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Michael Lesar, Chief, Rulemaking and Directives Branch, Mailstop TWB-05-B01M, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

RE: NUREG-1437, Revision 1, July 2009 [Docket ID NRC-2008-0608]- COMMENTS ALLIANCE FOR NUCLEAR RESPONSIBILITY, Nuclear Information Resource Service, Fairewinds Associates, Beyond Nuclear, Public Citizen, GRAMMES, Greenpeace, New Jersey Environmental Federation. (attached)

In Peace

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NUREG-1437, REVISION 1, JULY 2009 [DOCKET ID NRC-2008-0608] COMMENTS OF THE ALLIANCE FOR NUCLEAR RESPONSIBILITY, NUCLEAR INFORMATION RESOURCE SERVICE, FAIREWINDS ASSOCIATES, BEYOND NUCLEAR, PUBLIC CITIZEN, GRAMMES, GREENPEACE AND NEW JERSEY ENVIRONMENTAL FEDERATION

January 12, 2010

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RE: NUREG-1437, Revision 1, July 2009 [Docket ID NRC-2008-0608]-

COMMENTS ALLIANCE FOR NUCLEAR RESPONSIBILITY, Nuclear Information Resource Service, Fairewinds Associates, Beyond Nuclear, Public Citizen, GRAMMES, Greenpeace, New Jersey Environmental Federation.

The Alliance for Nuclear Responsibility, Nuclear Information Resource Service, Fairewinds Consultants, Beyond Nuclear, Public Citizen, GRAMMES, Greenpeace, and New Jersey Environmental Federal. (hereinafter "A4NR, et al") provides comments on NUREG-1437, Revision 1 issued July 2009. Section 1 discusses procedural issues and Section 2 makes comment on each section of the document.

Background

In 2003, the Executive Director of Alliance for Nuclear Responsibility—then representing another San Luis Obispo, California organization—was the **only** member of the public to attend the Nuclear Regulatory Commission's (NRC) initial west coast meeting opportunity for public participation in the Generic Environmental Impact Statement Revision held in California. It should seem obvious to most governmental agencies that when only one member of the public attends (in a state with a population of 36 million) there is a cause to doubt that public believed their participation was welcomed (or accessible, or convenient). It should have raised questions about the NRC's ability to notify the public of meetings and opportunities for participation.

Comments provided that evening in 2003 included a very important point which the NRC has again failed to seriously consider in the scheduling of meetings for public comments on its latest GEIS revision—the need to hold the meetings *near the reactor communities.* Here they would find the citizens—the "stakeholders" whom the NRC refers to in its publications—with the most valid concerns about continued operation of aging reactors and the ongoing creation and onsite storage of highly radioactive waste on *our* state's fragile coast. In fact, it was clear from the sign-in sheets at GEIS meetings held in 2009 that the insistence by California's elected representatives that meetings be held near reactor sites resulted in the only meetings where more that two members of the "public" were in attendance. A4NR, et al, continues to question sincerity of the NRC's commitment to openness and transparency when the local public has to turn to its elected officials in order for the NRC to schedule meetings in affected communities.

When the NRC scheduled of public meetings on the GEIS Revision over a hundred miles from either Diablo Canyon, SONGS or any other reactor community, it remains difficult for the public to believe the NRC considers our input valuable. The locations chosen by the NRC signaled to the public, to those who live within the "fallout zones" of these and many other reactor facilities—and to their elected representatives— that their input was neither encouraged nor valued. Lack of recognition that the public can and should provide valuable insight into the NRC's oversight process continues. The NRC's inability to listen to the public in 2003 resulted in wasted time and resources and shadowed the public's perception of the purported "openness" and transparency of the NRC's current license renewal revisions.

Comments, questions and recommendations of A4NR, et al
Introduction

PAGE I–6 determining the significance of environmental impacts associated with an issue. The introduction to the GEIS on I-6 states the following:

- The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics;

- A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective offsite radiological impacts from the fuel cycle and from high-level waste and spent fuel); and

- Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures would probably not be sufficiently beneficial to warrant implementation.

The NRC states that the generic analysis of an issue may be adopted in each plant-specific review.

A4NR, et al, question: What are the criteria for challenging the generic analysis of an issue in a plant-specific review? Please describe or list any license renewal applications where the generic analysis of an issue has been challenged, and also identify any successful challenges for such issues applied to reactors the NRC has approved for relicensing.

A4NR, et al, recommendation: Please provide a list of every issue that has been accepted for a Category 2 plant-specific review in a license renewal proceeding. Doing so will give the public a better idea of the scope of input the NRC is open to considering.

Page I–7

The GEIS introduction states "Scoping also identifies and eliminates from detailed study issues that are not significant or have been covered by a prior environmental review. Having a defined scope for the environmental review allows the NRC to concentrate on the essential issues of actions being considered rather than on issues that may have been or are being evaluated in different regulatory review processes, such as the safety review (NRC 2006)."

A4NR, et al, question: If there are issues involved in a site-specific relicensing proceeding that "may have been or are being evaluated in different regulatory review processes, such as the safety review (NRC 2006)" is the NRC required to update the evaluation or resolve the "different regulatory review processes" before approving a license renewal? If not, under what NRC criteria can the public and/or the state challenge issues that "may have been or are being evaluated in different regulatory review processes"? Please provide any examples of NGO or state challenges that were successful after issues were evaluated in "different regulatory review processes"?

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Actions subject to NRC approval for license renewal are limited to continued nuclear power plant operation consistent with the plant design and operating conditions for the current operating license and to the performance of specific activities and programs necessary accordance with 10 CFR Part 5417

A4NR, et al, question: As there have been over 200 license amendments, temporary orders, and waivers, etc. for Diablo Canyon and over 400 of the same changes for SONGS, the public asks which plant design criteria is assumed as the baseline in the GEIS, and if there are any "temporary orders" in place at the time of license renewal application, must they be resolved into a "permanent" form before any consideration of their impact on extended operation and the license renewal process can continue? For example, onsite storage of radioactive waste was never considered when nuclear plants were licensed. When the local community asked that seismic issues be addressed in the onsite storage proceedings (known to the industry and NRC as ISFSI's) the NRC denied that contention and directed the local community to reopen the original licensing proceedings, even though a new active offshore fault was discovered in 2008 – making it the second active fault discovered after the original permits were granted.

Page I – 9 to I – 12 Decisions outside the regulatory scope of license renewal that cannot be made on the basis of the final GEIS analysis. These decisions include the following five issues.

1. Changes to Plant Cooling Systems (EPA and state of California decisions)
2. Disposition of Spent Nuclear Fuel - The NRC will not make a decision or any recommendations on the basis of the information presented in this GEIS regarding the disposition of spent nuclear fuel at nuclear power plants. <u>The NRC's Waste Confidence Rule (10 CFR 51.23) leaves the onsite storage of spent nuclear fuel during the term of plant operation as the only option at the time of license renewal. Within the context of a license renewal environmental review, the NRC concluded that the storage of spent nuclear fuel can be accomplished safely and without significant environmental impacts.</u>

A4NR, et al, question: If the ultimate disposition of spent nuclear fuel are ongoing and outside the regulatory scope of this GEIS, will this issue be allowed to be reviewed as a Category 2 site-specific issue? If the resolution of this issue is being decided in another NRC forum, will NGO, county and/or state oversight be allowed to review this resolution and reopen license renewal proceedings if they believe the economy or reliability of state energy generation will be challenged?

