

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE SECRETARY

In the Matter of	)	
	)	
ENERGY NORTHWEST	)	Docket No. 50-397-LR
	)	
(Columbia Generating Station)	)	August 22, 2011

**PETITION FOR HEARING AND LEAVE TO INTERVENE  
IN OPERATING LICENSE RENEWAL FOR ENERGY NORTHWEST'S  
COLUMBIA GENERATING STATION**

Comes now Petitioner Northwest Environmental Advocates and respectfully seeks a hearing and leave to intervene in the operating license renewal for the Columbia Generating Station, Docket No. 50-397-LR. Northwest Environmental Advocates (hereinafter "NWEA" or "Petitioner") was founded in 1969 by citizens who were concerned about the imminent operation of the Trojan Nuclear Power Plant, located along the Columbia River at Rainier, Oregon. Known then as the Coalition for Safe Power, the organization was known best in its first decade and a half for its involvement in U.S. Nuclear Regulatory Commission ("NRC") licensing hearings for the construction and operation of reactors in Oregon and Washington. NWEA also filed numerous petitions concerning safety matters to the Commission pursuant to 10 C.F.R. § 2.206, including a petition addressing the impacts of the eruption of the Mt. Helens volcano on the safe operation of Trojan and emergency evacuation considerations and one concerning the unsafe construction of the Washington Public Power Supply System ("WPPSS") No. 2 reactor, now renamed the Columbia Generating Station. As Northwest Environmental Advocates, the organization has broadened the scope of its work to include protection of water, air, and habitat quality primarily but not exclusively in the Pacific Northwest.

**I. Request for Hearing and Petition for Leave to Intervene**

Pursuant to 10 C.F.R. § 2.309(a), Northwest Environmental Advocates files this petition

seeking a hearing and leave to intervene in the operating license renewal for Energy Northwest's Columbia Generating Station (hereinafter "CGS"), facility operating license NPF-21. The pending application for an operating license renewal would authorize an additional 20 years of operation beyond the period specified in the current operating license which expires on December 20, 2023.

Energy Northwest submitted its application for the 20-year renewal on January 19, 2010. 75 Fed. Reg. 5353 (February 2, 2010). A notice of acceptance for docketing of this application and a notice of opportunity for a hearing regarding the renewal of the CGS was noticed in the Federal Register on March 11, 2010. 75 Fed. Reg. 11572 (March 11, 2010). Pursuant to that notice and 10 C.F.R. § 2.309(1), "any person whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing and a specification of the contentions which the person seeks to have litigated in the hearing." This document constitutes Petitioner Northwest Environmental Advocates' written request for a hearing, petition for leave to intervene, and its specification of the contentions it wishes to litigate in the proceedings.

## **II. Standing**

Pursuant to 10 C.F.R. § 2.309(d), Petitioner NWEA addresses the requirements for standing:

### **A. The Name, Address and Telephone Number of the Petitioner**

The name, address, and telephone number of the Petitioner is as follows:

Nina Bell, Executive Director  
Northwest Environmental Advocates  
P.O. Box 12187  
Portland, OR 97212  
503/295-0490

### **B. Nature of Petitioner's Right to be Made a Party to the Proceeding**

Pursuant to 10 C.F.R. § 2.309(d)(ii), a petitioner must set out the nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding. When

assessing whether a petitioner has set forth a sufficient interest to intervene, NRC licensing boards generally rely on judicial concepts of standing. *See Entergy Nuclear Vermont Yankee, L.L.C., & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 552 (2004). Those concepts “require the petitioner to show that (1) he or she has personally suffered or will personally suffer a distinct and palpable harm that constitutes injury in fact; (2) the injury can fairly be traced to the challenged action; and (3) the injury is likely to be redressed by a favorable decision.” *See Allen v. Wright*, 468 U.S. 737, 751 (1984). Additionally, the petitioner must meet the “prudential” standing requirement by showing that the asserted interest arguably falls within the zone of interests protected by the governing law. “For construction permit and operating license proceedings, the Commission generally has recognized a presumption in favor of standing for those persons who have frequent contacts with the area near a nuclear power plant.” *See, e.g., Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95 (1993). In particular, “Commission case law has established a ‘proximity presumption,’ whereby an individual may satisfy . . . standing requirements by demonstrating that his or her residence or activities are within the geographical area that might be affected by an accidental release of fission products, and in proceedings involving nuclear power plants this area has been defined as being within a 50-mile radius of such a plant.” *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 65 NRC 41, 52 (2007).

Moreover, when an organization, such as the instant Petitioner, seeks to intervene in a proceeding, it must demonstrate either organizational or representational standing. Petitioner NWEA seeks to intervene based on representational standing, by demonstrating that one or more of its members would have standing to intervene on their own, and that the identified members have authorized the organization to request a hearing on their behalf. *See Shaw AREVA MOX Servs.* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 183 (2007). In addition, the interests that the representative organization seeks to protect must be germane to its

own purpose, and neither the asserted claim nor the requested relief must require an individual member to participate in the organization's legal action. *Id.*

Petitioner NWEA asserts representational standing based on the attached declaration of Tom Bailie, a farmer who lives approximately 18 miles from the CGS, a “downwinder” already affected by the operations of the Hanford Nuclear Reservation. The Bailie declaration demonstrates that this member is concerned about the effects on his health and safety associated with extending the reactor operation of the CGS for 20 years beyond the year 2023. His declaration establishes that he would suffer a distinct and palpable harm to constitute injury-in-fact within the zone of interest that are to be protected by the AEA, 42 U.S.C. 2011, *et seq.* and the injury can be fairly traced to the challenged action and the injury is likely to be redressed by a favorable decision. An alleged injury to health and safety, shared equally by many, can form the basis for standing. *See Philadelphia Elec. Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1434 (1982). Even minor radiological exposures resulting from a proposed license activity can be enough to create the requisite injury-in-fact. *See Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-91-17, 33 NRC 379, 391 (1991). Therefore, under the 50-mile presumption explained above, the declarant could have brought this action on his own behalf. Second, the Bailie declaration states that he has authorized NWEA to represent his interests in this licensing proceeding. Third, Petitioner NWEA’s objectives in this matter are to protect the public health and safety and the environment by challenging the issuance of an operating license extension to the CGS, purposes which are germane to the health, safety, and environmental interests asserted by its members. Finally, neither the asserted claims nor the requested relief requires an individual member to participate in this action.

NWEA also relies on the declaration of Bruce Smartlowit who resides, works, and recreates in and around Wapato, approximately 50 miles from the CGS. For example, Mr. Smartlowit’s post office box is located in Toppenish, which is roughly 48 miles from the CGS.

Mr. Smartlowit has frequent contacts with the zone of possible harm from the CGS and therefore NWEA may rely upon his membership for standing. *See Pa'ina Hawaii, LLC*, LBP-06-4, 63 NRC at 105 (citing *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146 (2001), *aff'd on other grounds*, CLI-01-17, 54 NRC 3 (2001)).

NWEA also relies on the declaration of Scott Madison whose home and ranch lie approximately 50 miles from the CGS. The Madison and Smartlowit declarations similarly demonstrate that these members are concerned about the effects on their health and safety associated with extending the reactor operation of the CGS, establishes that they would suffer a distinct and palpable harm to constitute injury-in-fact, and that such injury can be fairly traced to the challenged action and the injury is likely to be redressed by a favorable decision.

Petitioner has shown that it has members who live, work, and recreate within the 50-mile radius of the CGS, as well as members who do not reside within the 50-mile radius but who have frequent and regular contacts with the zone of possible harm from the CGS. Therefore, Petitioner has demonstrated it has standing to intervene in this proceeding. In addition, Petitioner relies upon members for standing who are outside the 50-mile radius of the CGS.

