

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE ATOMIC SAFETY AND LICENSING BOARD**

In the Matter of	)	Docket Nos. 50-247-LR
	)	and
ENTERGY NUCLEAR OPERATIONS, INC.	)	50-286-LR
	)	
(Indian Point Nuclear Generating Units 2 and 3)	)	
	)	January 24, 2011

**HUDSON RIVER SLOOP CLEARWATER, INC. AND RIVERKEEPER, INC.'S  
JOINT MOTION FOR LEAVE TO ADD NEW CONTENTIONS BASED  
UPON NEW INFORMATION AND PETITION TO ADD NEW CONTENTIONS**

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## **BACKGROUND**

Clearwater Inc. and Riverkeeper, Inc. (hereinafter “Petitioners”) hereby submit this Motion to add new contentions which seek to plug the gaps in the environmental and safety analyses for the long term storage of spent-fuel on the Indian Point site. Even the Commission has now formally acknowledged that it is not possible to predict when waste will leave the site and that the generic analyses are currently limited to 60 years beyond the time when power production ceases. Because the waste could remain on site for much longer than this and the generic work is limited, additional site-specific analysis is needed before the Commission can decide whether to relicense the operating reactors at Indian Point.

Spent fuel is a highly radioactive form of nuclear waste. Before it may be transported to another facility for reprocessing or disposal, it must remain at the nuclear reactor site for a period of time to allow the radioactivity in the waste to decay sufficiently. The designers of commercial nuclear reactor sites like Indian Point assumed that such waste would remain on-site for only approximately five years and be reprocessed thereafter. However, the reprocessing plant at West Valley in New York proved incapable of processing any appreciable quantity of this waste and reprocessing in the United States ceased altogether in the 1970s due to both practical concerns about cost and policy concerns about proliferation. After that, the government planned to dispose of spent fuel and other wastes in deep underground repositories. After mandating the building of two repositories, Congress settled on Yucca Mountain in Nevada as the location for a single repository. Following repeated delays the current administration has now canceled the program to build that repository and has made it unlikely that a repository will ever open at that

location. Instead, the Department of Energy (“DOE”) has convened a panel of experts to review all long-term options, but the panel has yet to make any recommendations regarding long term waste disposal options.

In the absence of a central disposal facility, waste has accumulated at reactor sites like Indian Point, turning those sites into long-term nuclear waste storage facilities in addition to nuclear waste producers. The recent Waste Confidence rulemaking by the Commission makes clear that waste will remain at reactor sites for the foreseeable future, and it is impossible to predict when any waste might be removed for off-site disposal. Therefore, waste generated during any period of extended operation will continue to accumulate at Indian Point, and no definite off-site disposal alternatives have been identified. Indeed, even if the administration were to revive the Yucca Mountain repository, it would not have the capacity to hold all the spent-fuel generated to date, let alone additional spent-fuel generated during any extended period of operation.

Generating additional waste necessitates either indefinite storage on-site or permanent disposal off-site. The latest iterations of the Waste Confidence Decision and companion Temporary Storage Rule<sup>1</sup> recognize that waste could remain at reactor sites even beyond 120 years after power generation activities cease. The Commissioners have previously recognized that it would be possible, but difficult, to analyze the environmental impacts of indefinite storage of waste on-site. Furthermore, it is currently impossible to analyze the environmental impact of

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<sup>1</sup> Waste Confidence Decision Update, NRC-2008-0482, 75 Fed. Reg. 81037 (December 23, 2010) (WCD “Update”); Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, Final Rule, NRC-2008-0404, RIN 3150-AI47, 75 Fed. Reg. 81032 (December 23, 2010) (“Temporary Storage Rule”).

off-site disposal because the government has not yet decided how to accomplish this. The NRC has decided not to assess the environmental or safety consequences of such long term storage generically during the rulemaking. Indeed, it has admitted that it needs more analysis for the period commencing 60 years after the cessation of power generation activities.

To comply with the requirements of the National Environmental Policy Act (“NEPA”), the NRC must assess the environmental impacts of long term on-site storage of the fuel that would be created during the extended period of operation, prior to any renewal of the Indian Point operating licenses. Furthermore, to comply with the Atomic Energy Act (“AEA”), the NRC or the applicant must also show that there is reasonable assurance that such storage is safe prior to any decision to grant renewed licenses. The contentions presented in this motion allege that generic work currently available combined with the Final Supplemental Environmental Impact Statement (“FSEIS”) regarding Indian Point lacks sufficient assessment of the environmental impacts of such storage and that generic work currently available combined with the Safety Evaluation Report (“SER”) related to Indian Point lacks sufficient safety analysis to provide a reasonable assurance of safety for long-term fuel storage. This is hardly surprising because the WCD Update came out after the NRC Staff finalized the generic and the site-specific analyses.

#### **I. New Information Available**

On September 24, 2009, the Commission decided not to adopt a proposed amendment to the Waste Confidence Rule that would have found that a centralized waste disposal facility for spent fuel will be available 50-60 years after the current licenses for nuclear power stations

expire because it did not have an adequate basis for making that prediction. Specifically, the current Waste Confidence Decision states, *inter alia*, that a central waste repository will open within 30 years after power generation at reactors ceases. The Staff proposed amending the Waste Confidence Decision to lengthen the time at which the off-site disposal will become available to 50 to 60 years after power generation ceases. However, two of the three then-current Commissioners refused to vote to finalize the proposed update, because of the uncertainty about the nation's approach to long term spent fuel disposal created by the administrations ongoing re-examination of how to move forward on this issue. See Vote of Commissioner Svinicki re SECY-09-0090 – Final Update of the Commission's Waste Confidence Decision (Sept. 24, 2010), available at, <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2009/2009-0090vtr-cls.pdf> (“Svinicki Vote”); Vote of Commissioner Klein re SECY-09-0090 – Final Update of the Commission's Waste Confidence Decision (Sept. 24, 2010), available at, <http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2009/2009-0090vtr.pdf> (“Klein Vote”). They voted against amending the waste confidence rule because they are no longer able to predict when a geological waste repository would commence accepting the spent fuel waste currently being stored on-site. *Id.* Commissioner Klein stated that the Commission must take into account “how the Administration's recent announcements of changes in the Nation's high-level waste (HLW) repository program should affect the proposed update.” *Id.* More baldly, Commissioner Svinicki stated “plainly put, this is a particularly difficult time to be in the prediction business,” because the administration is in the process of reassessing long term spent

fuel disposal options. Svinicki Vote at 1-2. In a nutshell, the Commission did not have confidence that a central waste repository for spent fuel will be available within 50-60 years.

Commissioner Svinicki also made it clear that “waste confidence is at heart an exercise in compliance with NEPA.” *Id.* at 2. Furthermore, indefinite onsite storage raises a “conundrum created in trying to envelope a National Environmental Policy Act (NEPA)-worthy environmental analysis of the impacts of the storage of spent nuclear fuel for an indefinite period [onsite].” *Id.* Although the staff could do the required NEPA analysis associated with such storage, that analysis would be challenging and would take years to conduct. *See id.* This shows that the potential impacts of long term onsite storage are significant. Finally, although the Commissioners could not say when offsite disposal facilities for spent fuel will be available, Commissioner Svinicki was confident that such facilities will eventually be created. *Id.* at 3.

Based upon these votes and the administration’s ongoing efforts to ensure that the repository at Yucca Mountain will never open, Clearwater submitted a motion to add new contentions regarding the lack of environmental and safety assessment of long term on-site spent fuel storage. Hudson River Sloop Clearwater, Inc.’s Motion for Leave to Add New Contentions Based Upon New Information, October 26, 2009, ADAMS Accession No. ML093080129. Recognizing that the Commissioners’ comments called into question the continuing validity of the former Waste Confidence Decision, the Atomic Safety and Licensing Board (the “Board” or “ASLB”) referred the issue to the Commission. Board Memorandum and Order (Certification to the Commission of a Question Relating to the Continued Viability of 10 C.F.R. § 51.23(b) Arising From Clearwater’s Motion for Leave to Admit New Contentions), February 12, 2010,

ADAMS Accession No. ML100431040. The Commission decided not to admit the proposed waste contention because it had not completed the rulemaking and it believed that the final rulemaking would deal with the issues raised by the contention. Commission Memorandum and Order, CLI-10-19, July 8, 2010, ADAMS Accession No. ML101890873. Tacitly recognizing that the proposed contention raised some valid issues, the Commission stated that it would complete the rulemaking on the waste confidence rule update prior to taking the relicensing decisions for Indian Point 2 and 3. *Id.* at 3.

Most recently, the Commission made good on its promise by publishing the WCD Update in the Federal Register. The WCD Update changes two key waste confidence findings. First, it amends finding 2 to state that sufficient repository capacity to disposal of spent-fuel will be available “when necessary.” WCD Update at 81938. This replaces the finding that one or more “mined geologic repositories” would be available by 2007-2009 and that sufficient capacity would be available within 30 years of any reactor ceasing operation to dispose of the spent-fuel generated. *Id.* The WCD Update recognized that the Commission currently has no basis to predict exactly when a repository will open, if ever. *Id.* at 81041. Furthermore, the basis of finding 2 is “not purely scientific” and is “more qualitative.” *Id.* at 81045.