A4NR, et al, comment: As California's reactors are located on seismically active and/or eroding coastal zones, A4NR seeks assurance this issue will be heavily weighed in an open and transparent proceeding. It is one thing to "grandfather in" the "temporary" storage of radioactive waste generated during the original licensed period of operation of the reactors; no such "grandfathering" can escape updated and separate review for a license period for which the NRC and the Federal government had predicted and guaranteed off-site storage of the waste. If such assurance cannot be guaranteed, then A4NR recommends that any California utilities applications for license renewal be stayed, until the same conditions requiring the permanent disposition of high-level radioactive waste as outlined in California Public Resource Code section 25524 are met.

A4NR, et al, recommendation: The U.S. Senate defunded the Yucca Mountain project in the 2009 Energy Budget, and the project fairs no better under the position of the current administration—as reported by the Bloomberg news (February 26, 2009):

> Obama and Energy Secretary Steven Chu "have been emphatic that nuclear waste storage at Yucca Mountain is not an option, period," said department spokeswoman Stephanie Mueller. The federal budget plan Obama released today "clearly reflects that commitment," she said.

Therefore, the public questions any NRC approvals of license renewals if storage of high-level waste is to remain on site indefinitely. The criteria for siting a permanent high-level radioactive waste facility should also be applied to "temporary" onsite storage. The utilities, the state, and the public never anticipated onsite storage, nor were contentions allowed to address the criteria for waste storage based on the NRC's high-level radioactive permanent waste storage rules and regulations. Instead the NRC assured the public that the onsite dry cask storage would be "temporary". No definition for "temporary" exists in the record of these proceedings. However, A4NR believes that the *up to a hundred year* timeframe oft mentioned by the industry must meet the same criteria for a permanent site and should therefore be investigated.

> The NRC is confident that there will eventually be a licensed high-level waste repository. If the site near Yucca Mountain is eventually found to be unsuitable, alternative sites will be considered. Until a permanent high-level waste repository is operational, the spent nuclear fuel will be safely stored either onsite or at offsite interim storage facilities (NRC 2006).

A4NR, et al, question: As the public and the state have waited over four decades for a permanent high-level radioactive waste repository and in 2010 we appear to be back at square one, on what does the NRC base its confidence in the eventuality of a licensed high-level radioactive waste repository? Please be specific.

A4NR, et al, recommendation: As California has learned that at least one new major-active fault now exists 1800 feet from Diablo Canyon and that the coastline at San Onofre beach is eroding at increased rates within the last year, it is the *state* and not the NRC who should determine if continued production of highly radioactive waste during a license renewal—and for an indefinite and undefined period of storage—will impact the state's economy and its grid reliability.

3. Emergency Preparedness -- The NRC will not make a decision or any recommendations on the basis of information presented in this GEIS regarding emergency preparedness at nuclear power plants. Nuclear power plant owners, government agencies, and State and local officials work together to create a system for emergency preparedness and response that will serve the public in the unlikely event of an emergency. The emergency plans for nuclear power plants cover preparations for evacuation, sheltering, and other actions to protect residents near plants in the event of a serious incident.

A4NR, et al, recommendation: The public and the states are discovering new information that increases the foreseeability of simultaneous events such as earthquakes, hurricanes and floods and/or attacks on the reactor or waste storage sites, with attendant lack of access to emergency routes, or impacts of such simultaneous

events upon emergency routes as well as offsite radioactive releases. The need to address multiple emergency scenarios should be considered in the NRC's GEIS and in Emergency Planning proceedings.

4. Safeguards and Security

A4NR, et al, recommendation: The NRC should adopt in the GEIS the same rules and regulations regarding safeguards and security as were adopted by the Commission for *newly* proposed reactor designs and sites. If the *new* reactor safety and security standards are deemed necessary to protect human health and the environment, then such standards should be applied retroactively to any reactor that will continue to operate beyond its original license, or the licensee must demonstrate how the existing reactor meets those newer standards. The very fact that the NRC has a newer and more stringent standard for reactor safety going forward is a tacit admission that those of the past must be somehow inadequate.

5. Need for Power

A4NR, et al, comment: The need for power is *not* the NRC's mandate. Regulating nuclear power and protecting the publics' health and safety are its mandate. As appears to be indicated in the language of this section, there should be no consideration of need for power in the GEIS or any other NRC decision this is a state decision.

Page I – 14 to I – 15 Public scoping and comments on SEIS

In both the scoping and the public comment process, the NRC will consider comments and will determine whether these comments provide any information that is new and significant compared with that previously considered in the GEIS. If the comments are determined to provide new and significant information that could change the conclusions in the GEIS, these comments will be considered and addressed in the SEIS.

A4NR, et al, recommendation: The GEIS should clearly explain the *criteria* the public will be required to follow to meet the NRC's standard of "new and significant information that could change the conclusions in the GEIS." Without knowledge of these criteria, the public may be falsely assured that conclusions in the GEIS will be reopened as new and significant information comes to light. There is ample evidence that the public and the states have brought forth new and significant information that the NRC has refused to admit in the SEIS. For example: (08-3903-ag(L) 08-4833-ag(CON); 08-5571-ag(CON) United States Court of Appeals for the Second Circuit THE STATE OF NEW YORK; RICHARD BLUMENTHAL, ATTORNEY GENERAL OF THE STATE OF CONNECTICUT; AND THE COMMONWEALTH OF MASSACHUSETTS,)

Page I – 16 Public Comment

1.9 During the ensuing 75-day public comment period, public meetings will be held in each of the four NRC regions.

A4NR, et al, Comment: As stated in the introduction to these comments, the NRC is not specific about the locations and frequency of meetings in each of the four NRC regions. For example, Region IV covers nearly half the mainland United States, and one meeting would be wholly inadequate to meet the needs of the stakeholders and public. The NRC should commit to holding public meetings in each reactor community where

the utility has given notice of intent to file for relicensing, and should include on its service list of notification all relevant state agencies with oversight for utilities, power generation and public safety.

Comments, questions and recommendations
Alternatives Including the Proposed Action

Page 2-4

If the NRC renews the operating license, the decision on whether or not to continue nuclear plant operations will be made by the licensee and State or other Federal (non-NRC) decision makers. This decision would be based on economics, increased energy efficiency production and use, conservation, reliable generation and distribution of electric power, improved fuel diversity, and environmental objectives.

A4NR, et al, Comment: A4NR, et al, Comment: A4NR, et al, requests that the NRC clarify whether the decision to continue operations is a state issue. And if so, how can the NRC be entertaining PG&E's application while the state has recommended and mandated studies that would provide a factual basis on which to determine if an addition 20 years of operation and the resultant production of highly radioactive waste will be in the best interest of California's resource planning and future economical generation.

Page 2 – 4

Refurbishment and Other Activities Associated with License Renewal
In the 1996 GEIS, the NRC assumed that licensees would need to conduct major refurbishment activities to ensure the safe and economic operation of nuclear plants beyond the current license term. Activities included replacement and repair of major components and systems, upgrades, and equipment. Replacement of many systems, structures, and components included steam generators and pressurizers for PWRs and recirculation piping systems for BWRs. It was assumed that many plants would also undertake construction projects to replace or improve infrastructure. Such projects could include construction of new parking lots, roads, storage buildings, structures, and other facilities.