The Commission has long used the 50-mile presumption to establish standing. The Commission has noted that “[t]he rule of thumb generally applied in reactor licensing proceedings” includes “a presumption of standing for persons who reside or frequent the area within a 50-mile radius of the facility.” *Sequoyah Fuels*, CLI-94-12, 40 NRC at 77. *See also North Anna*, ALAB-522, 9 NRC at 56; *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222 (1974). The 50-mile presumption “is a recognition of the potential effects at significant distances from the facility of the accidental release of fissionable materials.” *Babcock & Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 83 (1993). However, this 50-mile presumption is now outdated in light of the effects of the nuclear accident at the Fukushima Dai-ichi nuclear facility in Japan. For example, tests of the land

surrounding the sewage sludge incineration plant at Tokyo, Koutou-ku on May 22-25, 2011 showed high levels of contamination from Fukushima, reflecting the incineration of radioactive sludge from the accident.<sup>1</sup> The distance between Fukushima and Tokyo is approximately 238 kilometers or 148 miles.<sup>2</sup> Soil samples around the incineration plant showed contamination of cesium-137 at up to 122,000 Bq/m<sup>2</sup> (9-2 Ohshima Koutou-Ku, Toyko) as compared to the Belarusian limit of 37,000 Bq/m<sup>2</sup>.<sup>3</sup> Radioactive contamination has also been identified south of Tokyo, 180 miles from Fukushima.<sup>4</sup> Likewise, soil samples taken in May 15-17, 2011 demonstrated levels of cesium-137 up to 44,480 Bq/m<sup>2</sup> (Tsukazaki Kashiwa City, Chiba Prefecture)<sup>5</sup>, again exceeding the Belarusian limit.

Another source of information concerning the geographic reach of radioactive materials from Fukushima is available in a map prepared by Yukio Hayakawa, a volcanologist at Gunma University. Because Japanese government officials have failed to adequately monitor radiation, particularly outside both a 30- and an 80-kilometer radius of Fukushima, radiation physicists and local government officials in Japan have been measuring radiation levels. Dr. Hayakawa plotted

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<sup>1</sup> “Results of ACRO's monitoring in Japan (25th july 2011 update),” *available at* [http://www.acro.eu.org/OCJ\\_en.html#result%203rd%20camp0](http://www.acro.eu.org/OCJ_en.html#result%203rd%20camp0) (last visited Aug. 2, 2011).

<sup>2</sup> *See, e.g., available at* [http://distancecalculator.globefeed.com/Japan\\_Distance\\_Result.asp?fromplace=Fukushima%20%28Fukushima%29&toplace=Tokyo%20%28Tokyo%29&fromlat=37.75&tolat=35.6811259942652&fromlng=140.4666667&tolng=139.76705789566](http://distancecalculator.globefeed.com/Japan_Distance_Result.asp?fromplace=Fukushima%20%28Fukushima%29&toplace=Tokyo%20%28Tokyo%29&fromlat=37.75&tolat=35.6811259942652&fromlng=140.4666667&tolng=139.76705789566) (last visited Aug. 2, 2011).

<sup>3</sup> *Id.* at “Surrounding of the sludge incineration plant of Tokyo, Koutou-ku (22-25th May 2011),” (last visited Aug. 2, 2011).

<sup>4</sup> “Radiation 'hotspots' hinder Japan response to nuclear crisis,” *available at* [http://thestar.com.my/news/story.asp?file=/2011/6/14/worldupdates/2011-06-14T153803Z\\_01\\_NOOTR\\_RTRMDNC\\_0\\_-576864-1&sec=Worldupdates](http://thestar.com.my/news/story.asp?file=/2011/6/14/worldupdates/2011-06-14T153803Z_01_NOOTR_RTRMDNC_0_-576864-1&sec=Worldupdates) (last visited Aug. 2, 2011).

<sup>5</sup> “Results of ACRO's monitoring in Japan (25th july 2011 update),” at “Soil from the surroundings of Tokyo (15-17th of May 2011),” *available at* [http://www.acro.eu.org/OCJ\\_en.html#result%203rd%20camp0](http://www.acro.eu.org/OCJ_en.html#result%203rd%20camp0) (last visited Aug. 2, 2011).

the data on a map.<sup>6</sup> This map demonstrates wide contamination of areas to both the North and South of the Fukushima plant with exposures over 1 millisievert/year<sup>7</sup> at least 200 kilometers or 120 miles from the accident site.<sup>8</sup> All of the color-shaded areas on this map represent levels of unsafe radiation from the Fukushima accident.

As the accident at Fukushima has demonstrated, nuclear reactor accidents can and do result in the distribution of unsafe levels of radioactive materials far outside the presumptive 50-mile radius used by the NRC in evaluating the standing of a petitioner. Therefore, Petitioner NWEA may correctly rely for standing on declarants who reside both slightly outside and well outside the 50-mile radius but close enough to be affected by the CGS.

Additionally, Petitioner has a right to participate in the license renewal for the CGS because it has standing and has submitted an admissible contention. *See* 10 C.F.R. § 2.309, 42 U.S.C. § 2339(a)(1). The admissible contention is set out in Section IV below.

### **C. Nature and Extent of the Petitioner's Interest in the Proceeding**

NRC regulations require that the Petitioner establish the nature and extent of the petitioner's property, financial, or other interest in the proceeding. 10 C.F.R. § 2.309(d)(iii). Established in 1969 to oppose operation of the Trojan Nuclear Power Plant, NWEA subsequently engaged in extensive participation in nuclear licensing proceedings as well as demonstrated its leadership in protecting environmental quality of the Pacific Northwest. In

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<sup>6</sup> ENENews, "Radiation hot spots found in Tokyo — 3.5 times limit set by Japanese law (MAP)," June 18, 2011 *available at* <http://enenews.com/radiation-hot-spots-found-tokyo-35-times-limit-set-japanese-law> (last visited Aug. 3, 2011). The same data, measured by the Ministry of Education, Culture, Sports, Science and Technology Japan (MEXT) and local governments at 1.0 or 0.5 meters height are available on an interactive map *available at* <http://www.nnistar.com/gmap/fukushima.html> (last visited Aug. 3, 2011).

<sup>7</sup> Assuming 0.114 microsieverts/hour is equivalent to 1.0 millisieverts/year.

<sup>8</sup> Yukio Hayakawa (Gunma Univ.), "Radiation contour map of the Fukushima Daiichi accident" *available at* <http://gunma.zamurai.jp/pub/2011/18June.pdf> (last visited Aug. 3, 2011).

particular, NWEA has focused on restoring and protecting the water quality of the Columbia River, which is both the receiving water for the CGS discharge and would be affected by an accident at the CGS, through its efforts to obtain National Estuary Program (NEP) protection for the Columbia River under Section 320 of the Clean Water Act, its co-chairing of the Lower Columbia River Bi-State Water Quality Program, its publication of educational maps including *Columbia River: Troubled Waters*, a now-terminated boat-based education program called *RiverWatch*, among many other activities. NWEA has also participated extensively in the development of Clean Water Act (CWA) regulatory programs for the States of Oregon and Washington including the triennial review of state water quality standards for a wide range of pollutants, the identification of impaired waters pursuant to section 303(d) of the CWA, and the development of Total Maximum Daily Loads (TMDLs) to restore water quality in impaired waters in both states.

