

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
E. Roy Hawkens, Chairman  
Dr. Michael F. Kennedy  
Dr. William C. Burnett

In the Matter of )  
)  
FLORIDA POWER & LIGHT COMPANY )  
) Docket Nos. 52-040-COL  
) and 52-041-COL  
)  
Turkey Point Units 6 and 7 )  
)  
Combined License Application )

August 11, 2011

**CONTENTION REGARDING NEPA REQUIREMENT TO  
ADDRESS SAFETY AND ENVIRONMENTAL  
IMPLICATIONS OF THE FUKUSHIMA TASK FORCE REPORT**

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**I. INTRODUCTION AND SUMMARY**

Pursuant to 10 C.F.R. § 2.309(f)(1), CITIZENS ALLIED FOR SAFE ENERGY (CASE) asserts a new contention seeking consideration of new and significant information relevant to the environmental analysis for the proposed licensing of two new reactors at Turkey Point, Homestead, Florida, Turkey Point 6 & 7. In the contention set forth in Section II below, Intervenor request a hearing on the significant – indeed extraordinary – safety and environmental implications for the Turkey Point 6 & 7 licensing decision of the conclusions and recommendations of the U.S. Nuclear Regulatory Commission’s Near-Term Task

Force (the “Task Force”). The contention is supported by the expert declaration of Dr. Arjun Makhijani of the Institute for Energy and Environmental Research. The contention is also supported by a Motion to Admit a New Contention.

The Task Force, a group of highly qualified and experienced Nuclear Regulatory Commission (“NRC” or the “Commission”) staff members selected by the Commission to evaluate the regulatory implications of the Fukushima Dai-ichi accident, has 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. Recommendations for Enhancing Reactor Safety in the 21<sup>st</sup> Century: The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident at 20-21 (July 12, 2011) (“Task Force Report”). 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 in Section II 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 proposed Turkey Point 6 & 7 reactors are higher than estimated in the Environmental Report (the “ER”), (2) the Florida Power & Light Company’s (FPL) 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 the National Environmental Policy Act (“NEPA”), the analysis demanded by this contention may not be deferred until after Turkey Point 6 & 7 are licensed. 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 licensing decision for Turkey Point 6 & 7.

CASE wishes to point out that this contention is substantially similar to contentions and comments that are being filed this week in other pending reactor licensing and re-licensing cases and standardized design certification

proceedings. In addition, Intervenors 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. A copy of the 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 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) (the "Emergency Petition").

In the aggregate, these contentions, rulemaking comments, and the rulemaking petition 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 Intervenors recognize 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).

**II. INTERVENORS' NEW CONTENTION SATISFIES THE REQUIREMENTS OF 10 C.F.R. 2.309 (f)(1).**

**1. Statement of Contention.**

The ER for Turkey Point Units 6 & 7 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.

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

**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. 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.” *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”). 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>1</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, 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 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

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<sup>1</sup> The Task Force Report contains twelve “overarching” recommendations, which are summarized on pages 69-70.

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 a 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. Id. at 16. 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.

Section VI of the SOC, in turn, states that the NRC has evaluated severe accident mitigation alternatives using a cost-benefit analysis:

In addition, as part of the environmental assessment for the AP1000 design, the NRC reviewed Westinghouse's evaluation of various design alternatives to prevent and mitigate severe accidents in Appendix 1B of the AP1000 DCD Tier 2. Based upon review of Westinghouse's evaluation, the Commission finds that: (1) Westinghouse identified a reasonably complete set of potential design alternatives to prevent and mitigate severe accidents for the AP1000 design; (2) none of the potential design alternatives are justified on the basis of cost-benefit considerations; and (3) it is unlikely that other design changes would be identified and justified in the future on the basis of cost-benefit considerations, because the estimated core damage frequencies for the AP1000 are very low on an absolute scale. These issues are considered resolved for the AP1000 design.