A4NR, et al, Comment: The 1996 GEIS sent a clear signal to the nuclear industry to begin replacing components that *may* need to be replaced before a license renewal could be granted. The result was swift – applications for ratepayer funded replacement projects of large components that were designed to last the full original license term were filed sometimes as little as halfway through the original license term. Hence, the current GEIS draft statement that "Most nuclear plants have not identified any refurbishment activities associated with license renewal" resulted from the GEIS 1996 "clear signal."

Yet the GEIS1996 signal provided no assurance that these same parts will not need to be replaced again to ensure safe operations during license renewal periods. Thus, the NRC will be deciding license renewals based on the condition of components that had proven to be not as robust as initially promised and with no assurance replacements will last any longer.

The draft GEIS states that "Detailed analyses have not been performed for refurbishment actions in this GEIS revision. Instead, the impacts of typical activities during the license renewal term, including any refurbishment activities, are addressed for each resource area.

A4NR, et al, comment: The lack of a detailed analysis appears to be due to an absence of actual data on the operation of reactors beyond original licenses. The original 40-year license for Oyster Creek expired this year (2009). This spring, the NRC approved a very vigorously contested license renewal at Oyster Creek. Since we are barely 6 months into the operation of a relicensed reactor, there is lack of actual information on the continued need for refurbishment actions and other impacts of an additional twenty years of operation. In the months following Oyster Creek's relicense period, the reactor exceeded the number of unplanned shutdowns allowed by the NRC, including one incident barely weeks into the relicense period when Oyster Creek went into cold shutdown on April 25, after one of the plant's two transformers failed. The transformer that failed was a 30-year-old replacement that Exelon installed in February to replace another transformer that caught on fire on February 2. Plant operators declared an unusual event after the fire.

As another example, on October 5, 2009 it was disclosed that "in addition to Oyster Creek, affected plants [faulty clasps on spent fuel storage casks] include Millstone Power Station in Connecticut (relicensed 11/05), Susquehanna in Pennsylvania, Ginna in New York (relicensed 5/04), Brunswick in North Carolina (relicensed 6/06) and Cooper Nuclear Station in Nebraska. As dry cask storage is being imposed at all reactor sites it would appear that this is an issue that either must be resolved in GEIS proceedings and/or relegated to a Category 2 proceeding and mitigated to ensure that radioactive waste is being stored as safely as possible.

Therefore A4NR, et al, recommends all issues that the public and/or state question should be allowed in SEIS proceedings, even if the GEIS unilaterally deems issues to be "small".

In 2003, the only member of the public to comment at the NRC's GEIS meeting on license renewal submitted the following comments:

- components have been identified as substandard or counterfeit – making it impossible to judge expected lifespan;

- Federal oversight has been lacking, allowing undiscovered degradation, i.e. Davis-Besse plant.

The problem of substandard parts, or in this case defective large components, was recently demonstrated at the San Onofre Nuclear Station (NRC meeting with Southern California Edison, ADAMS No. ML092440095 dated 09/02/09). The NRC's GEIS acknowledges on page 4 – 127, "...the majority of construction materials and technology components are expected to be imported." What is unclear is if by "imported" the GEIS is referencing "imported" to mean from outside the town/county of the reactor, or "imported" as from a foreign location.

A4NR, et al, recommendation: The NRC should investigate the potential liability and reduction in safety margins from counterfeit and/or substandard large component replacements at aging reactors and incorporate their findings in the final GEIS.

A4NR, et al, comment: If the international push for constructing new reactors proceeds, then the problem of counterfeit and substandard parts will be exacerbated.

The escalating potential for accidents at aging reactors has received nationwide attention and derogatory audits by the NRC's own Office of Inspector General. Additionally, the General Accounting Office (GAO) has documented the widespread use of counterfeit and substandard parts in nuclear reactors. Finally, in a deregulated electric market, or a hybrid such as currently exists in California, the licensee is motivated to cut costs by delaying expensive repairs. There is thus an economic disincentive to find and remedy problems. Hence, the GEIS must require that site-specific issues be performed by the NRC, not the licensee.[1]

Termination of Nuclear Power Plant Operations and Decommissioning After the License Renewal Term

The impacts of decommissioning are described in the *Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities: Regarding the Decommissioning of Nuclear Power Reactors*, NUREG-0586 (NRC 2002a).

A4NR, et al, Recommendation: Decommissioning activities cannot be relegated to Category 1. Recent disclosures of inadequate capital in decommissioning funds at a large number of reactor sites, as well as wide fluctuations in the reported fiscal health of certain decommissioning funds should be addressed in the GEIS. Failure of the utility to possess adequate capital at the time of decommissioning could impact safety margins of the process and the availability of funds for problem mitigations—both known and unknown. If not, then each SEIS should include a review of status of decommissioning funds and deny renewals until inadequate funds are brought up to an adequate level. In times of great fiscal uncertainty, there is no reason to put additional financial burdens on either ratepayers or taxpayers.

Page 2 – 6 to 2 – 16 Summary of Impacts Associated with License Renewal Under the Proposed Action

[1] Federal Register Notice.

Issue Impact (Category 1 - small)

Land Use
Onsite land use
Offsite land use
Offsite land use in transmission line rights-of-way (ROWs)
Use of transmission line ROWs from continued operations and refurbishment associated with the license renewal term would continue with no change in land use restrictions.

Visual Resources
Aesthetic impacts

Air quality effects of transmission lines
Noise impacts
Geology and Soils
Impacts of nuclear plants on geology and soils
Surface Water
Surface-water use and quality
Altered current patterns at intake and discharge structures
Altered salinity gradients
Altered thermal stratification of lakes
Scouring caused by discharged cooling water
Discharge of metals in cooling system effluent
Discharge of biocides, sanitary wastes, and minor chemical spills
Water use conflicts (plants with once through cooling systems).
Effects of dredging on water quality
Temperature effects on sediment transport capacity

Groundwater use and quality
Groundwater use conflicts (plants that withdraw less than 100 gallons per minute [gpm])
Groundwater use conflicts (plants that withdraw more than 100 gpm including those using Ranney wells)
Groundwater use conflicts (plants with closed-cycle cooling systems that withdraw makeup water from a river)
Groundwater quality degradation resulting from water withdrawals
Groundwater quality degradation (plants with cooling ponds in salt marshes)

Exposure of terrestrial organisms to radionuclides
Cooling system impacts on terrestrial resources (plants with once-through cooling systems or cooling ponds)
Cooling tower impacts on vegetation (plants with cooling towers)
Bird collisions with cooling towers and transmission lines
Water use conflicts with terrestrial resources (plants with cooling ponds or cooling towers using make-up water from a river with low flow)
Transmission line ROW management impacts on terrestrial resources
Electromagnetic field effects on flora and fauna (e.g., plants, agricultural crops, honeybees, wildlife, livestock)
Aquatic Resources
Impingement and entrainment of aquatic organisms (plants with once through cooling systems or cooling ponds)
Impingement and entrainment of aquatic organisms (plants with cooling towers)
Thermal impacts on aquatic organisms (plants with once-through cooling systems or cooling ponds)
Thermal impacts on aquatic organisms (plants with cooling towers)
Effects of cooling water discharge on dissolved oxygen, gas supersaturation, and eutrophication
Effects of non-radiological contaminants on aquatic organisms
Exposure of aquatic organisms to radionuclides
Effects of dredging on aquatic organisms
Refurbishment impacts on aquatic resources
Impacts of transmission line ROW management on aquatic resources
Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses
Stimulation of aquatic nuisance species (e.g., shipworms)