NWEA has a long history of advocating for safe and renewable energy resources including its 1996 lawsuit seeking to clean up the air emissions from the Centralia Coal Plant; its development of the Oregon CO<sub>2</sub> Standard passed by the Oregon Legislature to offset greenhouse gases from new fossil fuel facilities and which led to the establishment of the Oregon Climate Trust; and its 1987 efforts that resulted in the closure of the N-Reactor at Hanford, a one-of-a-kind energy- and plutonium-generating nuclear reactor with no containment, following Congressional hearings with three NWEA experts after the 1986 Chernobyl nuclear disaster in the Soviet Union.

In short, NWEA has a long and wide history of litigation and administrative involvement in environmental concerns in the Pacific Northwest as well as many national issues. NWEA seeks to protect its members' health, safety, and lives as well as the health and safety of the general public by ensuring, *inter alia*, that the NRC fulfills its non-discretionary duty under the National Environmental Policy Act ("NEPA") to consider the new and significant information such as that advanced in the Petitioner's contention set out below. Petitioner has an interest in



this proceeding because of the “obvious potential for offsite consequences” to its members’ health and safety. *In the Matter Pacific Gas & Electric Co.*, (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 426-27, citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146, *aff’d*, CLI-01-17, 54 NRC 3 (2001).

#### **D. Possible Effect of the Proceeding on Petitioner’s Interest**

Last, pursuant to 10 C.F.R. § 2.309(d)(iv) the petitioner must set out the possible effect of any decision or order that may be issued in the proceeding on the petitioner’s interest. In response to this petition to intervene, the agency could issue an order that would establish public proceedings to evaluate the environmental and safety issues related to the operating license renewal for the CGP, proceedings that otherwise will not take place because there is no proceeding. Such an order establishing proceedings would allow the Petitioner to raise environmental and safety issues related to the Fukushima Dai-ichi Nuclear Facility accident that otherwise would, or would not, be resolved by the agency outside public proceedings and without public input. Relicensing the CGS will result in adverse health and safety risks to NWEA’s members and supporters. As noted above, Petitioner’s interest in a safe, clean, and healthful environment would be served by the issuance of an order requiring the NRC to fulfill its non-discretionary duty under NEPA to consider new and significant information before making a licensing decision. *See Silva v. Romney*, 473 F.2d 287, 292 (1st Cir. 1973). Compliance with NEPA ensures that environmental issues are given full consideration in “the ongoing programs and actions of the Federal Government.” *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 371 n.14 (1989).

#### **III. Nontimely Filing**

Pursuant to 10 C.F.R. § 2.309(c)(2), NWEA addresses below the factors associated with nontimely filings set out in 10 C.F.R. § 2.309(c)(1), seeking a determination by the Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on this

request, petition and contention that the request should be granted, the petition should be granted, and the contentions should be admitted.

**A. Good Cause**

NRC regulations require that an untimely petition demonstrate “[g]ood cause, if any, for the failure to file on time.” 10 C.F.R. § 2.309(c)(i)(i). The bases for NWEA’s untimely petition are as follows. First, NWEA was not made aware of the opportunity to petition to intervene when Energy Northwest submitted its application for the 20-year renewal and the NRC issued a notice of opportunity for a hearing regarding the renewal of the CGS in the Federal Register on March 11, 2010. Coming as it did, a full thirteen years before the expiration of the CGS operating license, NWEA did not anticipate the notice of opportunity for hearing would be filed so many years prior to expiration of the operating license. Additionally, given NWEA’s long-time interest in commercial nuclear reactors in Washington State, having most recently been intervenors in the Operating License proceedings for Washington Public Power Supply System (“WPPSS”) Units 1 & 4 (Hanford), the Operating License proceedings for WPPSS Units 3 & 5 (Satsop), Construction Permit proceedings for the proposed Skagit/Hanford Units 1 & 2, and having submitted a substantial petition to the Commission pursuant to 10 C.F.R. § 2.206 concerning the operational safety of the WPPSS No. 2 reactor, now known as the Columbia Generating Station, we incorrectly assumed that the licensee and the NRC staff would consider us potentially interested parties and would therefore inform us of the notice when it was issued. NWEA was maintained on a variety of mailing lists associated with the aforementioned NRC proceedings long after the subject nuclear power plants were abandoned and the licensing proceedings terminated. It was therefore improbable that the NRC would not include NWEA on any physical mailings of any notice associated with the operating license of the GCS. Yet NWEA received no such notice.

Second, NWEA seeks to raise concerns about the operating license extension that are related to the Fukushima Dai-ichi nuclear accident which had not yet taken place on the date of

the notice of March 11, 2010 because the accident only began on March 11, 2011, precisely 12 months later. The NRC has held that new developments and the availability of new information support late-filed motions to intervene. *See Duke Power Co.* (Amendment to Materials License SNM-1773- Transportation of Spent Fuel from Oconee Nuclear Station for Storage at McGuire Nuclear Station), ALAB-528 9 NRC 146, 148-49 (1979); *Consumer Power Co.* (Midland Plant, Units 1 & 2), LBP-82-62, 16 NRC 571, 577 (1982); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station Units, 1 & 2), CLI-92, 36 NRC 62, 69-73 (1992). The availability of material information “is a significant factor in a Board's determination of whether a motion based on such information is timely filed.” *Houston Lighting & Power Co.* (South Texas Project, Units 1 & 2), LBP-85-19, 21 NRC 1707, 1723 (1985) (internal citations omitted). This petition and the accompanying contention are based upon information contained within a report which was not released until July 12, 2011. Although the Fukushima accident began on March 11, 2011, prior to issuance of the NRC’s “Recommendations for Enhancing Reactor Safety in the 21st Century: The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident,” (hereinafter “Task Force Report”) dated July 12, 2011, the information material to the contention was simply unavailable. Moreover, NWEA could not have proposed a contention based on the Fukushima accident based on news accounts alone immediately after the accident but, rather, was required to wait until some reputable entity, such as the U.S. NRC, issued technical findings upon which a contention or contention could be based. In this case, NWEA has acted promptly in response to the issuance of the Task Force Report, thereby satisfying the requirement to demonstrate good cause.<sup>9</sup>

The information upon which the petition and accompanying contention are based is materially different than information previously available. Five months ago there was no nuclear accident that had occurred at the Fukushima Dai-ichi Nuclear Power Plant. Nor was there the

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<sup>9</sup> A slight additional delay was encountered due to one of NWEA’s declarant’s being in Fukushima, Japan at the time this petition was being finalized.

Task Force Report to provide a “systematic and methodical review of [NRC] processes and regulations to determine whether the agency should make additional improvements to its regulatory system.” Task Force Report at vii. In response to that directive, the Task Force made twelve "overarching" recommendations to “strengthen the regulatory framework for protection against natural disasters, mitigation and emergency preparedness, and to improve the effectiveness of NRC's programs.” *Id.* at viii. In these recommendations the Task Force, for the first time since the Three Mile Island accident occurred in 1979, fundamentally questioned the adequacy of the current level of safety provided by the NRC's program for nuclear reactor regulation.

In the Environmental Report for the CGS, the Applicant has assumed that compliance with existing NRC safety regulations is sufficient to ensure that the environmental impacts of accidents are acceptable. The information in the Task Force Report, however, refutes this assumption and is materially different from the information upon which the ER was based. *See* attached Declaration of Dr. Arjun Makhijani Regarding Safety and Environmental Significance of NRC Task Force Report Regarding Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident (hereinafter “Makhijani Declaration”).

Finally, the petition and accompanying contention are timely based on the availability of the new information. The NRC has previously found good cause where (1) a contention is based on new information and, therefore, could not have been presented earlier, and (2) the intervenor acted promptly after learning of the new information. *Texas Utils. Elec. Co.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-92-12, 36 NRC 62, 69-73 (1992). Here, the Petitioner has sought to intervene in this license renewal in a timely and prompt fashion, within weeks of publication of the Task Force Report.