Second, the WCD Update amended finding 4 to state that the Commission finds reasonable assurance that spent-fuel can be stored safely and without significant environmental impact for 60 years after any reactor ceases operation. *Id.* This replaces the former finding that such safe low-impact storage would be possible for 30 years. *Id.* The Commission therefore modified its regulations to make clear that fuel storage on-site for 60 years did not need to be

assessed on a site-specific basis. See Temporary Storage Rule at 810337. According to the Commission, this is because the environmental work underlying the rule is sufficient not to require any additional site-specific analysis. WCD Update at 81042.

## **II. Nuclear Waste Management Has Been Fraught With Difficulty and Delay**

### *A. History of U.S. Nuclear Waste Management*

Since the 1950s the disposal of our country's nuclear waste is replete with false starts, delays, and substantial problems that has left us at a loss for how to safely dispose of the waste generated by the use of nuclear power. Gordon Thompson, *Environmental Impacts of Storing SNF & HLW from Commercial Nuclear Reactors: A Critique of NRC's Waste Confidence Decision & Environmental Impact Determination* (February 2009) ("*Environmental Impacts*"); See generally Jason Hardin, *Tipping the Scales: Why Congress and the President Should Create a Federal Interim Storage Facility for High-Level Waste*, 19 J. Land Resources & Env'tl. L. 293 ("*Tipping the Scales*").

At the time the first commercial reactor sites commenced operation it was assumed that the fuel would be moved from the sites to be reprocessed. Facilities were not designed to store the full amount of spent fuel that the reactor would generate during its 40-year operational life, let alone storing waste for a 20-year license renewal and decommissioning process. Instead, they were designed to temporarily store waste in water-filled pools adjacent to reactors. The pools were to hold the spent fuel assembly in low-density open racks until it would be taken for reprocessing. *Environmental Impacts* at 11 (citing NRC 1979- U.S. NRC GEIS on Handling and Storage of Spent Light Water Power Reactor Fuel, NUREG-0575). After the spent fuel cooled

on the racks in the pool, it was to be removed from the reactor site and taken to a reprocessing facility.

Reprocessing, however, proved disastrous and people feared that reprocessing would lead to nuclear proliferation. From 1966-1972 spent fuel was being recycled at a reprocessing facility near West Valley, New York. During its time of operation the facility reprocessed only 640 metric tons of spent fuel. The plant met with regulatory problems that required expensive modifications and in 1975 the facility stopped accepting spent fuel. Within 5 years, the company operating the facility opted out of its lease for the site, leaving the state of New York with waste that was not reprocessed.

In 1977, President Carter banned reprocessing because of fears that it would lead to nuclear proliferation and as demonstrated by the West Valley fiasco, that reprocessing was not economical. *Id.* at 11. When reprocessing was abandoned, spent fuel accumulated in the pools. *Id.* In 1982 it became clear to Congress that the spent fuel pools were not designed as indefinite storage facilities and the efforts to devise a permanent solution to nuclear waste disposal had not been adequate. *Tipping the Scales* at 295-96.

In response, Congress enacted the Nuclear Waste Policy Act of 1982 (“NWPA”). NWPA set forth four objectives<sup>2</sup>: 1) to develop repositories to protect the public and the environment from spent fuel and high level waste (“HLW”); 2) to establish federal responsibility and define federal policy for the entire project; 3) to define the relationship between the federal

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<sup>2</sup> Originally Congress directed the creation of two permanent repositories, however as time passed without the development of even a single repository, Congress pushed the DOE in the direction of Yucca Mountain and called for only that repository.

government and the states and tribes with respect to spent fuel/HLW disposal; and 4) to establish a Nuclear Waste Fund, financed by the nuclear utilities to pay for the waste disposal. 42 U.S.C. § 10131(b)(2000). Under the NWPA, DOE was also required to site a permanent repository and to design acceptance of spent fuel and HLW by January 31, 1998 and to enter into contracts with the utilities. NWPA required the utilities to enter into a contract with the DOE to obtain a license to operate.

In 1983, DOE published a plan for a firm schedule to accept the waste beginning no later than January 31, 1998. *Pacific Gas & Electric Co. v. U.S.*, 536 F.3d 1283, 1286, 2008 U.S. App. LEXIS 16637 (Fed. Cir. 2008). The DOE plan also outlined a contingency plan because it was not optimistic the repository would be ready by the deadline set by Congress. The contingency plan called for the DOE to request that Congress approve a monitored retrievable storage (MRS) facility as an interim solution to remove the waste from the reactor site. *Id.* at 1286.

In 1985, the DOE issued a follow up plan providing for 2 schedules, one with the MRS facility and one without. In 1987, the DOE issued another new plan informing Congress that opening a permanent repository by 1998 was no longer realistic. Congress amended the NWPA by passing the Nuclear Waste Policy Amendments Act of 1987 (“1987 Amendments”) to direct DOE to develop the single repository at Yucca Mountain and cease activities at other sites. *Id.* at 1287. The 1987 Amendments also precluded the MRS facility construction until the NRC authorized a permanent storage repository.” *Id.* In 1991, DOE again amended its plan for storage of NSF. This plan proposed an MRS facility, but noted that part of the 1987 Amendments would need to be repealed to build the facility. *Id.*

In 1995, after 12 years of analyzing the feasibility of a single permanent repository and – 6 years after the January 31, 1998 acceptance date – the DOE issued a final finding on waste acceptance issues, concluding that DOE had no statutory obligation to accept waste until a storage facility is built. *Id.*

By the late 1990's, it was clear to some in Congress that a temporary solution was needed to remove wastes from reactor sites while a permanent repository was built. In fact, Congress introduced legislation for 4 straight years seeking to create a federal interim storage facility at Yucca Mountain to alleviate the problems caused by continued on-site storage. *Tipping the Scales* at 303-304. None of this legislation was enacted and no temporary waste site has been created.

In this past decade, the substantial opposition to Yucca Mountain and DOE's approach to acceptance of waste for disposal has played out in numerous lawsuits. Bentley Mitchell, *Diffusing the Problems: How Adopting a Policy to Safely Store America's Nuclear Waste May Help Combat Climate Change*, 28 J. Land Resources & Envtl. L. 375 ("Diffusing the Problems") at 386. In 2004, the D.C. Court of Appeals vacated an EPA radiation protection standard to the extent that it required DOE to show compliance for only 10,000 years following disposal. *Nuclear Energy Institute, Inc. v. EPA*, 373 F.3d 1251 (D.C. Cir. 2004). The decision of the D.C. Court of Appeals was a serious setback for the Yucca Mountain project and contributed to its ultimate demise. The current review of options surrounding waste disposal will in all likelihood prevent a repository from being constructed any time in the near future, if ever

In addition, industry is using the courts to reclaim money utilities provided under the Nuclear Waste Fund, which was established by Congress in the NWPA to pay for the disposal of spent fuel. NUREG-1350 at 75. As of Dec. 31, 2008, the fund totaled \$16 billion and utilities have had success in several courts on its claims for money damages and for return of money paid due to the DOE's failure to accept nuclear waste by January 31, 2008. *Maine Yankee Atomic Power Co. v. U.S.*, 225 F.3d 1336, 1343 (Fed. Cir. 2000). More than 50 years has passed and to date spent fuel remains stored at reactor sites and will remain there for the foreseeable future.

*B. Accumulation of Spent Fuel at Reactor Sites*

Since reprocessing ended in 1977 and there is no DOE repository, spent fuel has been accumulating at reactor sites. On-site storage is accomplished using pools, which are designed to temporarily store low-density levels of spent fuel, and in "dry cask storage." The U.S. generates 2,000 metric tons of nuclear waste per years. As of December 31, 2002 there were 42,268 metric tons of spent fuel at reactor sites. *See*

[http://www.eia.doe.gov/cneaf/nuclear/spent\\_fuel/ussnfddata.html](http://www.eia.doe.gov/cneaf/nuclear/spent_fuel/ussnfddata.html), last visited October 21, 2009.

Since 2002, the U.S. has generated approximately 12,000 metric tons of additional spent fuel bringing the total accumulated waste at reactor sites to 54,000 metric tons of spent fuel. This is far greater than was imagined when commercial nuclear reactors were constructed.

Yucca Mountain would have held about 77,000 metric tons. NRC Fact Sheet Yucca Mountain license review.<sup>3</sup> The DOE office of Civilian Radioactive Waste Management estimates that by 2035 we will have approximately 105,000 metric tons of waste. *Id.* As such,

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<sup>3</sup> *See* Fact Sheet on Licensing Yucca Mountain, <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-yucca-license-review.html>, last visited January 24, 2011.

even if Yucca Mountain were to open, it would not have sufficient capacity to take the additional waste that would be generated during any extended period of operation.

### **III. The Commission Has Repeatedly Amended The Waste Confidence Rule**

In 1979, the NRC Commission began to assess “whether radioactive wastes can be safely stored on-site past the expiration of the existing facility licenses until offsite disposal or storage is available. 44 Fed. Reg. 61372, 61373 (October 25, 1974). After a 5 year analysis the Commission issued 5 waste confidence findings. The Commission found:

- (i) reasonable assurance that safe disposal of high-level waste and spent fuel in a geologic repository is technically feasible;
- (ii) that repository capacity will eventually be available;
- (iii) that high-level waste and spent fuel will be safely managed until repository capacity is available;
- (iv) that spent fuel generated in any reactor can be stored safely and without significant environmental impacts for extended periods; and
- (v) that spent fuel storage will be available as needed.