Socioeconomics
Employment and income, recreation and tourism
Tax revenues
Community services and education
Population and housing—over 12, 000,000 people live within 50 miles of SONGS – second only to Indian Pt.
Transportation
Human Health
Radiation exposures to the public
Radiation exposures to occupational workers
Human health impact from chemicals
Microbiological hazards to the public (plants with cooling ponds or canals or cooling towers that discharge to a river)
Microbiological hazards to plant workers
Chronic effects of electromagnetic fields (EMFs)
Uncertain impact
Physical occupational hazards
Postulated Accidents
Design-basis accidents
Solid Waste Management
Low-level waste storage and disposal
Onsite storage of spent nuclear fuel
Offsite radiological impacts of spent nuclear fuel and high-level waste disposal
Mixed-waste storage and disposal
Nonradioactive waste storage and disposal
Uranium Fuel Cycle
Offsite radiological impacts – individual impacts from other than the disposal of spent fuel and high-level waste
Offsite radiological impacts – collective impacts from other than the disposal of spent fuel and high-level waste
Nonradiological impacts of the uranium fuel cycle
Transportation
Termination of Nuclear Power Plant Operations and Decommissioning
Termination of plant operations and decommissioning

A4NR, et al, agrees with the comments filed by Pilgrim Watch (PW), "issues improperly listed as Category 1 include: Solid Waste Management; Emergency Planning; Human Health, Radiation - exposures to the public & occupational workers and impact from chemicals; Postulated Accidents; Termination of Nuclear Power Plant Operations and Decommissioning." As one example, **Human Health;** Radiation exposures to the public; Radiation exposures to occupational workers are listed as category 1. And yet the NRC has stated in its own fact sheer: **Update to the Report "Cancer in Populations Living Near Nuclear Facilities"** (http://www.cancer.gov/cancertopics/factsheet/Risk/nuclear-facilities) that the agency does not expect to have a draft of this report available until 2011, with a completed report to appear later. Such assumptions about Human Health and Radiation Exposures should not be made until such time as this report has been peer reviewed and made available for public comment.

A4NR, et al, Comment: With only a few months, or less, of experience at actual aging reactors that are now operating beyond their original licenses under NRC approval of renewal, we believe there is no factual, much less operational history, to assure the public that the above issues will have "small" impacts. In addition, there is no assurance that the states will not be left with large ratepayer expenses if the GEIS impact predictions prove to be unreliable

A4NR, et al, Recommendation: ***All*** issues should remain Category 2 until at least one reactor of each major design (PWR, BWR) has operated an additional ten of the twenty years of NRC approved license renewals. At that point a detailed analysis based on

operating experience would provide factual information on which to determine whether foreseeable impacts will be "small, moderate, and/or large."

For example, ten years ago:

1. Neither the utilities, the states, nor the NRC, believed that Yucca Mountain funding would be consistently cut and that both executive administration and congressional support for the project would disappear.

2. Terrorists' plans that targeted U.S. reactors were unknown and unthinkable. Today we have American saboteurs rumored to have planned to destroy reactors in Pakistan.[2]

In 2003, the following comment was submitted from the one member of the public who attended the GEIS meeting in California:

> As a condition of re-licensing, the GEIS for nuclear plant license renewals must require that the licensee:

- has the means to resist an attack on the reactor building, its support structures, and its spent fuel storage - from air, land and water by a team of well equipped terrorists;
- be required to pass tests and mock-attack drills which would demonstrate the adequacy of its security. These tests should be required every two years and include mock-attacks testing when the licensee is refueling.

Another reason for requiring an observation period of ten years following the start of a 20 year license renewal is that, as indicated earlier in our comments, there have been over 200 license amendments, temporary orders, and waivers for Diablo Canyon and over 400 of the same changes for SONGS—making it difficult to determine a baseline for operational performance and stability of performance. This "shakedown" period of 10 years will allow the NRC to trend whether this need for amendments and waivers is increasing or decreasing with license renewal.

Emergency planning would need to take into account radioactive releases due to possible attack and shifts in populations near reactor sites so that responses could be planned and funded accordingly.

While the country's need for power has increased, the country's use of power has decreased according to the latest statistics from the Energy Information Agency (document DOE/EIA-0226 (2009/09). Another report released Sept 23, 2009 by the ACEEE looks at energy efficiency programs from recent years in 14 states, with utility costs ranging from $0.016 to $0.033 per kWh and an average cost of $0.025 per kWh. ACEEE gathered data on energy efficiency program costs in 14 states * California, Connecticut, Iowa, Massachusetts, Minnesota, Nevada, New Mexico, New Jersey, New York, Oregon, Rhode Island, Texas, Vermont, and Wisconsin. The six natural gas efficiency programs covered in the report also saved energy cost-effectively * spending $0.27 to $0.55 per therm, with an average of $0.37 per therm, less than a third of the average residential

[2] http://www.dailytimes.com.pk/default.asp?page=2009%5C12%5C26%5Cstory_26-12-2009_pg7_18

retail price seen over the past five years.
(http://aceee.org/pubs/u092.pdf?CFID=4116977&CFTOKEN=88188721)

Coupled with the creation of increasingly efficient technology and economically viable alternatives signifies that decision making on power generation over a decade in advance is unrealistic and irresponsible.

Large components designed to last the full design life of reactors (steam generators, turbine rotors, reactor vessel heads, etc) have been or are currently being replaced at most reactor sites. Granting a license renewal ten years before licenses expire provide little economic assurance that ratepayers will not need to replace them again, as there is no established track record for the performance of this second generation of components.

A4NR, et al, Recommendation: Each of the above generic issues should result in the solicitation of public and utility comments, be reviewed, and implemented before any further license renewals are considered. A4NR, et al, will recommend that applications for license renewals in California be withheld until the above issues, including seismic design adequacy are resolved.

Page 2 – 17 Alternative Energy Sources

The NRC evaluated the environmental impacts of energy sources that may serve as alternatives to license renewal. Alternative energy sources included a variety of fossil fuel, new nuclear, renewable energy, and other alternatives such as conservation and energy efficiency as well as purchased power.

A4NR, et al, Question: Where in the NRC's mandate is the expertise to evaluate the environmental impacts of alternative sources granted? One example is found on page 2-22 where the NRC writes: "Presently, energy extracted from wind cannot be stored." Presently, there are two Compressed Air Energy Storage systems operating in the world, one in Alabama and the other in Huntorf, Germany. In addition, PG&E—operators of Diablo Canyon—are currently applying to the Department of Energy for a $25 million Smart Grid stimulus funding grant, under the American Recovery and Reinvestment Act, for a large compressed air energy storage (CAES) project.

A4NR, et al, Comment: Given these lapses in the NRC's understanding of current alternative energy technologies, it seems that the analysis of alternatives should solely be under Department of Energy and state jurisdiction.

A4NR, et al, Recommendation: The NRC should request up-to-date information from the DOE and states as to amount of new MW's created by all energy sources in past decade. The NRC should also include the cost per kWh of all new energy sources (year by year) in the past decade and estimates for new MW that will generate electricity in the next decade. Finally, the NRC should also request up-to-date information from the DOE relating to the reduction in energy use and increase in efficiency programs that have reduced energy use.