#### **B. Right to be Made a Party**

NRC regulations require that a late-filing petitioner explain the nature of its right under the Atomic Energy Act to be made a party to the proceeding. 10 C.F.R. § 2.309(c)(1)(ii).

Petitioner incorporates by reference the content of this petition, *supra* in Section II.B, in which NWEA provides the identical information as required by 10 C.F.R. § 2.309(d)(ii) to establish standing.

**C. Petitioner’s Property, Financial and Other Interests**

Likewise, NRC regulations require that a late-filing petitioner set out the nature and extent of the petitioner’s property, financial or other interest in the proceeding. 10 C.F.R. § 2.309(c)(1)(iii). Petitioner incorporates by reference the content of this petition, *supra* in Section II.C, in which NWEA provides the identical information as required by 10 C.F.R. § 2.309(d)(iii) to establish standing.

**D. Possible Effect of Any Order on the Petitioner’s Interest**

NRC rules require the Petitioner to set out the the possible effect of any order that may be entered in the proceeding on the petitioner’s interest. 10 C.F.R. § 2.309(c)(1)(iv). Petitioner incorporates by reference the content of this petition, *supra* in Section II.D, in which NWEA provides the identical information as required by 10 C.F.R. § 2.309(d)(iv) to establish standing.

**E. Other Means by Which the Petitioner’s Interests Will be Protected**

The NRC regulations require the Petitioner to address the “availability of other means whereby the requestor’s/petitioner’s interest will be protected.” 10 C.F.R. § 2.309(c)(1)(v). With regard to this factor, the question is not whether other parties may protect Petitioner’s interests, but rather whether there are other means by which the Petitioner may protect its own interests. *Long Island Lighting Co.* (Jamesport Nuclear Power Station, Units 1 & 2), ALAB-292, 2 NRC 631 (1975). Quite simply, no other means exist. Only through this hearing does the Petitioner have a right that is judicially enforceable to seek compliance by NRC with NEPA before the license renewal for the CGS is issued, permitting this reactor to operate and impose severe accident risks on the Petitioner and the individuals it represents. The only other means by which the Petitioner’s interests will be protected is by the agency’s own actions. There is no

proceeding without the granting of Petitioner's request. There are no other parties other than the Petitioner. Based on the issuance of several operating license extensions by the NRC since the start of the Fukushima accident, none of which addressed the lessons learned from Fukushima, including but not limited to the health and safety effects of the accident, it can be deduced that the NRC likewise does not intend to address the health and safety impacts of Fukushima in evaluating the environmental impacts of the CGS. Therefore, only the intervention of the Petitioner NWEA will accomplish this end and protect its and its members' interests.

**F. Extent to Which Other Parties Will Represent Petitioner's Interests**

A late-filed petition must address the "extent to which the requestor's/petitioner's interests will be represented by existing parties." 10 C.F.R. § 2.309(c)(1)(vi). Here, there is no proceeding and there are no existing parties. Therefore, no existing parties can represent the Petitioner's interests.

**G. Extent to Which Petitioner's Participation Will Broaden the Issues or Delay the Proceedings**

The NRC regulations require the late-filed petition to address "[t]he extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding." 10 C.F.R. § 2.309(c)(1)(vii). This petition is filed 17 months following the date by which the agency originally intended to rule on any petitions to intervene in any proceedings that might have been held. The 17 months must be viewed in light of several considerations. First, the operating license for the CGP does not expire until December 2023, some twelve years from now. The NRC's schedule for relicensing the CGS presents a vast expanse of time in which to address the issues raised by the Petitioner. Specifically, the current proposed schedule calls for the issuance of a Final Supplemental Environmental Impact Statement (FSEIS) in February 2012, a final Safety Evaluation Report (SER) that same month, and a final decision on the pending license extension by June 2012. That date is twelve and a half years before the operating license for the CGS expires. While any participation by any member of the public will perforce broaden the

issues or delay a currently non-existent proceeding, the question is the “extent” to which that is the case and whether it is appropriate to weigh this factor in evaluating the late-filing of the petition and single contention. Presumably the question of extent is relative to the benefits that may accrue the public from the proceeding being held at all and the participation of the petitioner in the proceeding. In this case, given the importance of the health and safety implications of the Fukushima accident on the operation of the CGS and the over twelve years in which those implications can be resolved prior to the need for a final operating license extension, the relative benefits of the Petitioner’s participation weighs in favor of granting the petition to intervene.

Second, had NWEA successfully petitioned to intervene in a timely fashion, it would just now be submitting the very proposed contention included in this petition concerning the near-term lessons learned from the Fukushima accident, based on information that could not have been available prior to the accident or prior to the issuance of the Task Force Report. Therefore, such issues could not have been raised in March 2010, even had the Petitioner timely filed its request for a hearing and leave to intervene. Likewise, the NRC will not be addressing these lessons learned until it has performed its analysis. For this reason, the Petitioner’s late-filed petition will not cause any delay or broadening of the proceeding beyond the effects of the Fukushima accident itself. The late-filed petition will broaden the issues in that the issues that could have been raised in 2010 did not include those related to the Fukushima accident. That broadening, however, is outweighed in importance by the need to incorporate the lessons learned from the world’s most serious nuclear accident with relevance to U.S. commercial reactors. Likewise, even had the Petitioner timely filed for leave to intervene in 2010, the issues related to the Fukushima accident would not have been raised until they happened. The lack of a proceeding to date does not affect the timeliness of the proceedings that will be held if the petition is granted. Alternatively, there is no on-going proceeding for the late-filed Petition to delay. Instead, the late-filed Petition would, if granted, establish proceedings for which a

procedural schedule can be developed without prejudice to the licensee/applicant or the NRC staff.

Finally, while Petitioner's participation may broaden or delay the proceeding, this factor may not be relied upon to deny this request and petition or to exclude the contention because the NRC has a non-discretionary duty under NEPA to consider new and significant information that arises before it makes its licensing decision. *Marsh*, 490 U.S. at 373-4.

#### **H. Petitioner's Participation Will Assist in Developing a Sound Record**

Finally, the NRC requires a late-filed petition to demonstrate "[t]he extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record." 10 C.F.R. § 2.309(c)(1)(viii). NWEA was formed in 1969 to work for the safety of nuclear power reactors in the Pacific Northwest. NWEA participated in two license amendments for the Trojan Nuclear Power Plant (concerning the expansion of capacity of the spent fuel pool and the failure to design and construct the control building to meet federal earthquake standards), in the Construction Permit for the Skagit-Hanford proposed reactors, in the Operating License proceedings for the WPPSS Units 3 & 5 (Satsop), and the Operating License proceedings for the WPPSS Units 1 & 4 (Hanford). In all of these proceedings, NWEA contributed to the development of a sound record. NWEA has a long history of contributing to the soundness of the nation's environmental protection through participation in advisory committees to such agencies as the U.S. Environmental Protection Agency, the Oregon Department of Environmental Quality, and Washington Department of Ecology. Likewise, NWEA has assisted the government in ensuring conformity with federal law through litigation in such cases as *Northwest Environmental Advocates v. U.S. Environmental Protection Agency*, 537 F.3d 1006 (9th Cir. 2008) concerning EPA's *ultra vires* regulations on vessel discharges and *Northwest Environmental Advocates v. EPA*, 268 F.Supp.2d 1255, 1269 (D.Or. 2003) concerning EPA's arbitrary and capricious approval of Oregon's water quality standards. Finally, NWEA has a track record of ensuring compliance with federal law by private and public entities through



litigation such as *Northwest Environmental Advocates v. City of Portland*, 74 F.3d 945 (9th Cir. 1996), *cert. denied*, 116 S.Ct. 2550 (1996) which sought to end the discharge of millions of gallons of raw sewage annually to the Willamette River.