49 Fed. Reg. 34658 (August 31,1984). The timing of the repository has been repeatedly amended. In 1984, Commission found that the repository would open in 2007-2009. *See* WCD Update at 81038; *see also Environmental Impacts* at 7. In 1990, the Commission extended that date to 2025. *See* WCD Update at 81039; *see also Environmental Impacts* at 7. In addition, in 1984, the Commission amended 10 CFR Part 51 of its regulations to provide a generic determination that for at least 30 years beyond the expiration of the reactor operating license, no significant impacts will result from the storage of spent fuel in the reactor facility pools or in dry casks.

In 2007, the NRC Staff was asked by the Commission to prepare a memo on waste confidence that stated that an assessment or update might consider whether the earlier 100-year

confidence in on-site or off-site storage remains valid; whether fuel from new reactors warrants any possible changes to waste confidence findings; and whether the Commission's earlier expectations regarding a timeline for a permanent repository should be modified or updated. *Id.*

On October 9, 2008 the NRC opened a proposal to amend the waste confidence rule for public comment. The proposed rule would have lengthened the time at which the off-site disposal will become available to 50-60 years beyond the licensed life for operation, removing the reference to the completion of a repository by the first quarter of this century. Two of the three then-current Commissioners refused to endorse this change, finding that the current uncertainty about the nation's approach to long term spent fuel disposal meant that they could not vote for the rule proposed at that time. *See* Svinicki Vote; Klein Vote. As Commissioner Svinicki noted:

Plainly put, this is a particularly difficult time to be in the prediction business. That said, however, the Court in *State of Minnesota v. NRC* (D.C. Cir. 1979) noted this approach and stated that "[t]he breadth of the questions involved and the fact that the ultimate determination can never rise above a prediction suggest that the determination may be a kind of legislative judgment for which rulemaking would suffice." As the Atomic Energy Commission's first Chief of the Environmental and Sanitary Engineering Branch, Mr. Joseph Lieberman, sagely cautioned in 1960, however, in voicing his confidence that the nuclear industry would grow "in a rational way without being hamstrung by its own wastes": "[O]ne has to be very careful to distinguish between aspiration, reality, and speculation in this field."

Svinicki Vote at 2. Thus, while the government had an aspiration to have solved this problem by now, it is apparent that reality has intervened, and that at this moment it is unclear how waste will ultimately be disposed. Indeed, in the WCD Update, the Commission has expressly

acknowledged that it no longer has sufficient information to make a new rule about when, or even if, a new repository will open. *See* WCD Update at 81034. Nonetheless, the Commission has decided that waste disposal will be available “when necessary” and that spent-fuel can be stored safely and with little environmental impact on reactor sites for up to 60 years after power generation ceases.

#### **IV. The Issue of Nuclear Waste Disposal Is Once More Under Review**

The U.S. nuclear waste disposal dilemma is now being extensively reevaluated once more by all the stakeholders. The recent change in political leadership has brought a profound change in federal policy toward Yucca Mountain. President Obama’s administration has determined that Yucca Mountain is not the best option for disposing of waste and has publicly stated that it has plans to remove all funding from the continued examination of Yucca Mountain waste repository. In fact, and as of 2011 the White House will no longer provide funds in the budget for Yucca Mountain. *See* Elaine Hiruo, *Global Power Report*, “White House will not seek funds in 2011 budget for nuclear waste repository at Yucca Mountain,” August 6, 2009. In addition, Senate Majority leader Harry Reid is determined to keep waste away from Yucca Mountain. In fact, Sen. Reid has pronounced Yucca Mountain “dead” on numerous occasions.

Indeed even the DOE has decided to permanently abandon the effort to open a repository at re Yucca Mountain. *See* Elaine Hiruo *Global Power Report*, “DOE’s moves to ‘orderly shutdown’ of repository project” May 11, 2009. Bringing us back around full circle to where the commercial spent fuel disposal nominally began, the DOE is now revisiting the concept of fuel reprocessing. In October 2008, through the GNEP program at DOE the U.S. government is

pursuing “alternative” nuclear fuel cycles. *Environmental Impacts* at 14. In its draft impact statement on processing of spent fuel, the DOE states that this is being considered “to reduce the hazards associated with disposal of spent fuel.” DOE/EIS-0346 at s-1.

A DOE report on the likely need for a second repository, required under the 1982 NWPA, has considered three alternative scenarios for dealing with spent fuel generated beyond 2010: remove Yucca Mountain’s statutory capacity limit; site and build a second repository; or prolong the storage of spent fuel at reactor sites. Nuclear Engineering International, “Radwaste Management - No limits for Yucca Mountain?” March 4, 2009. The DOE has recognized that Yucca may never be built and some nuclear plants are already implementing changes to make their on-site storage facilities permanent, rather than temporary. *Diffusing the Problem* at 390. In addition, in March 2009, Secretary Steven Chu announced that the DOE would be creating a blue ribbon panel to develop a plan for handling nuclear waste.<sup>4</sup>

Additionally, the NRC has acknowledged that the administration of President Barack Obama announced that it would terminate the Yucca Mountain program, while developing a disposal alternative. NUREG-1350 at 85.

Observers and commentators are also opening up dialogue about the continued unsettled waste disposal issues in this country and stressing that “the temporary storage facilities on-site at nuclear plants across the United States are nearing the end of their intended lifespan, and the waste needs to be permanently stored.” *Diffusing the Problem* at 390. In addition,

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<sup>4</sup> “DOE Will Have A "Blue Ribbon" Panel Figure Out Nuclear Waste” (March 11, 2009), <http://www.businessinsider.com/doe-will-have-a-blue-ribbon-panel-figure-out-nuclear-waste-2009-3>, last visited January 24, 2011.

commentators believe that “many of the assumptions underlying on-site storage are unproven in the real world.” *Id.* at 392.

Even those who espouse expansion of nuclear power are calling for action on the waste storage problem. A recent U.S. Chamber of Commerce Report entitled “Revisiting Nuclear Waste Policy,” called for a review of the country's policy for the disposal of spent fuel now concluding that “many of the facts, conditions, and assumptions that were in place in 1982 when the current policy was crafted are no longer accurate or germane.” Commentators have also said that “the political landscape has recently changed, making it more likely that construction of the Yucca Mountain project be halted – and that a single concentrated repository is unlikely to be built in the near future.” *Diffusing the Problem* at 387.

#### **V. Storage On Site In Wet Pools and Dry Casks Is The Default Solution**

Over the last 60 years, the policy for disposal of spent fuel has taken many twists and turns, but the reality of waste disposal has not changed much. Spent fuel will be stored on-site for at least the renewal period of the license. At first the spent fuel was stored in low density pools, however because this waste has accumulated, pools are now tightly and densely packed with spent fuel. *Environmental Impacts* at 11. Many reactor spent fuel pools, including those at Indian Point, have reached capacity and now some of the spent fuel waste from 45 reactors, including Indian Point Units 2 and 3, is stored in dry casks on-site in addition to in high density spent fuel pools. *Id.* at 11-12; IPEC Newsletter,

<http://www.safesecurevital.org/pdf/IPNewsletter071609.pdf>, last visited October 26, 2009.

There is currently no other option because permanent waste disposal solution is as distant as ever

and there are no civilian facilities to reprocess spent fuel in the United States. The reality is that it is highly likely that the additional waste generated during any period of extended operation would remain on the site for the foreseeable future.

## **ARGUMENT**

This argument demonstrates that Petitioners meet the substantive contention admissibility requirements of 10 C.F.R. § 2.309(f)(i)-(vi), in addition to the requirement for presenting new and significant environmental information, and all other applicable requirements.

### **I. Specific Statement of the Contentions**

Petitioners must “provide a specific statement of the issue of law or fact to be raised or controverted.” 10 C.F.R. § 2.309(f)(1)(i). The contentions are presented under two different scenarios. The first scenario is that the new waste confidence rule is invalid because it attempts to use an agency rule to sidestep the statutory mandate of NEPA to assess the effects of producing more fuel that we do not know how we can dispose. Furthermore, the rule lacks any basis to assess the effects of long term fuel storage and ignores the very real impacts from such storage. In the second scenario, even if the rule is valid, Petitioners contend that additional site-specific safety and environmental analysis is required before a licensing decision can be taken.

The new contentions for the rule invalid scenario are:

Clearwater EC-8 (Riverkeeper EC-6)

The environmental analysis carried out to assess the potential impacts of relicensing Indian Point Units 2 and 3 is inadequate because it provides an insufficient analysis of the potential impacts of generating more spent fuel leading to additional waste storage on site, the alternative methods of accomplishing such storage, and potential alternatives to additional waste storage on the site, including the no-action alternative.