Comments, questions and recommendations
Affected Environment

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Soils and subsoils at nuclear plant sites also vary in terms of their geotechnical properties relative to site construction projects and their hydraulic properties relative to the movement of infiltration, groundwater, and contaminants. Depending on the nuclear plant's location and design, riverbanks or coastlines may need to be protected to prevent erosion, especially at water intake or discharge structures.

A4NR, et al, comment: Recent USGS and state studies have disclosed increasing erosion, especially at San Onofre Beach (SONGS site) at an average rate of close to 2 meters per year[3]
A4NR, et al, recommendation: All erosions studies (post 2000) must be included in SEIS and not decided in any way that would prevent erosion issues from being heard if SCE files for a license renewal for SONGS.

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Nuclear power plants are constructed according to seismic specifications in 10 CFR Part 50, Appendix S. Their spent fuel pools are designed with reinforced concrete, allowing them to remain operable through the largest earthquake that has occurred or is expected to occur in the area. The U.S. Geological Survey (Frankel et al. 2005) mapped seismic hazards across the United States. In terms of the peak horizontal acceleration with a 10 percent probability of exceedance in 50 years, most nuclear power plants are located in seismically low-hazard areas, with peak accelerations of 0 to 8 percent of gravity. However, the two California plants – Diablo Canyon and San Onofre – are in locations with peak acceleration of 25 to 30 percent of gravity. These plants have been designed to safely withstand the seismic effects associated with earthquakes with epicenters at various locations and at various depths, magnitudes, and ground accelerations (AEC 1973; Southern California Edison 2007).

A4NR, et al, Comment: We are amazed that seismic issues which could impact safety margins at reactor sites, not only in California, but ranging from Indian Point in New York to sites along the New Madrid Fault from Missouri through Tennessee to South Carolina, have been limited to one paragraph, only 153 words, in the NRC's 602 page draft GEIS.

A4NR, et al, Recommendation: The NRC has placed seismic issues under the broader heading of "Geology and Soils: Small Impact, Category 1". The NRC should not allow any seismic issues to be deemed Category 1. The NRC should not accept applications from utilities that have disclosed new active earthquake faults within the past decade. The NRC should not allow any applications from utilities until state mandated studies on the implications of new seismic studies are reviewed, adopted and implemented.

In Section 1.1 Purpose of GEIS (page I-2) states "(3) Changes in the environment around nuclear power plants are gradual and predictable." This is clearly not the case with *seismic* events that are conversely both sudden and unpredictable. The most recent case in point is the July 2007 Kashiwazaka-Kariwa nuclear plant shutdown due to the earthquake in Niigata Prefecture. This devastating event exceeded all the

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[3] . (source: "Rates and trends of coastal change in California and the regional behavior of the beach and cliff system." Hapke, Reid and Richmond in THE JOURNAL OF COASTAL RESEARCH)

predictions for ground motion that the Japanese nuclear safety agencies had predicted, as well as the design basis for the plant, and has resulted in a loss of generation for over two years from the world's largest nuclear power plant.

Additional comments questions and solutions specifically supporting comments filed by Pilgrim Watch

A4NR, et al, has reviewed the comments filed by Pilgrim Watch (PW) and supports **all** solutions proffered by PW. In addition, we have elaborated on certain PW comments and solutions below:

A4NR, et al, concurs with PW concerns relating to "Reasonable Assurance." It has been the NRC's disingenuous treatment of public and state intervenors concerns relating to license renewal that prompted the formation of our organization. The NRC's decisions have economic and reliability impacts that are the sole jurisdiction of the states. Each time the NRC denies participation, ignores contentions, or rules against their own established rules, the public and the states must expend resources to protect their interests. All issues that could impact economic and reliable operation should be up to the states, which will ultimately pay for the impacts of the NRC's determination of "Reasonable Assurance" if "Sound technical judgment" is not related to a defined level of assurance backed up with verification – a clear preponderance of facts that the defined level of assurance will be met.

A4NR, et al, Solution: The NRC should create "Reasonable Assurance" where "Sound technical judgment" is related to a defined level of assurance back-up with verification – a clear preponderance of facts that the defined level of assurance will be met. Absent the creation of this definition, A4NR will recommend that it is not in the best interest of economic and reliable energy planning to allow utilities to file license renewal applications.

Another issue in PW comments with which A4NR is in full agreement: The problem of filing contentions in the relicensing procedure is that there are expenses beyond witnesses – filing /copying fees and legal fees- and the sentence that "The decision to take such action is a matter of Licensing Board discretion which should be exercised with circumspection." So that it is not a real solution to the problem but it, in and of itself, indicates recognition that there is a problem.

A4NR, et al, Solution: The NRC should assess all licensees to establish a "kitty" for Petitioners accepted into the adjudicatory process and who meet a pre-determined qualifying financial level.

A4NR has provided California specific corroboration of financial challenges for the public:

California example of the problem as cited by PW: In the case of the proceedings to store highly radioactive waste in casks onsite at Diablo Canyon, the NRC denied several important issues. One, the adequacy of security at the proposed waste storage facility, was challenged by San Luis Obispo residents at a cost of close to $100,000. The federal circuit court ruled in the intervenors favor, but a timely and costly process was involved before partial reimbursement was granted.

The community was unable to simultaneously afford a challenge to the NRC's denial of its contention on seismic adequacy of the proposed storage site. Since that time the United State's Geological Survey has disclosed another major active earthquake fault, 1800 feet offshore and California legislators have mandated that further studies be initiated. This issue was also discussed on page 11 of A4NR comments.

A4NR, et al, additional solution: For over three decades the California Public Utilities Commission (CPUC) has provided intervenor funding for those organizations representing ratepayers who make a significant difference to the record. This process encourages public participation, rewards those who have provided valuable insights and creates a more open, transparent and inclusive record and an extra layer of economic protection for utility customers. The NRC would benefit from templating the CPUC intervenor compensation process.[4] The CPUC's Public Participation page begins with the following quote from Margaret Mead ""Never doubt that a small group of thoughtful, committed citizens can change the world. In fact, it's the only thing that ever has". We believe this is also the position of the Obama administration and the NRC would benefit from Ms. Mead's mindset.

Problem: The NRC Legal and Technical Staff take an active role in all respects similar to the two parties – filing motions, replies, etc. In [virtually all] cases to date, the NRC has taken the side of the Applicant, so that the Petitioner is placed at an unfair disadvantage - 2 to 1.

PW Solution:
The NRC Staff and any others should simply be allowed to file amicus briefs, as appropriate.

A4NR supports PW's solution. The public is often perplexed as to why the NRC's mandate "to protect public health and safety" manifests itself as the NRC pursuing every avenue to accommodate utility concerns. The public who provides insightful questions and expert information rarely, if ever, prevails in an NRC proceeding. In California the result has been costly proceedings (during licensing on seismic design adequacy, and during onsite waste storage security) where the public has prevailed in that the NRC was eventually directed to address their concerns. Yet the bottom line is that the NRC's determination to reinforce—rather than question—utility filings, and deny participation, hearings, experts, cross-examination and compensation to an informed public is not in the interest of democracy.