Petitioners will assist in the development of a sound record, as their contention is supported by the expert opinion of a highly qualified expert, Dr. Arjun Makhijani. *See* attached Makhijani Declaration. *See also Pacific Gas & Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-01, 67 NRC 1, 6 (2008) (finding that, when assisted by experienced counsel and experts, participation of a petitioner may be reasonably expected to contribute to the development of a sound record). Furthermore, as a matter of law, NEPA requires consideration of the new and significant information set forth in the Task Force Report. *See* 10 C.F.R. § 51.92(a)(2). A sound record cannot be developed without such consideration.

#### **IV. Contentions to be Advanced by Petitioner**

A request for hearing or petition for leave to intervene “must set forth with particularity the contentions sought to be raised.” 10 C.F.R. § 2.309(f)(1). Petitioner seeks to raise a single contention seeking consideration of new and significant information relevant to the environmental analysis for the proposed re-licensing of the CGS. In the contention set forth below, Petitioner requests a hearing on the significant – indeed extraordinary – safety and environmental implications for the CGS licensing decision of the conclusions and recommendations of the Task Force Report. The contention is also supported by the expert declaration of Dr. Arjun Makhijani of the Institute for Energy and Environmental Research.

The Task Force, a group of highly qualified and experienced Nuclear Regulatory Commission staff members selected by the Commission to evaluate the regulatory implications of the Fukushima Dai-ichi accident, issued a report recommending the NRC strengthen its regulatory scheme for protecting public health and safety by increasing the scope of accidents that fall within the “design basis” and are therefore subject to mandatory safety regulation. The

Task Force's recommendation to establish mandatory safety regulations for severe accidents has extremely grave environmental and safety implications because it would not be logical or necessary to recommend an upgrade to the basic level of protection currently afforded by NRC regulations unless those existing regulations were insufficient to ensure adequate protection of public health, safety, and the environment throughout the licensed life of nuclear reactors. The recommendation is all the more grave because it constitutes the second warning that the Commission has received regarding the need to expand the scope of design basis accidents. The first warning, issued by the Rogovin Report over thirty years ago, following the Three Mile Island accident and explained in more detail below, essentially went unheeded. *Id.* at 16-17. As the Task Force urges, "the time has come" to make fundamental changes to the NRC's program for establishing minimum safety requirements for nuclear reactors. *Id.* at 18.

Moreover, the Task Force's recommendation that the scope of mandatory safety regulations be expanded to include severe accidents raises significant environmental concerns in this proceeding, including that (1) the risks of operating the CGS under a renewed license are higher than estimated in the ER and (2) Energy Northwest's previous environmental analysis of the relative costs and benefits of severe accident mitigation alternatives ("SAMAs") is fundamentally inadequate because those measures are, in fact, necessary to assure adequate protection of the public health and safety and, therefore, should be imposed without regard to their cost.

Pursuant to NEPA, the analysis demanded by this contention may not be deferred until after CGS is relicensed. Given that the NRC Commissioners have postponed taking action on the Task Force's recommendations, admission of this contention constitutes the only way of ensuring that the environmental implications of the Task Force recommendations are taken into account in the license renewal decision for CGS.

The Petitioner notes that this contention is substantially similar to contentions and comments that were filed recently in pending reactor licensing and re-licensing cases and

standardized design certification proceedings. In addition, Petitioners have joined with other individuals and organizations in a rulemaking petition seeking to suspend any regulations that would preclude full consideration of the environmental implications of the Task Force Report. Rulemaking Petition to Rescind Prohibition Against Consideration of Environmental Impacts of Severe Reactor and Spent Fuel Pool Accidents and Request to Suspend Licensing Decision (August 22, 2011). A copy of NWEA's rulemaking petition is attached. Finally, in an Emergency Petition, now pending before the Commission for nearly four months, many of the same organizations and individuals including the Petitioner previously asked the Commission to suspend its licensing decisions while it evaluated the environmental implications of the Fukushima accident and to establish procedures for the fair and meaningful consideration of those issues in licensing hearings. Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident (April 14-18, 2011) ("Emergency Petition"). In the aggregate, these contentions and the rulemaking petitions follow up on the Emergency Petition's demand that the NRC comply with NEPA by addressing the lessons of the Fukushima accident in its environmental analyses for licensing decisions. Having received no response to their Emergency Petition, the signatories to the Emergency Petition now seek consideration of the Task Force's far-reaching conclusions and recommendations in each individual licensing proceeding, including the instant case.

The Petitioner recognizes that given the sweeping scope of the Task Force conclusions and recommendations, it may be more appropriate for the NRC to consider them in generic rather than site-specific environmental proceedings. That is for the NRC to decide. *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 100 (1983). It is the NRC, and not the public, which is responsible for compliance with NEPA. *Duke Power Co. et al.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

**A. Statement of Contention.**

The ER for CGS license renewal fails to satisfy the requirements of NEPA because it does not address the new and significant environmental implications of the findings and recommendations raised by the NRC's Fukushima Task Force Report. As required by NEPA and the NRC regulations, these implications must be addressed in the ER.

**B. Brief Explanation of the Basis for the Contention.**

**1. The Task Force Report.**

This contention is based on the Task Force Report, in which the Commission instructed the Task Force to provide:

A systematic and methodical review of [NRC] processes and regulations to determine whether the agency should make additional improvements to its regulatory system and to make recommendations to the Commission for its policy direction, in light of the accident at the Fukushima Dai-ichi Nuclear Power Plant.

Task Force Report at vii. In response to that directive, the Task Force prepared a detailed history of the NRC's program for regulation of safety and public health and evaluated that program in light of the experience of the Fukushima accident.

The Task Force then assessed the risk posed by "continued operation and continued licensing activities" for U.S. nuclear plants. Applying the NRC's standard for whether nuclear plants pose an "imminent risk" such that they should be shut down immediately, *see, e.g.*, Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-6, 43 NRC 123, 128 (1996) (finding no "imminent hazard" that would warrant shutdown of a reactor), the Task Force found that no imminent risk was posed by operation or licensing. *Id.* at 18; *see also* 42 U.S.C. § 2133(d) (forbidding the NRC from licensing reactors if their operation would be "inimical to the common defense and security"). In addition, the Task Force concluded that U.S. reactors meet the statutory standard for security, i.e., they are "not inimical to the common defense and security." Notably, however, the Task Force did not report a conclusion that licensing of

reactors would *not* be “inimical to public health and safety,” as the AEA requires for licensing of reactors. 42 U.S.C. § 2133.

Instead, the Task Force concluded that the regulatory system on which the NRC relies to make the safety findings that the AEA requires for licensing of reactors must be strengthened by raising the level of safety that is minimally required for the protection of public health and

safety: In response to the Fukushima accident and the insights it brings to light, the Task Force is recommending actions, some general, some specific, that it believes would be a reasonable, well-formulated set of actions to increase the level of safety associated with adequate protection of the public health and safety.