Clearwater SC-2 (Riverkeeper TC-3)

The license renewal application requesting the relicensing of Indian Point Units 2 and 3 is inadequate because it provides insufficient analysis of the aging management of the dry casks and spent fuel pools that could be used to store waste on the site in the long term. In addition, both the applicant and the NRC Staff have failed to establish that that any combination of such storage will provide adequate protection of safety over the long term.

In the alternative, if the Board decides that Petitioners cannot challenge duly adopted NRC rules in these proceedings, the new contentions for the rule valid scenario are:

Clearwater EC-9 (Riverkeeper EC-7)

The environmental analysis carried out to assess the potential impacts of relicensing Indian Point Units 2 and 3 is inadequate because it provides an insufficient analysis of the potential impacts of generating more spent fuel during the period commencing 60 years after the expiration of each license. Missing elements include analysis of: a) the long term impact of additional waste storage on site; b) the alternative methods of accomplishing such storage; and c) potential alternatives to additional waste storage on the site, including the no-action alternative.

Clearwater SC-3 (Riverkeeper TC-4)

The license renewal application requesting the relicensing of Indian Point Units 2 and 3 is inadequate because it provides insufficient analysis of the aging management of the dry casks and spent fuel pools that could be used to store waste on the site during the period commencing 60 years after the date the license expires at each unit. In addition, both the applicant and the NRC Staff have failed to establish that that any combination of such storage will provide adequate protection of safety over the long term.

## **II. Explanation of Basis**

At this preliminary stage, Petitioners do not have to submit admissible evidence to support a contention, rather it has to “[p]rovide a brief explanation of the basis for the contention,” 10 C.F.R. § 2.309(f)(1)(ii), and “a concise statement of the alleged facts or expert

opinions which support the . . . petitioner’s position.” 10 C.F.R. § 2.309(f)(1)(v). This rule ensures that “full adjudicatory hearings are triggered only by those able to proffer . . . minimal factual and legal foundation in support of their contentions.” *In the Matter of Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 N.R.C. 328, 334 (1999) (emphasis added).

Here, the facts discussed above, supported by the Declaration of Dr. Gordon R. Thompson (attached as Exhibit 1 to the previous filing and available as ML093080129), provide the factual basis of the contentions. The legal basis for the contentions is that because the Commission cannot currently make a determination about when off-site disposal options will be available for spent fuel, the WCD Update no longer allows the NRC to comply with the Atomic Energy Act (“AEA”) and the National Environmental Policy Act (“NEPA”) without a thorough analysis of the safety and environmental issues raised by the potentially indefinite on-site storage of the additional spent fuel to be generated, which is one of the foreseeable outcomes of licensing an extended period of operation. With the WCD Update, the Commission has found such a repository may not be available within 60 years of the end of any extended operating period and has taken itself out of the “prediction business” of trying to guess when offsite spent fuel disposal could commence. Thus, because long term or indefinite storage of additional wastes on the Indian Point would be the foreseeable result of allowing the reactor to continue operating, the applicant must provide the NRC with a basis to conclude that such storage meets the safety requirements of the AEA or the NRC Staff must devise its own basis. In addition, to

comply with NEPA, the NRC must provide a site specific assessment of the environmental impacts that have not been generically addressed.

Although Petitioners believe that the rules established by the WCD Update are invalid, because they amount to an attempt to create an exemption from a statute through regulation, they also recognize the general rule that Atomic Safety and Licensing Boards cannot pass an opinion on the validity of a Commission rule. Therefore, Petitioners have presented alternative contentions that are valid, even if the rules established by the WCD Update are valid.

*A. NRC's Reliance on the Waste Confidence Decision*

The NRC had determined it need not perform site-specific environmental reviews of medium-term onsite spent fuel storage. The Commission's former confidence that disposal would occur within 30 years after reactors ceased operation and concomitant generic determination of no significant environmental impact for that period, led to the conclusion that no site-specific assessment of environmental impacts was required to comply with NEPA. More specifically, the relevant regulation stated:

§ 51.23 Temporary storage of spent fuel after cessation of reactor operation--  
generic determination of no significant environmental impact.

(a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

(b) Accordingly, as provided in §§ 51.30(b), 51.53, 51.61, 51.80(b), 51.95, and 51.97(a), and *within the scope of the generic determination in paragraph (a) of this section, no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the reactor operating license or amendment, reactor combined license or amendment, or initial ISFSI license or amendment for which application is made, is required in any environmental report, environmental impact statement, environmental assessment, or other analysis prepared in connection with the issuance or amendment of an operating license for a nuclear power reactor under parts 50 and 54 of this chapter, or issuance or amendment of a combined license for a nuclear power reactor under parts 52 and 54 of this chapter, or the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.*

10 C.F.R. § 51.23(b) (emphasis added). In turn, based upon this rule, 10 C.F.R. § 51.95 provides that no environmental analysis of long-term spent fuel storage is required during individual license renewal proceedings within the scope of the generic finding:

[i]n connection with the renewal of an operating license . . . the supplemental environmental impact statement . . . need not discuss . . . any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b).”

10 C.F.R. § 51.95. This is reflected in the Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437 (“GEIS”), which omits any analysis of post-operation environmental impacts related to nuclear waste storage. Instead, the GEIS explicitly acknowledges the Commission’s generic determination of no significant environmental impact codified at 10 C.F.R. § 51.23, and states that “in accordance with this determination the rule also provides that no discussion is required concerning environmental impacts of spent-fuel storage for the period following the term of the reactor operating license, including a renewed license.”

*See id.* § 6.4.6.3.

The GEIS further relies upon the Commissions waste confidence rulemaking to arrive at the conclusion that “[o]n-site storage of spent fuel *during the term of a renewed operating license* is a Category 1 issue.” GEIS § 6.4.6.7 (emphasis added). While the GEIS states that the “[c]urrent and potential environmental impacts from spent-fuel storage have been studied extensively and are well understood” *see* GEIS § 6.4.6.3, the GEIS contains no new analysis related to environmental impacts of spent fuel storage (including spent fuel pool accidents), and appears to rely entirely on the 1990 Waste Confidence rulemaking review.

Indeed, the GEIS explicitly cites rationale provided in the Waste Confidence Decision: “[i]ndustry experience with spent-fuel storage, coupled with supplemental studies of the integrity of pool and dry storage systems, indicates that spent fuel generally can be stored on site with minimal environmental impacts”; “[e]xtended pool storage provides a benign environment that does not lead to degradation of the integrity of spent-fuel rods”; “studies of fuel rod or cladding failures indicate that fuel rods should remain secure *well beyond the period of plant life extension.*” *See id.* § 6.4.6.2 (citing Waste Confidence Decision Review, 55 Fed. Reg. 38474 (Sept. 18, 1990) (emphasis added)).

Based on this “analysis,” the NRC concluded that “[w]ithin the context of a license renewal review and determination . . . there is ample basis to conclude that continued storage of existing spent fuel and storage of spent fuel generated *during the license renewal period* can be accomplished safely and without significant environmental impacts.” *Id.* § 6.4.6.7 (emphasis added).

In accordance with the GEIS, NRC has consistently rebuffed challenges relating to the environmental impacts of on-site spent fuel storage, and disallowed any site-specific review of such issues. In the Turkey Point nuclear power plant relicensing proceeding, an intervenor raised a contention asserting that spent fuel could not be safely stored given the location of the Turkey Point facility. *See Florida Power & Light Co. (Turkey Point Nuclear Generating Plants, Units 3 and 4)*, LBP-01-06, 53 N.R.C. 138, 146-150 (2001). The Atomic Safety and Licensing Board (the “Board” or the “Licensing Board”) in that case quickly rejected the contention since “the issue of onsite spent fuel storage is a . . . Category 1 issue that cannot be examined further in a license renewal proceeding.” *Id.* The board also specifically noted that any questions related to environmental impacts of spent fuel after the renewal term were “barred by the Commission’s Waste Confidence Rule.” *Id.*

On appeal, the Commission upheld this decision, finding that “Part 51’s license renewal provisions cover environmental issues relating to on-site spent fuel storage generically. All such issues, including accident risk, fall outside the scope of license renewal proceedings.” *See Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4)*, CLI-01-17, 54 N.R.C. 3, 21-22 (2001). The Commission explained the NRC’s reliance on the GEIS for the generic disposition of spent fuel storage related issues, stating that

[t]he NRC has spent years studying in great detail the risks and consequences of potential spent fuel pool accidents, and the GEIS analysis is rooted in these earlier studies. NRC studies and the agency’s operational experience support the conclusion that onsite reactor spent fuel storage, which has continued for decades, presents no undue risk to public health and safety.”

*Id.* Given the discussion in the GEIS as cited above, such studies and operational experience are ostensibly those which underlie the Waste Confidence rulemaking.

In the Pilgrim and Vermont Yankee nuclear power plant relicensing proceedings, the Massachusetts Attorney General raised contentions asserting the failure to address new and significant information related to environmental impacts of on-site spent fuel storage. *See Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), Docket No. 50-293, Massachusetts Attorney General’s Request for A Hearing and Petition for Leave to Intervene with Respect to Entergy Nuclear Operations Inc.’s Application for Renewal of the Pilgrim Nuclear Power Plant Operating License and Petition (May 26, 2006), ADAMS Accession No. ML061630088; *Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), Docket No. 50-271, Massachusetts Attorney General’s Request for A Hearing and Petition for Leave to Intervene with Respect to Entergy Nuclear Operations Inc.’s Application for Renewal of the Vermont Yankee Nuclear Power Plant Operating License (May 26, 2006), ADAMS Accession No. ML061640065.