Problem: Petitioners noted internal inconsistencies in the regulations - one section contradicts another.

PW Solution: The regulations need to be updated to resolve inconsistencies and go out to comment before becoming finalized.

Example: The licensee is required to have an aging management program for components within scope. The question is how the aging management is judged. In Pilgrim's license renewal adjudication1 the adequacy of the Aging Management Program was judged simply on whether it provides "reasonable assurance" that the components will perform the functions outlined in 10 C.F.R. § 54.4(a)(1)-(3) - that is whether the

[4] http://docs.cpuc.ca.gov/published/REPORT/46182.htm#P319_12731

components would function in a design base failure; or whether the standard also is to assure that the Current Licensing Basis (CLB) will be maintained throughout the renewal period based upon 10 C.F.R § 54.21 and 10 C.F.R § 54.29. Because there is a conflict in the regulations, inevitably the District Court of Appeals will have to decide - placing a burden on the parties.

A4NR, et al, fully support PW solution. As California's utilities have begun to apply for license renewals, A4NR will request that PW's solution be adopted and implemented before the state allows utilities to file. Absent this solution, the state faces exposure to the economic impacts from challenging possible regulatory discrepancies. In the decades since California's reactors were licensed, state agencies have had to use precious resources to challenge NRC decisions due to inconsistencies or inadequacies of NRC regulations, and a continuation of this policy is irresponsible.

Follow-up from the NRC 2003 GEIS -- the following additional comments were submitted by the one member of the public who attended the meeting in Anaheim, California – and remain unresolved

RISK ASSESSMENTS

The NRC must improve its risk assessment guidelines for nuclear power plant renewals. An integral component of the GEIS for nuclear license renewal is the evaluation of consequences and correction of flaws in calculating accident probabilities. Nuclear plant risk assessments are not valuable because potential accident consequences are not evaluated. They merely examine accident *probabilities* -- only half of the risk equation. Consequences are potentially so catastrophic that they must be considered.

Moreover, the accident probability calculations are seriously flawed. They rely on assumptions that contradict actual operating experience. The risk assessments assume nuclear plants always conform to safety requirements, yet each year more than a thousand violations are reported. Plants are assumed to have no design problems even though hundreds are reported every year. Aging is assumed to result in no damage, despite evidence to the contrary. Reactor pressure vessels are assumed to be fail-proof, even though embrittlement forced the Yankee Rowe nuclear plant to shut down. The risk assessments assume that plant workers are far less likely to make mistakes than actual operating experience demonstrates. The risk assessments consider only the threat from damage to the reactor core despite the fact that irradiated fuel in the spent fuel pools represents an equally serious health hazard. The results from these unrealistic calculations are, therefore, overly optimistic.

Risk assessment analyzes health impacts by calculating impacts from exposure to a healthy 30-year- old "reference man" weighing 179 pounds. However, there are no age, sex, and weight requirements to allow residences near a reactor. The very young, old, and disabled also live in the community and may be impacted. The results from these unrealistic calculations are overly optimistic.

Furthermore, the NRC requires plant owners to perform the calculations, but it fails to establish minimum standards for the accident probability calculations. Thus, the reported probabilities vary widely for virtually identical nuclear plant designs indicating that self-assessment is inaccurate.

Any risk assessment must also include human error and terrorism/sabotage in order to have any real-life validity. For example, a 1987 study found that human error contributed to 74% of all incidents at nuclear power plants.

A4NR, et al, Comment: the NRC did not mention "Risk Assessment" of nuclear reactors anywhere in the 2009 draft GEIS. This omission reinforces the public's opinion that their 2003 input was not valued and questions the NRC's commitment to incorporating public comment in the final revision of the GEIS for license renewal.

Transport

Scenarios for transport of nuclear waste include trucks on our major highways, trains, and barges. Seven million Californians live within one mile of proposed routes, and none of these modes can be protected from terrorist strikes or accidents. In California alone there were 1,880 tractor-trailer accidents between1994 and 2000 and 4,264 train wrecks from 1990 to2001. These statistics represent a fraction of the accidents across our nation, and the tragedy of just one accident involving nuclear waste would be devastating.

As recently as July 8, 2003, California requested a halt to medium-waste shipments of nuclear materials. This action was taken to protect California residents and "first responders" from the inherent dangers of nuclear waste spills arising from accidents and/or sabotage - and supported by California's Senator Feinstein.[5] Nuclear power plant license renewals increase the necessity of a greater number of shipments and thus the odds of such a lethal accident.

To quote from the Los Angeles scenario of the Environmental Working Group: "Given the unanimous agreement that train or truck accidents are inevitable during the tens of thousands of radioactive waste shipment to Yucca Mountain, we believe people have a right to know what would happen if one of those accidents led to a release of radioactive materials in their town. ...The number of people exposed to unsafe doses of radiation is entirely dependent on the timing and location of the accident or attack."[6]

The NRC must consider the full consequences of high-level radioactive waste transportation before it can determine the GEIS of nuclear power plant license renewals.

A4NR, et al, Comment: While the 2009 draft GEIS mentions transport issues in several sections, it does not address the eventual transport of additional "spent" fuel that will be produced during the license renewal period. It is clear this issue cannot be discussed until there is a permanent repository accepting radioactive waste. And yet, a recent notice by the NRC of the transport of spent fuel from the Pilgrim Plant, Massachusetts, to the GE Vallecitos plant in California creates questions that must be discussed in any future license renewal cases.[7] Where will current radioactive material be stored and

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[5] AP

[6] What if...A nuclear waste accident scenario in Los Angeles, Ca Richard Wiles, James R. Cox, June 27, 2002 www.mapscience.org

[7] Enclosure 1 Page 1 of 3 OFFICE OF NUCLEAR SECURITY AND INCIDENT RESPONSE DIVISION OF SECURITY POLICY DECEMBER 2009 IRRADIATED REACTOR FUEL ROUTE SUMMARY **(233)** PILGRIM NUCLEAR POWER PLANT, PLYMOUTH, MA TO GE VALLECITOS, SUNOL, CA

where does the NRC and the utility anticipate storing radioactive waste produced during the renewal period?

A4NR, et al, Recommendation: Until a permanent storage facility is in operation and transport routes have been resolved no license renewals should be approved by the NRC. In addition, no license renewal applications should be allowed to be filed by the state of California until the economic impacts of transport routes are addressed and resolved in a public forum.

Comments, questions and recommendations
Summary

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The GEIS is intended to improve the efficiency of the license renewal process by (1) providing an evaluation of the types of environmental impacts that may occur from renewing commercial nuclear power plant operating licenses, (2) identifying and assessing impacts that are expected to be generic (the same or similar) at all nuclear plants (or plants with specified plant or site characteristics), and (3) defining the number and scope of environmental impact issues that need to be addressed in plant-specific EISs.

A4NR, et al, Comment: A4NR, et al, would like to know how the NRC defines "efficiency" in the above statement. Is this an efficiency of time, money, or workforce labor? Is it meant to increase efficiency for the agency, the utility, or the stakeholder? Given the fact that for individual reactors in communities across the United States, the NRC has written hundreds—if not thousands—of individual waivers, amendments and exemptions, there is very little that can be said to be *similar* about the aging reactors that face relicensing. Defining—and narrowing—the scope of plant-specific issues may produce an efficiency for the utility or the agency, but not necessarily for the ratepayers or stakeholders.