*Id.* at 18 (emphasis added). In particular, the Task Force found that “the NRC's safety approach is incomplete without a strong program for dealing with the unexpected, including severe accidents.” *Id.* at 20. Therefore, the Task Force recommended that the NRC incorporate severe accidents into the “design basis” and subject it to mandatory safety regulations. In order to upgrade the design basis, the Task Force also recommended that the NRC undertake new safety investigations and impose design changes, equipment upgrades, and improvements to emergency planning and operating procedures. *See, e.g.*, Task Force Report at 73-75.<sup>10</sup>

The Task Force also found that the Fukushima accident was not the first warning the NRC had received that it needed to strengthen its safety program in order to provide an adequate level of protection to public health and safety. After the Three Mile Island accident in 1979, an independent body appointed to investigate the accident’s implications, headed by Mitchell Rogovin of the NRC's Special Inquiry Group (the “Rogovin Report”), recommended that the NRC “[e]xpand the spectrum of design basis accidents.” *Id.* at 16. But the NRC did little to follow the recommendations of the Rogovin Report. While it “encouraged licensees to search for vulnerabilities” in their plant designs through Individual Plant Examination (“IPE”) and Individual Plant Examination for External Events (“IPEEE”) programs and encouraged the

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<sup>10</sup> The Task Force Report contains twelve “overarching” recommendations, which are summarized on pages 69-70.

development of severe accident mitigation guidelines (“SAMGs”), “the Commission did not take action to require the IPEs, IPEEEs, or SAMGs.” *Id.* Thus, the Task Force concluded that:

While the Commission has been partially responsive to recommendations calling for requirements to address beyond-design-basis accidents, the NRC has not made fundamental changes to the regulatory approach for beyond-design-basis events and severe accidents for operating reactors.

*Id.* at 17. Looking back on the Commission's failure to heed the Rogovin Report's recommendations, the Task Force urged that “the time has come” when NRC safety regulations must be “reviewed, evaluated and changed, as necessary, to insure (sic) that they continue to address the NRC's requirements to provide reasonable assurance of adequate protection of public health and safety.” *Id.* at 18.

To finally fulfill the Rogovin Report's recommendation – a need now re-confirmed by the Fukushima Task Force – would require a major re-evaluation and overhaul of the NRC's regulatory program. As the Task Force recognized, the great majority of the NRC's current regulations do not impose mandatory safety requirements on severe accidents, and severe accident measures are adopted only on a “voluntary” basis or through a “patchwork” of requirements. *Id.*

The lack of an NRC program for mandatory regulation of severe accidents is clearly evident from the regulations themselves. The Part 50 regulations, which establish fundamental safety requirements for all reactors (including the current generation and the proposed new generation), are based on a “design basis” that does not include severe accidents. Task Force Report at 16. While NRC NEPA regulations require consideration of severe accident mitigation measures, they need not be adopted unless they are found to be cost-beneficial. *See, e.g., Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Station, Units 2 and 3), LBP-11-17, slip op. at 17 (July 14, 2011). Because the imposition of severe accident mitigation measures is based on cost considerations, they are not part of the design basis for adequate

protection of public health and safety. *Union of Concerned Scientists v. NRC*, 824 F.2d 108, 120 (D.C. Cir. 1987).<sup>11</sup>

Therefore, the NRC's current regulatory scheme requires significant re-evaluation and revision in order to expand or upgrade the design basis for reactor safety as recommended by the Task Force Report. The fact that this effort has been postponed for thirty years makes the scope of the required undertaking all the more massive and urgent.

## **2. The National Environmental Policy Act.**

The contention is also based on NEPA, "our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). NEPA requires a federal agency to prepare an Environmental Impact Statement ("EIS") for any "major Federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C)(i). This duty to carefully consider information regarding a project's environmental impacts is non-discretionary. *Silva v. Romney*, 473 F.2d 287, 292 (1st Cir. 1973). Federal agencies are held to a "strict standard of compliance" with the Act's requirements. *Calvert Cliff's Coordinating Commission v. AEC*, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

NEPA and the Council on Environmental Quality ("CEQ") regulations implementing NEPA are intended to ensure that environmental considerations are "infused into the ongoing programs and actions of the Federal Government." *Marsh v. Oregon Natural Res. Council*, 490

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<sup>11</sup> Even the NRC's Part 52 regulations for new reactors do not contain mandatory requirements for severe accident mitigation features. While the Part 52 regulations require combined license applicants to submit analyses of measures to mitigate severe accidents, Part 52 contains no standards for the adequacy of such analyses. In addition, the Commission has also stated that Part 52 severe accident mitigation measures, which must be described under the NRC's safety regulations in 10 C.F.R. §§ 52.47(a)(23) and 52.79(a)(38), are subject to cost-benefit analysis. *See, e.g.*, Statement of Considerations ("SOC") for AP1000 design certification rule, 10 C.F.R. Part 52 Appendix B, 71 Fed. Reg. 4,464, 4,469 (January 27, 2006): As stated in that notice:

Westinghouse's evaluation of various design alternatives to prevent and mitigate severe accidents does not constitute design requirements. The Commission's assessment of this information is discussed in Section VII (sic) of this SOC on environmental impacts.

U.S. 360, 371 n.14 (1989). Thus, NEPA imposes on agencies a continuing obligation to gather and evaluate new information relevant to the environmental impact of its actions. *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1023-24 (9th Cir. 1980) (citing 42 U.S.C. 4332(2)(A), (B); *Essex County Preservation Ass'n v. Campbell*, 536 F.2d 956, 960-61 (1st Cir. 1976); *Society for Animal Rights, Inc. v. Schlesinger*, 512 F.2d 915, 917-18 (D.C. Cir. 1975)). “An agency that has prepared an EIS cannot simply rest on the original document. The agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a “hard look” at the environmental effects of [its] planned action, even after a proposal has received initial approval.” *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 557-58 (9th Cir. 2000) (quoting *Marsh*, 490 U.S. at 373-74).

In order to aid the Commission in complying with NEPA, each applicant shall submit to the Commission an environmental report (“ER”). See 10 C.F.R. §§ 51.14; 51.45. The ER must contain a description of the proposed action, a statement of its purposes, and a description of the environment affected. *Id.* § 51.45 (b). Further, the ER must discuss the impact of the proposed action on the environment, any adverse environmental effects which cannot be avoided should the proposal be implemented, alternatives to the proposed action, the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any reversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. *Id.* § 51.45 (b)(5). The ER must also contain an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects. *Id.* § 51.45 (c). An ER for the licensing action contemplated in this instance must also include consideration of the economic, technical, and other benefits and costs of the proposed action and its alternatives. *Id.* The environmental report must to the fullest extent practicable, quantify the various factors considered and contain sufficient data to aid the Commission in its development of an independent analysis. *Id.*



Within this regulatory framework, “[t]he Commission recognizes a continuing obligation to conduct its domestic licensing and related regulatory functions in a manner which is both receptive to environmental concerns and consistent with the Commission's responsibility as an independent regulatory agency for protecting the radiological health and safety of the public.” *Id.* § 51.10 (b) (emphasis added).

**3. The Environmental Report Does Not Consider the Significant New Information Contained in the Task Force Report and the ER Must Be Supplemented to Comply with NEPA.**

NEPA requires federal agencies to supplement their NEPA documentation when “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1509(c)(1)(ii). A federal agency’s continuing duty to take a “hard look” at the environmental effects of their actions requires they consider, evaluate, and make a reasoned determination about the significance of this new information and prepare supplemental NEPA documentation accordingly. *Warm Springs Task Force v. Gribble*, 621 F.2d at 1023-24; *Stop H-3 Association v. Dole*, 740 F.2d 1442, 1463-64 (9th Cir. 1984). The need to supplement under NEPA when there is new and significant information is also found throughout the NRC regulations. *See* 10 C.F.R. §§ 51.92 (a)(2), 51.50(c)(iii), 51.53(b), 51.53(c)(3)(iv).

The conclusions and recommendations presented in the Task Force Report constitute “new and significant information” under NEPA whose environmental implications must be considered before the NRC may make a decision that approves license renewal for CGS. First, the information is “new” because it stems directly from the Fukushima accident, which occurred only five months ago and for which the special study commissioned by the Commission has only just been issued.