The Licensing Boards reviewing Massachusetts’ petitions rejected these contentions, finding that the potential environmental impacts of storing spent fuel in pools for an additional 20 years – including the risk of spent fuel pool accidents – already had been generically addressed in the GEIS as a “Category 1” issue that does not require a site-specific impacts analysis. *See* LBP-06-20, 64 N.R.C. 131, 152-61 (2006); LBP-06-23, 64 N.R.C. at 280-300. These boards went on to conclude that because “Category 1” environmental impacts findings are codified in NRC regulations, such findings normally may not be attacked in individual NRC

adjudicatory proceedings, unless the Commission waives the rule at issue for a particular proceeding, or the rule is changed or suspended due to a rulemaking review. *See* LBP-06-20, 64 N.R.C. at 155-61; LBP-06-23, 64 N.R.C. at 288-99.

In August 2006, the Massachusetts Attorney General filed a Petition for Rulemaking (“PRM”) requesting that the NRC vacate the general characterization in the GEIS that the environmental impacts of spent fuel pool storage are insignificant and revoke the regulations which excuse consideration of such impacts in NEPA decision-making documents. *See Proposed Amendment to 10 C.F.R. Part 51 (Rescinding finding that environmental impacts of pool storage of spent reactor fuel are insignificant)*, Massachusetts Attorney General’s Petition for Rulemaking to Amend 10 C.F.R. Part 51 (August 25, 2006), ADAMS Accession No. ML062640409 (hereinafter “Massachusetts AG PRM”).

The Commission denied this petition for rulemaking, concluding that the spent fuel pool environmental impact findings in the GEIS were valid despite the concerns articulated by Massachusetts, i.e. that spent fuel pool accidents and potential terrorist attacks could result in an catastrophic spent fuel pool fire. *See* The Attorney General of Commonwealth of Massachusetts, The Attorney General of California; Denial of Petitions for Rulemaking, Docket No. PRM-51-10, NRC-2006-0022 and Docket No. PRM-51-12, NRC-2007-0019, 73 Fed. Reg. 46204 (August 8, 2008). That is, NRC affirmed the general conclusions in the GEIS that on-site storage of spent nuclear reactor fuel, including high-density pool storage, for 30 years after power operations ceased had no significant adverse environmental impacts on the human environment. *Id.* at 46,212.

In the current relicensing proceeding related to Indian Point, review of environmental impacts of spent fuel storage have similarly been precluded to date. The draft supplemental environmental impact statement relies on the GEIS to conclude that “there are no impacts of onsite spent fuel associated with license renewal.” Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 38, Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3, Draft Report for Comment, Main Report (U.S. Nuclear Regulatory Commission December 2008) (“Indian Point DSEIS”) at 6-7. The DSEIS further specifically cites to the generic determination of no significant impact codified at 10 C.F.R. § 51.23 to explain the lack of discussion of environmental impacts of long-term onsite nuclear waste storage. *See id.* at xiv. The FSEIS issued December 2010 similarly concluded that “there are no impacts of onsite spent fuel associated with license renewal beyond those discussed in the GEIS.” FSEIS at 6-8; see also *id.* at 9-2 (citing to generic determination of no significant environmental impact set forth in 10 C.F.R. § 51.23(b), to justify failure to discuss the environmental effects of onsite spent fuel storage).

The Licensing Board has also disallowed adjudication of issues related to environmental impacts of on-site spent fuel storage. In relation to Riverkeeper’s Contention EC-2 related to the impacts of, *inter alia*, spent fuel pool fires, the Board relied upon the designation of spent fuel storage environmental impacts as a Category 1 issue to deem the contention beyond the scope of the proceeding. *See Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-08-13, 68 N.R.C. \_\_ (slip op. July 31, 2008), at 180-81.

Riverkeeper subsequently raised a similar new contention, Contention EC-4, stating that “[t]he NRC Must Address the Spent Fuel Storage Impacts at Indian Point in a Supplemental GEIS.” *See* Riverkeeper, Inc.’s New and Amended Contentions Regarding Environmental Impacts of High-Density Storage of Spent Fuel, Docket Nos. 50-247, 50-286 (Sept. 5, 2008). This contention was based on newly recognized information about site-specific mitigation measures that undermined the NRC’s generic environmental impact finding in the GEIS. The Board similarly rejected this contention, finding that “New Contention 4 deals with spent fuel storage impacts that the Commission has stated is a Category 1 issue, outside the scope of our proceeding.” *Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)*, Memorandum and Order, Denying Riverkeeper’s Request to Admit Amended Contention EC-2 and New Contentions EC-4 and EC-5), Docket Nos. 50-247-LR and 50-286-LR, ASLBP No. 07-858-03-LR-BD01 (December 18, 2008), at 12.

Thus, based on the generic findings of the license renewal GEIS, there has been no site-specific review of environmental impacts of on-site spent fuel storage during the term of license renewal, let alone beyond that time-frame, for Indian Point, or any other nuclear power plant. However, all of the legal reasoning excluding environmental analysis of spent fuel disposal issues is based upon the key premise contained in the rule that waste would only be stored on the site temporarily and now at most for 60 years beyond the expiration of the license. The WCD Update has destroyed that premise and therefore waste storage is now legally at issue in this proceeding.

*B. The Commission Has Radically Altered Part of the Waste Confidence Rule*

The new information contained in the WCD Update demonstrates that the Commission cannot now predict how long nuclear waste will remain at reactor sites. The Commission even assumed for purposes of the WCD Update that a Yucca Mountain repository would not come to fruition, and repeatedly acknowledged the uncertainty surrounding when any repository or long-term nuclear waste storage solution in the U.S. would occur:

[R]ecent events in the United States . . . have diminished its [the Commission's] confidence in the target-date approach. The Commission now believes that there is insufficient support for the continued use of a target date because of the difficulty associated with predicting the start-date for any repository programs.

. . . .

[B]roader institutional issues . . . [and] [i]nternational developments have made it clear that technical experience and confidence in geologic disposal, on their own, are not sufficient to bring about the broad social and political acceptance needed to construct a repository.

. . . .

WCD Update at 81040, 81064.

[T]here are issues beyond the Commission's control, including the political and societal challenges of siting a HLW repository, that make it premature to predict a date when a repository will become available. The Commission has therefore decided not to adopt a specific time frame in Finding 2 or its final rule.

. . . .

[I]t is uncertain whether the social and political consensus necessary for a successful repository program will be reached in the near future.

. . . .

A target date requires the Commission to have reasonable assurance of when a repository will become available; but, because the Commission cannot predict when this societal and political

acceptance will occur, it is unable to express reasonable assurance in a specific target date for the availability of a repository.

Temporary Storage Rule at 81034, 81035, 81036

Indeed, at this point it is clear that despite half a century of effort, the federal government has made little progress toward identifying a safe and environmentally acceptable means of disposing of spent fuel in the long term. First, as discussed above, reprocessing failed and, even if successful, would have created risks of nuclear proliferation that successive administrations found unacceptable. In the section of the NWPA entitled, “Nuclear Waste Fund,” in the discussion about contracts to be entered into by DOE with generators of high level radioactive waste, Congress stated that “in return for payment of fees established by [§ 10222], the Secretary, beginning not later than January 31, 1998, will dispose of the high-level radioactive waste or spent nuclear fuel involved as provided in this subtitle.” Nuclear Waste Policy Act, 42 U.S.C. § 10222(a)(5)(B). Thus, Congress envisioned a central repository for nuclear waste would be ready by 1998. But the alternative of long-term geological storage ran into serious technical and political problems to such an extent that the administration has now decided to abandon efforts to build such a repository at Yucca Mountain. Instead, the administration has convened a panel to explore all the options available.

Although there is no doubt that the government intends to fulfill its obligation under the Nuclear Waste Policy Act to dispose of the spent fuel, even the Commission is currently unable to predict when and how that might be done. It is problematic to reconcile the requirement of the Atomic Energy Act that licensing actions must be accompanied by a finding of adequate protection of safety with the long-term failure to devise an adequate solution for waste disposal.

The Second Circuit in *Natural Resources Defense Council, Inc. v. United States Nuclear Regulatory Commission*, 582 F.2d 166 (1978) noted that although it is very difficult to find that the long term disposal of this waste will be safe, when the means of accomplishing such disposal is not known, Congress had taken no action to prevent the Commission granting licenses that allow the continued accumulation of such wastes. The Court noted that Congress knew at the time it passed the AEA that no such means was available, but it nonetheless intended that licenses be issued for nuclear power generation.