71 Fed. Reg. at 4,477 (emphasis added). If, as recommended by the Task Force, the design basis had been upgraded to include severe accidents, the severe accident mitigation measures considered under 10 C.F.R. §§ 52.47(a)(23) and 52.79(a)(38) in the AP1000 design certification rulemaking would have been required if they were found to be necessary to ensure adequate protection of public health and safety, and it would have been unlawful to apply cost-benefit

analysis to those measures. *Union of Concerned Scientists v. NRC*, 824 F.2d 108, 120 (D.C. Cir. 1987).

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.

### **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 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 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. 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 environmental report 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).

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” whose environmental implications must be considered before the NRC may make a decision that approves operation of Turkey Point 6 & 7. 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 operation of Turkey Point 6 & 7 “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<sup>2</sup> and disclose “all major points of view on the environmental impacts” including any “responsible opposing view.”<sup>3</sup> Courts have found that an EIS that fails to disclose and respond to expert

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<sup>2</sup> 40 C.F.R. § 1502.24.

<sup>3</sup> 40 C.F.R. §§ 1502.9(a), (b)

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>4</sup> As a result, the NRC must revisit any conclusions in the Turkey Point 6 & 7ER based on the assumption that compliance with NRC safety regulations is sufficient to ensure that environmental impacts of accidents are acceptable.

*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.*

The Turkey Point 6 & 7 ER states that the radiological consequences of design basis accidents are assessed to demonstrate that new units can be sited at Turkey Point without undue risk to the health and safety of the public (7.1.1) and concludes that any health effects resulting from the design basis accidents are negligible (7.1.4). 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

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<sup>4</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).

Makhijani Declaration, pars. 7-10. If the design basis for the reactor does 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. See Makhijani Declaration, pars.

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 (“COLAs”) that rely on certified standardized designs to reference the severe accident mitigation analyses for those designs).<sup>5</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

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<sup>5</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).

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 Turkey Point 6 & 7 SAMAs, as described in Section 7.3 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 EIS for Turkey Point 6 & 7 could be affected significantly in two major respects. First, severe accident mitigative measures now rejected as too costly may be required, thus substantially improving the safety of the Turkey Point operation if it is licensed. Second, consideration of the costs of mandatory mitigative measures could affect the overall cost-benefit analysis for the reactor.<sup>6</sup> 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>7</sup> As the

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<sup>6</sup> 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).

<sup>7</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



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 (5<sup>th</sup> Cir. 1983) (“There can be no ‘hard look’ at the costs and benefits unless all costs are disclosed.”).

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.

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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)).

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. Task Force Report 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. Task Force Report 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 Turkey Point 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.

*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.” Robertson, 490 U.S. 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 mitigation measures for multi-unit accidents. See also Makhijani Declaration, pars. 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)).

### **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.

Intervenors respectfully submit 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 issuing a license for Turkey Point 6 & 7, 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 licensing decision for Turkey Point 6 & 7 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 Turkey Point 6 & 7 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, posted on the NRC’s website at <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2011/>. 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 Turkey Point 6 & 7 ER must be supplemented in

order to meet NEPA's goal that the NRC's licensing decision for Turkey Point 6 & 7 will be "based on an accurate understanding of the environmental consequences of [its] actions." *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Station, Units 2 and 3), LBP-11-17, slip op. at 17 (July 14, 2011).

**3. 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 Turkey 6 & 7 may be licensed.

**4. Demonstration that the Contention is Material to the Findings NRC Must Make to License Turkey Point 6 & 7.**

As demonstrated above in Section 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 Turkey Point 6 & 7 reactors.. Unless the NRC complies with the procedural requirements of NEPA that are discussed in the contention, it cannot make a valid finding that the a COL's for Turkey Point 6 & 7 should be issued. Therefore the contention is material to the findings the NRC must make in order to license this facility.

Intervenors recognize 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 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.

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

The Intervenors rely on the facts and opinions of the Task Force members as set forth in their Task Force Report and as summarized above in Section 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.

**6. 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 licensing of Turkey Point 6 & 7, 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 B, the Task Force Report and Dr. Makhijani's Declaration provide sufficient information to show the genuineness and materiality of the dispute.

### **III. CONCLUSION**

For the foregoing reasons, the contention is admissible and should be admitted for a hearing.

Respectfully submitted this 11th day of August, 2011.

/signed electronically by/

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