A4NR, et al, Recommendation: A4NR, et al, recommends that the NRC define what it means by "efficiency" achievable through the GEIS, and place that efficiency into quantifiable and measurable units of time, money or effort.

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A full range of power generation alternatives are evaluated in the GEIS, including fossil fuel new nuclear, and renewable energy sources. Conservation and power purchasing are also considered as alternatives to license renewal, because they represent other options for electric system planners.

A4NR, et al, Comment: as previously noted by A4NR, with regard to the NRC's inaccurate evaluation of Compressed Air Energy Storage (as one example) the NRC's information on renewable energy is out of date and incomplete.

A4NR, et al, Recommendation: A4NR, et al, recommend that data and statistics on the use and availability of alternative and renewable energy by evaluated by the DOE.

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In a Notice of Intent published in the *Federal Register* on June 3, 2003, the NRC notified the public of its plan to revise the GEIS and to give people an opportunity to participate in the environmental scoping process. This step was the initial opportunity for public participation in the GEIS revision. In July 2003, the NRC held public scoping meetings in four locations (one in each of the four NRC regions) – Atlanta, Georgia; Oak Lawn, Illinois; Anaheim, California; and Boston, Massachusetts.

A4NR, et al, Comment: As indicated earlier, A4NR, et al, finds the NRC's attempt at soliciting public input to the process woefully inadequate. As indicated earlier, the NRC held a meeting in 2003 in Anaheim, California, at which only ONE member of the public was present. In this most recent attempt at soliciting comments, the NRC attempted to hold one meeting in California for all of Region IV. The NRC offered a conference call as an alternative, but California had learned from New York's NRC conference call where "The committee discussed a number of hot-button issues dogging the plant, including contaminated water seeping into the Hudson river, aging pipes and the integrity of Indian Point's future plans. But the powwow was nearly inaudible over the phone. NRC officials apologized for the glitch and said a meeting transcript would be available in about a week." and reinforced its demand that the meeting be held where the impacted community lives.

This NRC's effort to hold the meeting over 100 miles away and/or to offer a conference was rebuffed by the public and their representatives, and as a result, the NRC will now schedule meetings in each of California's affected reactor communities.

A4NR, et al, Recommendation: A4NR recommends that the NRC hold public meetings within a one-hour drive of any affected reactor community, and that telephone or internet "bridge" be disallowed because of the numerous technical challenges and failures evident in this system.

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Category 1 issues are those that meet all of the following criteria:

> (1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics;
> (2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective offsite radiological impacts from the fuel cycle and from high-level waste and spent fuel);
> (3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures would probably not be sufficiently beneficial to warrant implementation.

For issues that meet the three Category 1 criteria, no additional plant-specific analysis is required in future SEISs unless new and significant information is identified.

A4NR, et al, Comment: A4NR, et al, find the above descriptions for criteria constituting a Category 1 issue to be inconsistent and incomplete. For example, as cited below in S.4, the NRC lists item 3 as follows: (3) soils, geology, and seismology which seem inclusive of seismology. (continued)

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For purposes of the evaluation in this GEIS revision, the "affected environment" is the environment currently existing around operating commercial nuclear power plants. Current conditions in the affected environment are the result of past construction and operations at the plants. The NRC has considered the effects of these past and ongoing impacts and how they have shaped the environment. The NRC evaluated impacts of license renewal that are incremental to existing conditions. These existing conditions serve as the baseline for the evaluation and include the effects of past and present actions at the plants.

The NRC described the affected environment in terms of the following resource areas and activities: (1) land use and visual resources; (2) meteorology, air quality, and noise; **(3) soils, geology, and seismology**; (4) hydrology (surface water and groundwater); ...the affected environments of the operating plant sites represent diverse environmental conditions.

A4NR, et al, Comment (continued): HOWEVER, on the following page of the GEIS, when listing this item specifically, it makes NO mention of seismic issues at all, while continuing to consider "Geology and Soils" as one topic.

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• Impacts on geology and soils would be small at all plants if best management practices were employed to reduce erosion. This is a Category 1 issue.

July 2009 S-7 NUREG-1437, Revision 1

A4NR, et al, comment, (continued): And yet, on page 2-7 it mentions geology and soils without including "seismic" while making the blanket statement that "Geology and Soils" is a generic category 1 issue.

> Geology and Soils - Impacts of nuclear plants on geology and soils Small impact (Category 1).
>
> Impacts on geology and soils would be small at all nuclear plants if best management practices were employed to reduce erosion associated with continued operations and refurbishment. July 2009 2-7 NUREG-1437, Revi1

A4NR, et al, recommendation: The NRC must clarify the subcategories of item (3) Geology and soils. It includes seismic issues, or it does not; seismic issues (standing alone as an issue) are deemed to be category 1, or as we maintain, must be deemed category 2 and therefore site specific. This confusing mix of usage of the terms "Geology and Soils" is either meant to obfuscate or minimize the impacts of seismic issues on continued nuclear plant operations. This is certainly the case in California, where new USGS information has revealed a previously undisclosed and unstudied fault

1800 feet from the Diablo Canyon Power Plant. As previously indicated in these comments, the cautionary tale of the 2007 Japanese earthquake at the Kashiwazaka-Kariwa plant must be heeded by the NRC. In the case of the San Onofre plant, also singled out for special attention in the one paragraph dealing with seismic issues in detail (3-50) there have been no new or updated seismic studies since the plant was licensed. In the case of Diablo Canyon, the NRC has relied on the utility's own internal seismic study program, and not subjected their results to analysis from independent or outside consultants.

A4NR, et al, recommendation: All seismic issues be moved to Category 2 and require consultation from the USGS as well as independent seismic studies apart from the utility at all facilities with seismic concerns.

Socioeconomics

• Population and housing impacts would be small for all plants. Regional population and housing availability and value would not change during the license renewal term unless significant changes in plant employment would occur. With no increase in employment expected during the license renewal term, population and housing availability and values would not be affected by continued power plant operations. Any changes in population and housing availability and value due to changes in the workforce at the plant would have a greater effect on sparsely populated areas than areas with higher density populations. This is a Category 1 issue. July 2009 S-15 NUREG-1437, Revision 1

A4NR, et al, Comment: Housing issues around nuclear power plants cannot be considered Category 1 issues, especially in light of the ongoing national financial crisis involving the plummeting real estate market and the wide fluctuations in home prices and dwindling new construction. While there may be no anticipated increase in the *number* of workers at the plant during a relicense period, there may be a significant difference in the age and status of those workers. Although the NRC continues to fail to track the demographics of an aging and retiring nuclear workforce, at least one utility, Southern California Edison, is concerned enough to have included in their proceedings before the California Public Utilities Commission, a request for ratepayer funding to enhance hiring bonuses and housing allowances to allow for the increased cost of housing near the SONGS reactor in order to accommodate new workers to replace retiring workers. They had to justify in a public hearing the problems of attracting replacement workers to an area of high housing costs. It cannot be assumed, as the NRC statement quotes above indicates, that "Any changes in population and housing availability and value due to changes in the workforce at the plant would have a greater effect on sparsely populated areas than areas with higher density populations" because the area surrounding SONGS is second only to Indian Point in New York in terms of population, with a surrounding population of over 12 million people. In this case, SONGS would merit a site specific look at housing economics in Category 2.