The continued validity of this holding is now doubtful, because providing waste disposal facilities for spent fuel has proved far more difficult than Congress expected in 1954 when it passed the AEA. The history of high level waste disposal is that approaches that looked promising, such as Yucca Mountain, turned out to be far more technically complex than initially thought. Illustrating this truth, a few years after the Second Circuit rejected NRDC's challenge, Congress made the basis of its inaction to that point explicit by stating in the NWPA that a spent fuel disposal repository would be available by 1998. Thus, it is now clear that Congress's inaction prior to 1998 was based upon an erroneous assumption that a disposal facility for spent fuel would be in place by now. Even though this assumption proved false, in the Energy Policy Act of 2005 Congress provided loan guarantees to help finance a few new nuclear power plants. Thus, it now appears that the legislature is prepared to assume that even if a central waste repository does not open, means will be devised to safely store the wastes at reactor or other sites for the very long term, if not indefinitely.

This view is confirmed by Commissioner Svinicki, who approvingly quotes Judge Tamm's concurrence in *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979), which states “if the Commission determines it is not reasonably probable that an offsite waste disposal solution will be available when the licenses of the plants in question expire, it must then determine whether it is reasonably probable that spent fuel can be stored safely onsite for an indefinite period.” Svinicki Vote at 2-3; accord *Potomac Alliance v. NRC*, 682 F.2d 1030, 1038 (D.C. Cir. 1982). The opinion in the *Minnesota* case also makes clear that NRC cannot claim that waste disposal concerns are never relevant to licensing because Congressional inaction has actually been based upon the repeated assurances of the NRC that a solution to that issue is at hand. *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979). Furthermore, courts subsequently found that while the provision of centralized waste disposal could be termed a generic issue, where issues involve particularized situations, such as when waste will be stored at individual reactor sites, they cannot be resolved generically. *Limerick Ecology Action v. NRC*, 869 F.2d 719, 738 (3rd Cir. 1989).

To avoid consideration of the implications of onsite waste storage during individual license proceedings, the Commission approached this issue through rulemaking on waste confidence. The WCD Update now articulates the Commission’s confidence in the environmental integrity and safety of onsite storage for up to 60 years beyond the cessation of licensed power generation activities for the oldest spent fuel.<sup>5</sup>

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<sup>5</sup> The Commission continues to envision storage of spent fuel for this period in both wet pools and dry casks. For example, in the 1990 Waste Confidence Decision review, the Commission first found confidence that storage of spent fuel in wet pools for this time period is safe and has insignificant environmental impact: “The Commission addressed structure and component safety for extended operation for storage of spent fuel in reactor

The Commission’s updated waste confidence rulemaking found that while, “spent fuel can probably be safely stored without significant environmental impact for longer periods, the Commission does not find it necessary to make a specific conclusion” that spent fuel could be safely stored in dry casks without environmental impact for 100 years, as suggested by a commenter. WCD Update at 81072. Indeed, the Commission continues to explicitly assert that it did not intend the waste confidence decision to support indefinite onsite storage: “It must be emphasized that the removal of a target date from Finding 2 should not be interpreted as a Commission endorsement of indefinite storage.” WCD Update at 81056; *see id.* at 81041, 81043 (“the changes to Finding 2 do not mean that the Commission has endorsed indefinite storage of SNF and HLW. . . . the Commission has decided not to endorse the concept indefinite storage.”); *see also* Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38474, 38482

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water pools in the matter of waste confidence rulemaking proceeding. The Commission's preliminary conclusion is that experience with spent fuel storage provides an adequate basis for confidence in the continued safe storage of spent fuel for at least 30 years after expiration of a plant's license. The Commission is therefore confident of the safe storage of spent fuel for at least 70 years in water pools at facilities designed for a 40-year lifetime. . . . The Commission has also found that experience with water-pool storage of spent fuel continues to confirm that pool storage is a benign environment for spent fuel that does not lead to significant degradation of spent fuel integrity. Since 1984, utilities have continued to provide safe additional reactor pool storage capacity through re-racking, with over 110 such actions now completed.” Review and Final Revision of Waste Confidence Decision, 55 Fed. Reg. 38474, 38510 to 38512 (September 18, 1990). The Commission then found that storage in dry casks has even less impact than storage in wet pools. It based this finding on an Environmental Assessment (“EA”) associated with the rule related to interim monitored retrievable storage, which assessed dry storage of spent fuel for a period of 70 years after receipt of spent fuel from a reactor. The EA found that: “[i]n consideration of the safety of dry storage of spent fuel, the Commission’s preliminary conclusions were that [its] confidence in the extended dry storage of spent fuel is based on a reasonable understanding of the material degradation processes, together with the recognition that dry storage systems are simpler and more readily maintained. In response to Nuclear Waste Policy Act of 1982 authorizations, the Commission noted “. . . the Commission believes the information above [on dry spent fuel storage research and demonstration] is sufficient to reach a conclusion on the safety and environmental effects of extended dry storage. All areas of safety and environmental concern (e.g., maintenance of systems and components, prevention of material degradation, protection against accidents and sabotage) have been addressed and shown to present no more potential for adverse impact on the environmental and the public health and safety than storage of spent fuel in water pools.”” *Id.* at 38510. The Commission did not clearly define the interaction of the 70 years for wet storage, which started at the time the plant was originally licensed, and the 70 years for dry storage, which started much more recently.

(September 18, 1990) (“[t]he Commission supports timely disposal of spent fuel and high-level waste in a geologic repository, and by this Decision does not intend to support storage of spent fuel for an indefinitely long period.”).

The WCD Update and Temporary Storage Rule otherwise make it very clear that the Commission's revised generic determination of no significant environmental impacts specifically relates only to the 60 year timeframe after reactor life. The Temporary Storage Rule states that “Finding 4 has not been changed, and *only considers ‘at least 60 years’ of storage* beyond licensed life for operation.” Temporary Storage Rule at 81035 (emphasis added); *see also id.* at 81033 (“Because of the generic determination in § 51.23(a) the potential environmental impact of storage of spent fuel *for a 60-year period* (rather than a 30-year period) after the end of licensed operations or whether ultimate disposal will be available, is not considered) (emphasis added). The WCD Update also explicitly states that “current analysis” only “supports at least 60 years of post-licensed life storage with eventual disposal in a deep geologic repository. WCD Update at 81040. Thus, the Commission’s generic findings with respect to onsite fuel storage in both wet pools and dry casks relate only to the period 60 years beyond the expiration of a plant’s operating license.

In sum, the Commission's recent WCD Update and Temporary Storage Rule serve to explicitly recognize that the eventuality of long-term nuclear waste disposal in the U.S. is highly uncertain, while at the same time asserting a finding of no significant impact in relation to temporary onsite waste storage for a defined 60-year period of time.

*C. The NRC Must Perform Further Safety Review*

As the D.C. Circuit Court has twice recognized, in light of the reasonable prospect of indefinite storage at reactor sites well beyond this timeframe, the Atomic Energy Act requires site-specific review of the safety impacts of indefinite onsite storage. *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979), *accord Potomac Alliance v. NRC*, 682 F.2d 1030, 1038 (D.C. Cir. 1982). Because it is somewhat unclear to Petitioners who is responsible for this task, Petitioners contend that it should be done by either the Applicant or the Staff. In addition, because the casks and pools in which some of the spent fuel is already stored, and more will be stored in the future, along with ancillary equipment like the fuel cladding and the flexible boron wrapping, are long lived passive components that the licensee cannot assume will require no inspection of maintenance, the Applicant must provide an adequate aging management plan for of these components and associated equipment. Even if the WCD Update generic finding is valid, the applicant must address the period commencing 60 years after power generation ceases.

The licensing application must be supported by adequate generic and site-specific safety analyses to show that the fuel can be safely stored for the long term at the Indian Point site. The WCD Update makes it clear that this work has not yet been done generically. WCD Update at 81040. Recognizing that more generic work is needed, the Commission states that it has directed the Staff to assess the safety of long term storage for up to 120 years. *Id.* At most, in the WCD Update, the Commission alleges that there is sufficient technical work to support a finding that long term storage is safe for 100 years (although it is unclear when that time period commenced).

WCD Update at 81047. For the additional fuel that could be generated during the extended period of operation that would be only 80 years beyond the end of power production. The Commission is clearly contemplating having to store the waste for up to 120 years beyond that date. Thus, at minimum, there is a 40 year gap between the generic safety work and the time-frame for extended on-site storage contemplated by the Commission. Although the Commission attempts to state that it could extend the 60 year period in Finding 2 if necessary, it fails to note that it cannot do so now because it does not have sufficient safety analysis to support such an extension. WCD Update at 81043. In the absence of generic safety assessments, the assessment must be done on a site-specific basis.

Examples of specific issues that site-specific and generic safety analyses fail to address, include without limitation:

- I) the potential for ongoing leaks of radioactivity from existing spent-fuel pools to get worse over the long term. *See* maps showing current plume of radioactivity extending from the spent-fuel pool to the Hudson River available at Exhibit A to ML081340325.
- II) The long term degradation of the Boraflex or other wrapping around the fuel assemblies in the spent-fuel pool.<sup>6</sup> Petitioners will offer the expert testimony of Mr. Arnold Gunderson in this area.<sup>7</sup>

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<sup>6</sup> Degradation of Boraflex has been recognized as potentially problematic for over 10 years, while the Staff has more recently highlighted degradation of alternatives. <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/1996/secy1996-122/1996-122scy.html> & <http://edocket.access.gpo.gov/2010/2010-10389.htm> (both last visited January 24, 2011).