Second, the information is “significant” because it raises an extraordinary level of concern regarding the manner in which the proposed renewed operation of CGS “impacts public health and safety.” *See* 40 C.F.R. § 1508.27(b)(2). For the first time since the Three Mile Island

accident occurred in 1979, a highly respected group of scientists and engineers within the NRC Staff has fundamentally questioned the adequacy of the current level of safety provided by the NRC's program for nuclear reactor regulation. NEPA demands that federal agencies “insure the professional integrity, including the scientific integrity, of the discussions and analyses” included in an EIS, 40 C.F.R. § 1502.24, and disclose “all major points of view on the environmental impacts” including any “responsible opposing view.” 40 C.F.R. §§ 1502.9(a), (b). Courts have found that an EIS that fails to disclose and respond to expert opinions concerning the hazards of a proposed action, particularly those opinions of the agency's own experts, are “fatally deficient” and run contrary to NEPA’s “hard look” requirement.<sup>12</sup> As a result, the NRC must revisit any conclusions in the CGS ER based on the assumption that compliance with NRC safety regulations is sufficient to ensure that environmental impacts of accidents are acceptable.

**4. The Task Force Report Reveals that the Full Spectrum of All Design-Basis Accidents Has Not Been Assessed and the ER Must Be Supplemented to Consider Additional Design-Basis Accidents that Have the Potential for Releases to the Environment.**

In Appendix B to 10 C.F.R. Part 51, the NRC reports a determination that the environmental impacts of both design basis accidents and severe accidents are “small.” The findings of the Task Force Report call into question whether this represents a full, accurate description and examination of all the design basis accidents having the potential for releases to the environment. *See* Makhijani Declaration, ¶¶ 7-10. If the design basis for the reactor does

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<sup>12</sup> *Center for Biological Diversity v. United States Forest Service*, 349 F.3d 1157 (9<sup>th</sup> Cir. 2003) (finding an EIS’s failure to disclose and discuss responsible opposing scientific viewpoints violated NEPA and the implementing regulations); *Seattle Audubon Society v. Moseley*, 798 F.Supp. 1473, 1479 (W.D. Wa. 1992) *aff’d* sub nom *Seattle Audubon Society v. Espy*, 998 F.2d 699 (9<sup>th</sup> Cir. 1993) (quoting *Friends of the Earth v. Hall*, 693 F.Supp. 904, 934 (W.D. Wa. 1988) (“[a]n EIS that fails to disclose and respond to ‘the opinions held by well respected scientists concerning the hazards of the proposed action...is fatally deficient.’”)); *Western Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 487 (9<sup>th</sup> Cir. 2010) (finding that agency failed to take a “hard look” under NEPA when it ignored concerns raised by its own experts). *See also* *Blue Mtns. Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1213 (9<sup>th</sup> Cir. 1998) (noting that an agency’s failure to discuss and consider an independent scientific report’s recommendations “lends weight to [plaintiff’s] claim that the [agency] did not take the requisite ‘hard look’ at the environmental consequences” of the project).

not incorporate accidents that should be considered in order to satisfy the adequate protection standard, then it is not possible to reach a conclusion that the design of the reactor adequately protects against accident risks.

**5. The ER Must Be Supplemented in Light of the Task Force Findings that Certain Accidents Formerly Classified as Severe Should Be Incorporated into the Design Basis.**

By recommending the incorporation of accidents formerly classified as “severe” or “beyond design basis” into the design basis, the Task Force effectively recommends a complete overhaul of the NRC's system for mitigating severe accidents through consideration of SAMAs. *See* 10 C.F.R. § 51.45(c). As the Task Force recognizes, currently the NRC does not impose measures for the mitigation of severe accidents unless they are shown to be cost-beneficial or unless they are adopted voluntarily. Task Force Report at 15. *See also* 10 C.F.R. §§ 51.71(d); 51.75(c)(2) (allowing EISs for combined license applications that rely on certified standardized designs to reference the severe accident mitigation analyses for those designs).<sup>13</sup> But the Task Force recommends that severe accident mitigation measures should be adopted into the design basis, i.e., the set of regulations adopted without regard to their cost as fundamentally required for all NRC standards that set requirements for adequate protection of health and safety. *Union of Concerned Scientists v. NRC*, 824 F.2d 108, 120 (D.C. Cir. 1987). Thus, the values assigned to the cost-benefit analysis for CGS SAMAs, as described in Section 4.20 of the ER, must be re-evaluated in light of the Task Force’s conclusion that the value of SAMAs is so high that they should be elected as a matter of course.

Were SAMAs imposed as mandatory measures, the outcome of the ER and subsequently the future SEIS for CGS could be affected significantly in two major respects. First, severe

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<sup>13</sup> *See also* Memorandum from NRC Staff to AP1000 and ESBWR design-Centered Working Groups re: Summary of the March 22 and 23, 2007, Meeting to Discuss pre-Combined License Application Issues (April 23, 2007) (suggesting that some SAMAs for proposed reactors with standardized designs should be included in the design application and some should be included in COLAs).

accident mitigative measures now rejected as too costly may be required, thus substantially improving the safety of the CGS operation if it is licensed. Second, consideration of the costs of mandatory mitigative measures could affect the overall cost-benefit analysis for the reactor. *See* 10 C.F.R. § 51.45 (c) (explaining that environmental reports should also include consideration of the economic, technical, and other benefits and costs of the proposed action and its alternatives). As discussed in Dr. Makhijani’s declaration, these costs may be significant, showing that other alternatives such as the no-action alternative and other alternative electricity production sources may be more attractive.<sup>14</sup> As the fundamental purposes of NEPA are: (1) to guarantee that the government takes a “hard look” at all of the environmental consequences of proposed federal actions before the actions occur, *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); and (2) to “guarantee[] that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision,” *id.* at 349, the NRC cannot meet the fundamental purposes of NEPA if it does not include all of the costs associated with required mitigative measures. *See Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (“There can be no ‘hard look’ at the costs and benefits unless all costs are disclosed.”).

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<sup>14</sup> NEPA requires the NRC to include in its EIS a “detailed statement . . . on . . . alternatives to the proposed action.” 42 U.S.C. § 4332(C)(iii). The alternatives analysis should address “the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for the choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14. This analysis must “rigorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a). Agencies must consider three types of alternatives, which include a no action alternative, other reasonable courses of actions, and mitigation measures not in the proposed action. 40 C.F.R. § 1508.25. The purpose of this section is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.” *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974). “The existence of a viable but unexamined alternative renders an [EIS] inadequate.” *Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 813 (9th Cir. 2005) (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)).

**6. The ER Must Be Supplemented to Include a Discussion of the Task Force Report's Recommended Measures to Ensure the Plant's Protection From Seismic and Flooding Events.**

Following the devastating events in Japan, the Task Force Report explained the importance of protecting structures, systems and components (SSCs) of nuclear reactors from natural phenomena, including seismic and flooding hazards:

Protection from natural phenomena such seismic and flooding is critical for safe operation of nuclear power plants due to potential common-cause failures and significant contribution to core damage frequency from external events. Failure to adequately protect SSC's important to safety from appropriate design-basis natural phenomena with appropriate safety margins has the potential for common-cause failures and significant consequences as demonstrated at Fukushima.

Task Force Report at 30. Yet, the Task Force found that significant differences may exist between plants in the way they protect against design-basis natural phenomena (including seismic and flooding hazards) and the safety margin provided. *Id.* at 29. For instance, while tsunami hazards have been considered in the design basis for operating plants sited on the Pacific Ocean, the same cannot be said for those sited on the Atlantic Ocean and Gulf of Mexico. *Id.* Accordingly, the Task Force recommended that licensees reevaluate the seismic and flooding hazards at their sites and if necessary update the design basis and SSCs important to safety to protect against the updated hazards. *Id.* at 30.