A4NR, et al, Recommendation: A4NR, et al, recommend that "Population and housing" impacts be removed from Category 1 and placed in Category 2 for site specific analysis.

Solid Waste Management

• The impacts on low-level waste (LLW) storage and disposal are expected to be small at all nuclear plants. The comprehensive regulatory controls that are in place and the

low public doses being achieved at reactors ensure that the radiological impacts on the environment would remain small during the term of a renewed license. This is a category 1 issue. 1 July 2009 S-17 NUREG-1437, Revision 1

A4NR, et al, Comments: With the closure of the Barnwell LLW facility in South Carolina and the availability of other low level waste disposal limited to those reactors already in contractual compacts, the volume of LLW accumulating and stored at reactor sites could grow beyond the anticipated design strategies. Regardless of whether the NRC or the nuclear utilities had hoped for or wished for more LLW storage facilities to be available at this time on a national level, they have failed to materialize, and the communities in which this waste will be stored may find the quantities growing beyond the initial plan. Therefore, these should be moved to Category 2 site specific issues.

Page S – 19 Termination of Nuclear Power Plant Operations and Decommissioning

• Termination of plant operations and decommissioning would occur eventually regardless of license renewal. The additional 20-year period of operation under the license renewal term would not affect the impacts of shutdown and decommissioning on any resource or at any plant. This is a Category 1 issue.
July 2009 S-19 NUREG-1437, Revision 1

A4NR, et al, Comment: A4NR, et al, is concerned that the additional 20 year extension of operation could impact the decommissioning activities the plant. Because of the unpredicted and unanticipated financial crisis, suppositions and expectations of the status and security of decommissioning funds have been sharply reduced. If inadequate funding is present at the decommissioning stage of plant life, then money needed for certain facets of restoration of the environment may not be available for mitigation, cleanup or remediation. If the activities needed involved potential cleanup of contaminated offsite groundwater, for example, the lack of funds to execute this action would be detrimental.

The following Associated Press story from January 5, 2010, which references the NRC, should provide enough of a cautionary warning to merit attention to this issue:

NEW ORLEANS (The Associated Press) - Jan 5 –
By ALAN SAYRE AP Business Writer

Two Louisiana power utilities owned by Entergy Corp. are short $235.5 million for the projected costs of eventually closing two nuclear generating plants - and the power provider wants slight increases in customer rates to close the gap.

According to a Tuesday filing with the Louisiana Public Service Commission, Entergy Louisiana said it needs an additional $68.2 million to meet the federal Nuclear Regulatory Commission's demand for a $400.2 million decommissioning fund for the Waterford 3 plant at Taft.

Entergy Gulf States Louisiana said it needs an additional $167.3 million for an NRC-required fund of $378.8 million for the eventual closing of the River Bend nuclear plant at St. Francisville. That utility owns 70 percent of River Bend.

The filing requests that Entergy Louisiana customers pay $10.3 million

toward the Waterford fund annually, up from the current $2.2 million. Entergy Gulf States Louisiana customers, who don't currently contribute to the decommissioning fund, would pay $9.67 million a year.

Entergy spokesman Philip Allison said Tuesday that if the PSC agrees with the utilities, Entergy Gulf States' residential customers would pay an additional 84 cents per 1,000 kilowatt hours, while Entergy Louisiana's residential customers would pay an additional 41 cents per 1,000 kilowatt hours.

The NRC determines how much a utility needs for each eventual nuclear plant closure based on a complicated formula.

"This is to put us into federal compliance," Allison said. "It's not something we came up with." The PSC is expected to discuss the filing on Jan. 13.

The filing said the two funds are now short of what the NRC wants partially because of the fall in financial markets, where the money had been placed in hopes of growing the funds through investment returns.

A4NR, et al, Recommendation: A4NR, et al, therefore recommend that the financial status of each utility's decommissioning fund be examined on an individual basis under Category 2, and not assumed to be generic. Different utilities will have different levels of investment strategies for securing their decommissioning funds, and world financial markets are too volatile to assume that a "one size fits all" answer will apply to each and every nuclear utility.

A FINAL RECOMMENDATION: A4NR, et al recommends that the GEIS should include scoping and analysis of the effects of climate change on reactor operations for the duration of the relicensed period. The past decade has provided ample evidence of reactors both domestically and internationally whose operations have been curtailed and whose reliability has been diminished by droughts, high ambient cooling water temperatures, unanticipated ice flows and other climate disturbances. Both NASA and NOAA predict an increase in these events during the coming decades and the Obama administration is considering adding the impacts of such exigencies to NEPA. The NRC would do well to follow the lead of the administration on this issue.

Conclusion

The NRC's draft GEIS NUREG-1437 glosses over a myriad of environmental impacts at aging reactors and incorrectly categorizes many issues as generic (category 1). A4NR fails to understand how close to 60 reactors have attained license renewals from the NRC absent complete and open site-specific issues relating to: current rulemaking proceedings (onsite storage, security, emergency planning, etc), seismic updates, decommissioning shortfalls, hundreds of changes and amendments to original design criteria, lack of a permanent storage facility offsite, unresolved water impacts, changes in population surrounding aging reactors and other issues.

The administration has called for greater transparency from our governmental agencies, yet this proposed Revision actually reduces the openness and thoroughness of

proceeding that are proposed to ensure safe operations during the license renewal period. A4NR, et al, recommends the NRC incorporate all public input into the final GEIS and implement all suggestions.

Democracy is dependent on the participation of the public; ignoring public input places our country, our energy supplies and our ratepayers at risk. Therefore the Alliance for Nuclear Responsibility will end with the same quote that begins the comments of Pilgrim Watch:

The Honorable Gregory Jaczko's statement made in a speech entitled, "A Regulator's Perspective on New Nuclear Reactor License Applications," September 24, 2009 said that, "NRC is built upon a solid foundation of a talented workforce dedicated to the safety and security mission of the agency, and guided by sound safety regulations. This solid foundation is *strengthened by public involvement and input".* The statement was repeated in an NRC announcement and video released Dec 11, 2009

> The U.S. Nuclear Regulatory Commission is strengthening its commitment to openness and transparency through a variety of new and ongoing initiatives to help the public understand and participate in its processes. The White House is highlighting one new NRC initiative with a video on its Open Government Innovation Web page.
>
> "The NRC has a long history of, and commitment to, openness with the public and transparency in its regulatory process," said NRC Chairman Gregory B. Jaczko. "As an independent regulatory agency that prides itself on openness, we are pleased to be included in the President's focus on open accountable and accessible government. I look forward to working with my Commission colleagues to make our decision-making activities even more open."

Repeating these words quarterly will not create the transparency touted by the NRC. Our successful attempts to move GEIS meetings to the affected communities seems to have found an audience with short-attention spans in the NRC, as the NRC has now scheduled all three upcoming Safety Culture meetings in Maryland. The Californian's and other non-Maryland co-signers to these comments are hundreds to thousands of miles away from the NRC headquarters. Furthermore, the video shown highlights a group of people with costly net-conferencing equipment – none of these people were NGO's and we are fairly sure that all persons featured in the video work either for the industry or the NRC. Unless the NRC is offering to purchase the cyber-equipment needed for reasonable access to NRC meetings, that video and the President of the Commission's statement have a hollow and disingenuous ring.

Respectfully Submitted on January 12, 2010,

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