<sup>7</sup> In an e-mail dated January 24, 2010, Mr. Gunderson stated: "As a Vice President at Nuclear Energy Services (NES) and later as a Senior Vice President, I was responsible for the Engineering and Engineered Products divisions. Products my NES divisions designed and fabricated included nuclear fuel racks for dozens of reactors

III) As shown in the Thompson Report cited above, Petitioners believe that long-term wet storage of spent-fuel in high-density racks does not meet the NRC requirements for adequate protection and renders the plant excessively vulnerable to terrorism. Even the analysis from Sandia National Laboratories cited in the Temporary Storage Rule recognizes that a spontaneous propagating spent fuel pool fire could occur. *See* Temporary Storage Rule at 81,034. Furthermore, the analysis by the National Academy of Sciences specifically suggests that the NRC consider moving spent-fuel more expeditiously from wet storage to dry storage. *See id.* This analysis must now be done on a site-specific basis for Indian Point.

*D. The NRC Must Perform Further Environmental Review Pursuant to NEPA*

The National Environmental Policy Act (“NEPA”) establishes a “national policy [to] encourage productive and enjoyable harmony between man and his environment,” and was intended to reduce or eliminate environmental damage and to promote “the understanding of the ecological systems and natural resources important to” the United States. *Dept. of Transp. v. Pub Citizen*, 541 U.S. 752, 756 (2004) (*quoting* 42 U.S.C. § 4321). The application of NEPA’s requirements, under the rule of reason relied on by the NRC, is to be considered in light of the two purposes of the statute: first, ensuring that the agency will have and will consider detailed information concerning significant environmental impacts; and second, ensuring that the public

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throughout the United States. The NES racks used boroflex neutron absorber sandwiched between stainless steel. The time period when I was responsible for this NES effort was between 1981 and 1990.

My NES division performed criticality calculations on these spent fuel racks. I can state with certainty that the K effective criticality calculations my NES division or our competitors performed did not include any aging issues related to long term degradation of the boron neutron absorber. Nor did NES or other competitors ever assume that the boron would slip and gradually move downward over time when NES performed our Keff calculations.”

can both contribute to the body of information and can access the information that is made public. *San Luis Obispo Mothers For Peace v. NRC*, 449 F.3d 1016 (June 2, 2006). The Supreme Court has identified NEPA's "twin aims" as "plac[ing] upon an agency the obligation to consider every significant action[, and] ensur[ing] that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process." *Baltimore Gas & Elec. Co. v. Natural Res. Def. Counsel, Inc.*, 462 U.S. 87, 97 (1983)

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1. Its fundamental purpose is to "help public officials make decisions that are based on understanding of environmental consequences, and take decisions that protect, restore and enhance the environment." *Id.* NEPA requires federal agencies to examine the environmental consequences of their actions before taking those actions, in order to ensure "that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast." *Robertson v. Methow Valley Citizens Council (Robertson)*, 490 U.S. 332, 349 (1989).

NEPA goes beyond the Atomic Energy Act ("AEA") in mandating that the NRC consider alternatives to its licensing actions that may have detrimental effects on the environment. 10 C.F.R. § 51.71(d). The primary method by which NEPA ensures that its mandate is met is the "action-forcing" requirement for preparation of an EIS, which assesses the environmental impacts of the proposed action and weighs the costs and benefits of alternative actions. *Robertson*, 490 U.S. at 350-51. An EIS must be searching and rigorous, providing a "hard look"

at the environmental consequences of the agency's proposed action. *Id.* at 349; *Marsh v. Oregon Natural Resources Council*, 490 U.S. 260, 374 (1989).

The environmental impacts that must be considered in an EIS include “reasonably foreseeable” impacts which have “catastrophic consequences, even if their probability of occurrence is low.” 40 C.F.R. § 1502.22(b)(1). The Commission has held that probability is the “key” to determine whether an accident is “reasonably foreseeable” or whether it is “remote and speculative” and therefore need not be considered in an EIS. *Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station)*, CLI-90-7, 32 NRC 129, 131 (1990). *See also Limerick Ecology Action v. NRC*, 869 F.2d 719, 745 (3rd Cir. 1989), *citing Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551 (1978).

As Commissioner Svinicki acknowledged, and as discussed above, to comply with NEPA, the Commission used to rely upon its confidence that the central waste repository would open within 30 years. Now everyone, including the Commission, has recognized that is not going to happen. Furthermore, even if the planned repository at Yucca Mountain were to open within 60 years, it would not be big enough to accommodate the additional waste that would be generated during any extended period of operation at Indian Point. Accordingly, in order to comply with the tenets of NEPA in light of the facts presented herein, NRC must consider the environmental impacts of indefinite long-term onsite spent fuel storage in a supplemental environmental impact statement. The repeated claims from the Commission that such long term storage would have no significant environmental impact, *e.g.* the WCD Update at 81047, ring particularly hollow at Indian Point where even short term storage of spent-fuel has resulted in

radioactively contaminated water from leaking spent fuel pools to leach into the Hudson River. Moreover, these claims are totally at odds with Commissioner Svinicki's earlier candid statements that the environmental analysis of indefinite storage would be a formidable task.

At minimum, the licensing application must be supported by adequate environmental analysis to show the potential impacts of long term storage of the spent-fuel at the Indian Point site, (i.e., an analysis of impacts of onsite nuclear waste storage that would occur after 60 years after reactor operations cease). The WCD Update makes it clear that this work has not yet been done generically. WCD Update at 81040; Temporary Storage Rule at 81033, 81035.

Recognizing that more generic work is needed, the Commission states that it has directed the Staff to assess the environmental impact of long term storage for up to 120 years. WCD Update at 81040. At most, in the WCD Update, the Commission alleges that there is sufficient technical work to support a finding that long term storage is safe for 100 years (although it is unclear when that period commenced). *Id.* at 81047. For the additional fuel that could be generated during the extended period of operation that would be only 80 years beyond the end of power production. The Commission is clearly contemplating having to store the waste for up to 120 years beyond that date. Thus, at minimum, there is a 40 year gap between the generic environmental work and the time-frame for extended on-site storage contemplated by the Commission. Although the Commission attempts to state that it could extend the 60 year period in Finding 2 if necessary, it fails to note that it cannot do so now because it does not have sufficient environmental analysis to support such an extension. *Id.* at 81043. In the absence of generic environmental assessments, the assessment must be done on a site-specific basis.

Furthermore, the NRC must study the alternative means of long-term onsite storage, as well as the no-action alternative. Moreover, all other foreseeable means of long-term waste disposal need to be assessed prior to licensing, because it is currently unclear which option will actually be selected.

### **III. The Waste Confidence Rulemaking Is “New and Significant” Information**

As required by 10 C.F.R. § 51.92(a), if an EIS has been prepared but the proposed action has not been taken, the NRC Staff must supplement the EIS if, *inter alia*, “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” Notably, Section 51.92(a)(2) does not contemplate the preparation of an EA as a supplement to an EIS. In addition, 10 C.F.R. §§ 51.59(c)(3) and (c)(4) require the supplemental EIS prepared at the license renewal stage to address “significant new information.” NRC regulations for the preparation of Environmental Reports (“ER”) by license renewal applicants also require that an ER must address “new and significant information regarding the environmental impacts of license renewal of which the licensee is aware.” 10 C.F.R. § 52.53(c)(3)(iv).

Here, the recently issued WCD Update and revised Temporary Storage Rule present undoubtedly new information regarding the Commission’s understanding about the predictability of a long-term nuclear waste repository as well as new conclusions regarding its generic finding of no significant environmental impact of onsite nuclear waste storage. The Commission’s acknowledgement that it is impossible to predict when long-term storage of nuclear waste will occur is highly significant, since it is now both legally and factually clear that spent fuel

produced during any period of extended operation could well remain on the Indian Point site for more than 60 years after power generation ceases. Indeed, at this stage, the Commission cannot predict when a waste disposal facility to take the waste might be available, nor even what form that facility might eventually take. Moreover, the Commission has made no generic findings on safety or environmental impact of on-site spent fuel storage beyond that 60-year time period. The current contentions are designed to ensure that the agency plugs this gap.

The NRC Staff cannot now say these unassessed impacts are minor or insignificant. Commissioner Svinicki points out that that Staff has informed her assessing the impacts from the indefinite long term storage “would be challenging, would take a number of years, and would confront many analytical uncertainties.” Svinicki Vote at 2.

#### **IV. The New Contentions Are Within The Scope of License Renewal**

Although the existing rules do not contemplate the assessments that Petitioners contend are missing, it is clear that to issue a valid license, the NRC must comply with NEPA and the AEA. For example, in the *San Luis Obispo* case discussed supra, the Court required an analysis that the NRC said was not required by its rules. In the environmental arena, the scope of license renewal is therefore synonymous with the requirements of NEPA. Furthermore, the Ninth Circuit reiterated NEPA’s direction on uncertain consequences, which requires an agency to deal with uncertainties by including in the EIS “a summary of existing credible scientific evidence which is relevant to evaluating the reasonable foreseeable significant adverse impacts on the human environment, and... the agency’s evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.” 40 C.F.R. §§ 1502.22(b)(3), (4). The court construed the regulation to apply to those events with potentially catastrophic consequences “even if their probability of occurrence is low, provided that the

analysis of impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.” 40 C.F.R. § 1502.22 (b)(4). The notion that spent fuel could remain on the Indian Point site for more than 60 years after power generation ceases is way beyond mere conjecture. Even the Commission has acknowledged it cannot predict when spent fuel might leave the site and it has directed the Staff to look into waste storage on-site for a further 60 years. The history here shows that it is now impossible to predict when the waste will leave the Site and indefinite on-site storage is the likely consequence of the current confusion on long-term waste disposal.

