacement steam  
27 generators were **identical in height**. The briefing informed the NRC that the new steam

28 <sup>3</sup> 20 March 2012 “Steam Generators: Design and details” Atomic Power Review, p. 2

1 generators were 643.6 tons, which was 23.6 tons heavier than the original, and that the  
2 replacement and would have more tubes than the original (9,727 versus 9,350).

3 63. Edison's PowerPoint for the new steam generator project at San Onofre did not  
4 inform the reader as to the negative void problem; it referred to the changes in the steam  
5 generators as "improvements:"



## San Onofre Nuclear Generating Station Units 2 & 3

### STEAM GENERATOR REPLACEMENT PROJECT OVERVIEW

*June 7, 2006*



## Some Key Design Improvements



- Larger Surface Area
- Alloy 690 Thermally Treated Tubing
- Improved AVB Design
- Integral Steam Nozzle
- Improved Material for Tube Supports
- Forged Shell



**S/G 3A Lower and Middle Shell  
S/G 2A Balance Ring, Extension  
Ring, & Tubesheet**



12



1                                   **DEFECTIVE STEAM GENERATORS FAIL IN 11 MONTHS**

2           64.     Edison deployed the defective steam generators, despite having been warned of  
3 their defects. The defective steam generators failed within eleven (11) months, causing the closure  
4 of the San Onofre plant.

5                                   **UNREASONABLE RELIANCE ON SCE**  
6                                   **REPRESENTATIONS NO ALTERNATIVES**

7           65.     Edison seeks to bury its nuclear waste on the beach in San Diego as a result of its  
8 reckless conduct in deploying four (4) defective steam generators at its nuclear plant at San  
9 Onofre. Edison has made a series of false statements to California State officials at the CPUC and  
10 to the public that demonstrate that it is unreasonable to rely on Edison’s statements regarding San  
11 Onofre.

12           **66.**     The permit should be revoked until Edison identified and obtains an off-site  
13 location for the ISFSI. Edison effort to escape responsibility for storing the nuclear waste its  
14 business activities produced raises unacceptable, life-threatening risks for the people living in and  
15 around San Onofre. In the event someone else or the federal government does not provide a  
16 permanent repository or other offsite interim storage facility emerges, or if the shipment of San  
17 Onofre’s spent fuel to an off-site location is otherwise delayed, or if the steel fuel storage casks  
18 proposed for use in the ISFSI degraded to the point of becoming unsafe to transport, the proposed  
19 ISFSI could be required beyond 2051, possibly for many decades. Under this scenario the ISFSI  
20 would eventually be exposed to coastal flooding and erosion hazards beyond its design capacity,  
21 or else would require protection by replacing or expanding the existing San Onofre shoreline  
22 armoring. In either situation, retention of the ISFSI beyond 2051 would have the potential to  
23 adversely affect marine and visual resources and coastal access.

24                                   **UNLAWFUL INDEMNIFICATION**

25           67.     In order to induce the CC Commissioners to grant the unlawful permit which the  
26 CC members knew to be unlawful, Edison agreed to indemnify the CC Commissioners to  
27 indemnify and hold harmless the Commission, its officers, agents, and employees with respect to  
28 the Commission’s approval of the project against any and all liability.



1 WHEREFORE PLAINTIFFS PRAY FOR THE FOLLOWING RELIEF

2 1. For a writ of mandate vacating the order of the California Coastal Commission  
3 issuing to Southern California Edison under Application NO. 9-15-0228

4 2. For a declaration that the Permit issued by the California Coastal Commission to  
5 Southern California Edison under Application NO. NO. 9-15-0228 was issued in excess of the  
6 Coastal Commission authority under law and is declared null and void.

7 3. For attorney's fees according to statute;

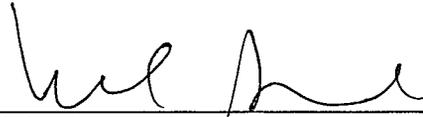
8 4. Costs; and

9 5. For all other relief the Court deems proper.

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AGUIRRE & SEVERSON, LLP

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Dated: November 3, 2015

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Michael J. Aguirre, Esq.,  
Attorneys for Petitioners

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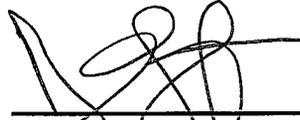
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**VERIFICATION**

I am a petitioner in this proceeding. The facts alleged in the above petition are true of my own knowledge.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: 11/3/2015

  
\_\_\_\_\_  
Petitioner  
Citizen's Oversight, Inc.

Date: 11-03-15

  
\_\_\_\_\_  
Petitioner  
Patricia Borchmann