The ER must be supplemented in light of this new and significant information. The Task Force's findings and recommendations are directly relevant to environmental concerns and have a bearing on the proposed action and its impacts as they point to the need for a reevaluation of the seismic and flooding hazards at the CGS site, a “hard look” at the environmental consequences such hazards could pose, and an examination of what, if any, design measures could be implemented (i.e. through NEPA's requisite “alternatives” analysis) to ensure that the public is adequately protected from these risks.

**7. The ER Must Be Supplemented to Include a Discussion of the Additional Mitigation Measures Recommended by the Task Force Report.**

“The discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989); see also 1502.16(h) (stating that an EIS must contain “means to mitigate adverse environmental impacts”). There must be a “reasonably complete discussion of possible mitigation measures.” *Id.* at 352. Mitigation measures may be found insufficient when the agency fails to study the efficacy of the proposed mitigation, fails to take certain steps to ensure the efficacy of the proposed mitigation (such as including mandatory conditions in permits), or fails to consider alternatives in the event that the mitigation measures fail. *Id.*

The Task Force Report makes several significant findings when it comes to increasing and improving mitigation measures at new reactors and recommends a number of specific steps licensees could take in this regard. These recommendations include strengthening SBO mitigation capability at all operating and new reactors for design-basis and beyond-design-basis external events, (Section 4.2.1), requiring reliable hardened vent designs in BWR facilities with Mark I and Mark II containments (Section 4.2.2), enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool (Section 4.2.4), strengthening and integrating onsite emergency response capabilities such as EOPs, SAMGs, and EDMGs (Section 4.2.5), and addressing multi-unit accidents. *See also* Makhijani Declaration, ¶¶ 18-24. Accordingly, the ER must be supplemented to consider the use of these additional mitigation measures to reduce the project's environmental impacts. *See* 40 C.F.R. §§ 1502.14 (f), 1502.16), 1508.25 (b)(3)).

#### **8. Requirement for Prior Consideration of Environmental Impacts.**

The Task Force urges that some of its recommendations be considered before certain licensing decisions are made. For instance, the Task Force concludes that Recommendation 4 (proposing new requirements for prolonged station blackout ("SBO") mitigation) and Recommendation 7 (proposing measures for spent fuel pool makeup capability and instrumentation) should apply to all design certifications or to COL applicants if the

recommended requirements are not addressed in the referenced certified design. Task Force Report at 71. The Task Force recommends that design certifications and COLs under active staff review address this recommendation “before licensing.” *Id.* at 72.

Petitioner respectfully submits that this is the appropriate and required approach for NEPA consideration of Recommendations 4 and 7 and all of the Task Force’s remaining conclusions and recommendations. Before making a decision regarding renewal of the CGS license, for example, the NRC must evaluate the relative costs and benefits of adopting Recommendations 4 and 7 in light of the NRC’s increased understanding regarding accident risks and the strength of its regulatory program to prevent or mitigate them. And the NRC must apply the same analysis to all of the recommendations, not just Recommendations 4 and 7. NEPA requires the NRC to address the environmental implications of the Task Force’s analysis before making a re-licensing decision for CGS, in order to ensure that “important effects [of the licensing decision] will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.” *Robertson*, 490 U.S. at 349. *See also* 40 C.F.R. §§ 1500.1(c), 1502.1, 1502.14. The NRC’s obligation to comply with NEPA in this respect is independent of and in addition to the NRC’s responsibilities under the AEA, and must be enforced to the “fullest extent possible.” *Calvert Cliffs Coordinating Committee*, 449 F.2d at 1115. *See also Limerick Ecology Action v. NRC*, 869 F.2d 719, 729 (3rd Cir. 1989) (citing *Public Service Co. of New Hampshire v. NRC*, 582 F.2d 77, 86 (1st Cir. 1978)). Under NEPA, therefore, the Commission is required to address the Task Force’s findings and recommendations as they pertain to CGS before making a licensing decision, regardless of whether it does or does not choose to do so in the context of its AEA-based regulations.

Of course the Commission could moot the contention by adopting all of the Task Force’s recommendations. *See Citizens for Safe Power v. NRC*, 524 F.2d 1291, 1299 (D.C. Cir. 1975). However, a majority of the Commissioners has voted not to do so immediately. *See* Notation Vote Response Sheets re: SECY-11-0093, Near-Term Report and Recommendations for Agency

Actions Following the Events in Japan.<sup>15</sup> Thus, while the NRC may eventually address the Task Force's recommendations in the context of its AEA-based regulatory scheme, the Commission has given no indication that it intends to address any of the Task Force's conclusions in its prospective licensing decisions. In the absence of any AEA-based review of the Task Force's conclusions, the CGS ER must be supplemented in order to meet NEPA's goal that the NRC's licensing decision for CGS will be "based on an accurate understanding of the environmental consequences of [its] actions." *Indian Point*, LBP-11-17, slip op. at 17.

**C. Demonstration that the Contention is Within the Scope of the Proceeding.**

The contention is within the scope of the proceeding because it seeks compliance with NEPA and NRC-implementing regulations, which must be complied with before CGS may be licensed.

**D. Demonstration that the Contention is Material to the Findings NRC Must Make to Re-License CGS.**

As demonstrated above in Section IV.B, this contention challenges the NRC's failure to fully comply with NEPA and federal regulations for the implementation of NEPA in its EIS for the proposed CGS renewal. Unless the NRC complies with the procedural requirements of NEPA that are discussed in the contention, it cannot make a valid finding that CGS should be re-licensed. Therefore the contention is material to the findings the NRC must make in order to license this facility.

The Petitioner recognizes that some issues raised by the Task Force Report may be appropriate for generic rather than case-specific resolution. The determination of whether it is appropriate to address the issues raised in this contention generically or on a case-specific basis is a discretionary matter for the NRC to decide. *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. at 100. Nevertheless, any generic resolution of the issues

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<sup>15</sup> <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2011/>.



must be reached before the licensing decision in this case is made, and must be applied to this licensing decision. *Robertson*, 490 U.S. at 350.

**E. Concise Statement of the Facts or Expert Opinion Supporting the Contention, Along With Appropriate Citations to Supporting Scientific or Factual Materials.**

The Petitioner relies on the facts and opinions of the Task Force members as set forth in their Task Force Report and as summarized above in Section IV.B. The high level of technical qualifications of the Task Force members has been recognized by the Commission. *See* Transcript of May 12, 2011, briefing at 5, in which Commissioner Magwood refers to the Task force as the NRC's "A-team."

Additional technical support is provided by the attached Declaration of Dr. Arjun Makhijani, which confirms the environmental significance of the Task Force's findings and recommendations with respect to the environmental analyses for all pending nuclear reactor licensing cases and design certification applications including the instant case.

**F. Sufficient Information to Show the Existence of a Genuine Dispute With the Applicant and the NRC.**

Based on the complete failure of the NRC to address the environmental implications of the Task Force Report for the proposed re-licensing of CGS, it appears that the parties have a dispute as to whether the ER for the facility must be revised to address those implications. As demonstrated above in Section IV.B, the Task Force Report, and Dr. Makhijani's Declaration provide sufficient information to show the genuineness and materiality of the dispute.

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**V. Conclusion**

For the foregoing reasons, the petition should be granted, the Petitioner should be granted standing to intervene, and the Petitioner's contention should be admitted for a hearing.

Respectfully submitted this 22<sup>nd</sup> day of August 2011.

*Signed (electronically) by*  
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