Second, the safety contention raises issues about the aging of long-lived passive components, which are at the heart of the relicensing safety review, and requests the agency to comply with the AEA, which is of course mandatory.

#### **V. The New Contentions Raise Multiple Material Disputes**

The regulations require petitioners to “[d]emonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding.” 10 C.F.R. § 2.309(f)(1)(iv). A showing of materiality is not an onerous requirement, because all that is needed is a “minimal showing that material facts are in dispute, indicating that a further inquiry is appropriate.” *Georgia Institute of Technology*, CLI-95-12, 42 N.R.C. 111, 118 (1995); *Final Rule, Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process*, 54 Fed. Reg. 33,171 (Aug. 11, 1989).

At present, the Commission is directing the Staff to do a generic assessment of waste storage beyond 120 years after cessation of power operations, but this raises two material disputes. To date, the NRC Staff has explicitly relied upon the GEIS and the NRC’s generic determination of no significant impact to evade any discussion of the environmental impacts of

on-site waste storage. *See* FSEIS at xiv, 9-2. However, it is now clear that even the Commission thinks that waste could be stored at Indian Point for potentially more than 120 years, but the generic work to support that scenario is lacking. Thus, relicensing cannot proceed unless either that work is completed or site-specific analyses are carried out. Furthermore, because there is now no definite time for the waste to leave the Indian Point site, licensing decisions must now be supported by work analyzing the environmental impact of indefinite on-site storage. *Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979); *accord Potomac Alliance v. NRC*, 682 F.2d 1030, 1038 (D.C. Cir. 1982); Svinicki Vote at 2-3.

As mentioned above under basis, Entergy has also failed to put forward any aging management plan for the spent fuel storage casks, for the spent fuel pools themselves, and for associated components, such as the boron wrapping of the fuel assemblies. In the absence of such analyses it is clear there is material dispute about compliance with NEPA and AEA. Moreover, Petitioners expect that the answers to this Petition will demonstrate further sharp factual and legal disputes between the parties that will need to be resolved through a hearing.

As discussed in the basis section, a number of specific safety issues are problematic. For example, the many reports produced by Petitioners' expert Dr. Gordon Thompson make it plain that he believes that storage of spent fuel in wet pools is far less safe than the NRC Staff believe and that the staff should take further steps to improve the safety of spent fuel pools. However, to date this issue has been legally excluded from the proceeding because of the waste confidence rule. Because it is now clear that the Commission envisions long-term use of wet pools as well as dry casks, this material dispute is properly raised by the safety contentions as are the other specific issues mentioned in the basis Section.

## VI. The New Contentions Are Timely

In accordance with paragraph F.2 of the ASLB's July 1, 2010 Scheduling Order, Petitioners' new contentions are timely pursuant to 10 C.F.R. §2.309(f)(2), because they have been "filed within thirty (30) days of the date when the new and material information it is based first becomes available". See Scheduling Order, ASLBP No. 07-858-03-LR-BD01 (July 1, 2010) at 6. Nonetheless, out of an overabundance of caution, Petitioners show below that they actually meet the timing requirements set forth in 10 C.F.R. § 2.309(f)(2), as well as 10 C.F.R. § 2.309(c).

Petitioners may add timely new contentions after filing their initial petition, so long as they act in accordance with 10 C.F.R. § 2.309(f)(2). *Entergy Nuclear Vermont Yankee, L.L.C.* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813 (2005). The Commission's regulations allow for a new contention to be filed upon a showing that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). Thus, when the Board found that action by the licensee mooted an admitted contention, the Board allowed the intervenors to file a new contention, but required the new contention to be timely in accordance with 10 C.F.R. § 2.309(f)(2). *In the Matter of AmerGen Energy Company* (License Renewal for Oyster Creek Nuclear Generating Station), LBP-06-16, 63 N.R.C. 737, 744-45 (2006). Similarly, the Board in the Vermont Yankee license renewal proceeding recently recognized that the time to file contentions is placed at a very early stage, when the renewal application is docketed. *Entergy Nuclear Vermont Yankee L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-07-15, slip op.

at 6 n. 12 (November 7, 2007) *available at* ML073110424. After the initial time to present contentions has expired, new contentions must meet a timeliness test. When significant new information becomes available this test should be a relatively simple matter to meet. *Id.* at 5; 10 C.F.R. § 2.309(f)(2). However, in the absence of new information the applicable test is more stringent. LBP-07-15 slip op. at 6. The Board also noted that “normally a great deal of new and material information becomes available to the public after the docketing” through application amendments or the safety evaluation report. LBP-07-15, slip op. at 6 n. 12. This information can then be used to file new contentions, satisfying the AEA requirement that the public must be afforded an opportunity to request a hearing on all material safety issues. *Id.*

Here, the new contentions meet the requirements of 10 C.F.R. § 2.309(f)(2) because they are based upon new information that was “not previously available,” and is “materially different than information previously available,” that is, the WCD Update and Temporary Storage Rule that were issued on December 23, 2010. Turning to the last element, the ASLB in this proceeding has provided that contentions filed within 30 days of new information are considered timely. *See* Scheduling Order at 3.<sup>8</sup> Because this motion is based on the publication of the WCD Update on December 23, 2010, it is within the timeliness requirement of 10 C.F.R. § 2.309(f)(2)(iii).

NRC Staff and Entergy may argue that the regulations require Petitioners to meet the timeliness test for a late-filed contention contained in 10 C.F.R. § 2.309(c). Although this is not correct, even if the 10 C.F.R. § 2.309(c) standard applies, Petitioners meet that standard. The

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<sup>8</sup> Generally, the Commission and on occasions the Board has interpreted the “timely fashion” requirement of 10 C.F.R. § 2.309(f)(2)(iii) as being 30 days from the availability of the new information upon which the new contention is based. *E.g. Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 46 (2004).

standard contained in Section 2.309(c) is that late-filed contentions will be admitted based upon a balancing of the following factors:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;
- (v) The availability of other means whereby the requestor's/petitioner's interest will be protected;
- (vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;
- (vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and
- (viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

In evaluating the admissibility of a late-filed contention, the first and foremost factor is whether good cause exists that will excuse the late-filing of the contention. *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). The good cause element has two components that may impact on a presiding officer's assessment of the timeliness of a contention's filing: (1) when was sufficient information reasonably available to support the submission of the late-filed contention; and (2) once the information was available, how long did it take for the contention admission request to be prepared and filed. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-3, 49 NRC 40, 46-48 (assessing late-filing factors relative to petition to intervene), *aff'd*, CLI-99-10, 49 NRC 318 (1999); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-13, 53 NRC 319, 324 (2001).

First, and most importantly, Clearwater has good cause for not submitting the contentions earlier, because the previous Commission's decision prior to the WCD Update makes it abundantly clear that Petitioners could not have filed the proposed contention before the NRC published the WCD Update and they have filed this motion promptly thereafter. Second, Petitioners are already parties to this proceeding. Third, as demonstrated in the declarations filed with Clearwater's initial petition to intervene dated December 10, 2007, Clearwater has individual members who live close to the plant and have intense interest in the potential environmental impacts license extension could cause. Likewise Riverkeeper has many members who live in the vicinity of Indian Point and have ample interest in the environmental and safety consequences resulting from the operation thereof. Fourth, if the proposed contentions were admitted it would have a material effect on the licensing decision that is before the Commission. Fifth, Petitioners currently has no other available means to protect their interests because in the absence of an admitted contention, the required analyses would not be done. Sixth, the other parties in this proceeding do not have any admitted contentions that would require a similar analysis. Seventh, although Commissioner Svinicki believes the analysis required by the new environmental contention could take a number of years, that would be preferable to violating NEPA. Not admitting the contention could lead to more delay if a Circuit Court were to find on appeal that analysis of the spent fuel issues is essential to comply with NEPA. Finally, at present the record is insufficient to allow the Commission to conclude that the environmental and safety analysis supporting the Indian Point relicensing is adequate. Thus, admitting the contentions would assist the Commission in developing a sound record.

## **CONCLUSION**

For the foregoing reasons, this Board should admit Petitioners' proffered contentions into this proceeding.

**CONSULTATION PURSUANT TO 10 CFR 2.323(b)**

Out of an overabundance of caution, Clearwater and Riverkeeper have contacted Entergy and the NRC Staff to consult on this issue. Petitioners contacted Entergy and NRC Staff in order to explain to them the factual and legal issues raised in this motion. Both counsel for Entergy and NRC Staff indicated that they would respond in opposition to Petitioners' filing. Despite Petitioners' consultation efforts, the parties were unsuccessful in resolving the matters raised herein.

Respectfully submitted,



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