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Rulemakings and Adjudications Staff  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
[Rulemaking.Comments@nrc.gov](mailto:Rulemaking.Comments@nrc.gov)

Re: Comments on the Nuclear Regulatory Commission's Waste Confidence Decision Update and Proposed Rule regarding the Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation

Dear NRC Rulemakings Staff:

Riverkeeper, Inc. ("Riverkeeper") hereby respectfully submits the following comments in response to the Nuclear Regulatory Commission's ("NRC" or "Commission") Waste Confidence Decision Update, 73 Fed. Reg. 59,551 (Oct. 9, 2008); Docket ID-2008-0482) (hereinafter "WCD Update") and Proposed Rule on the Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation (73 Fed. Reg. 59,547 (Oct. 9, 2008); RIN 3150-AI47; NRC-2008-0404) (hereinafter "Proposed Rule Change"). Taken together, these two actions, if approved, will result in inadequate regulation of spent nuclear fuel storage, by (1) extending unsupported assurances about the availability and capacity of a long-term high level radioactive waste disposal facility, and (2) by unjustifiably continuing to shield the issue of "temporary" onsite storage of spent fuel after reactor license life from any kind of meaningful environmental or safety review. Accordingly, the NRC should withdraw this proposed rule and implement a comprehensive environmental review of spent fuel storage that includes robust public participation and allows for site specific review of the environmental impacts of spent fuel storage in licensing proceedings. In addition to offering the following comments, Riverkeeper hereby incorporates by reference the joint Comments filed by the Offices of the Attorneys General of the States of New York and Vermont and the Commonwealth of Massachusetts on February 6, 2009.

## I. Riverkeeper's Interest

Riverkeeper is a member-supported, not-for-profit organization dedicated to protecting the Hudson River and its tributaries.<sup>1</sup> Since its inception in 1966, Riverkeeper has used litigation, science, advocacy, and public education to raise and address concerns relating to the Indian Point nuclear power plant, located on the eastern bank of the Hudson River in Buchanan, NY.<sup>2</sup> Riverkeeper is headquartered in Tarrytown, New York, approximately twenty-two (22) miles from the Indian Point facility, and has numerous members that reside within at least fifty (50) miles of the plant.<sup>3</sup>

In recent years, Riverkeeper has become increasingly concerned with the environmental, safety, and security issues presented by the large amount of irradiated ("spent") fuel stored onsite at the Indian Point facility.<sup>4</sup> Indian Point Energy Center currently stores approximately 1,500 tons of spent fuel onsite, either in densely packed pools or in dry casks.<sup>5</sup> This is one of the largest quantities of high level radioactive waste in the northeast.<sup>6</sup> Moreover, Entergy Nuclear Indian Point Unit 2, L.L.C. and Entergy Nuclear Indian Point Unit 3, L.L.C. ("Entergy"), the owners of the Indian Point facility, recently applied for a twenty year license extension, which, if granted would result in an approximate 1,000 tons of additional spent fuel being produced and "temporarily" stored onsite.<sup>7</sup>

The pools and dry casks storing this waste have demonstrated vulnerability to environmental degradation and safety/security risks.<sup>8</sup> For example, the Indian Point spent fuel pools have a documented history of leaking radioactive water into groundwater.<sup>9</sup> Riverkeeper has actively been involved in raising such concerns, most recently through successfully intervening in the Indian Point relicensing proceeding and raising the issue of groundwater contamination from spent fuel pool leaks.<sup>10</sup> Riverkeeper is also concerned that the Independent Spent Fuel Storage Installation ("ISFSI") at Indian Point, as currently configured, is potentially vulnerable to sabotage or earthquake damage. The dry casks in the Indian Point ISFSI are stored on an outdoor

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<sup>1</sup> See Riverkeeper.org, Our Story, [http://www.riverkeeper.org/ourstory\\_index.php](http://www.riverkeeper.org/ourstory_index.php) (last visited Feb. 6, 2009).

<sup>2</sup> See Riverkeeper.org, Our History, [http://www.riverkeeper.org/ourstory\\_timeline.php](http://www.riverkeeper.org/ourstory_timeline.php) (last visited Feb. 6, 2009).

<sup>3</sup> See Riverkeeper.org.

<sup>4</sup> See Riverkeeper.org, Indian Point, Radioactive Waste, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste](http://www.riverkeeper.org/campaign.php/indianpoint_waste) (last visited Feb. 6, 2009).

<sup>5</sup> See *id.*

<sup>6</sup> See *id.*

<sup>7</sup> See Riverkeeper.org, Indian Point's Spent Fuel, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste/the\\_facts/1255-indian-points-spent-fuel](http://www.riverkeeper.org/campaign.php/indianpoint_waste/the_facts/1255-indian-points-spent-fuel) (last visited Feb. 6, 2009).

<sup>8</sup> See Riverkeeper.org, Indian Point, Radioactive Waste, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste](http://www.riverkeeper.org/campaign.php/indianpoint_waste) (last visited Feb. 6, 2009); Riverkeeper.org, Indian Point's Spent Fuel, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste/the\\_facts/1255-indian-points-spent-fuel](http://www.riverkeeper.org/campaign.php/indianpoint_waste/the_facts/1255-indian-points-spent-fuel) (last visited Feb. 6, 2009).

<sup>9</sup> See *Liquid Radioactive Release Lessons Learned Task Force Final Report*, U.S. Nuclear Regulatory Commission, at 5-6 (September 1, 2006), available at [http://www.riverkeeper.org/document.php/539/NRC\\_Lessons\\_Lea.pdf](http://www.riverkeeper.org/document.php/539/NRC_Lessons_Lea.pdf) (hereinafter "Radioactive Release Task Force Report").

<sup>10</sup> See *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-08-13, 68 NRC \_\_\_, at 187-88 (slip op. July 31, 2008).

concrete pad, lined up in rows that are easily visible from the air and the Hudson River.<sup>11</sup> Riverkeeper has advocated for the use of earthen berms and the dispersal of the casks around the Indian Point site to reduce the dry casks' vulnerability to sabotage or earthquake, and reiterates those concerns in these comments.

As an advocate on environmental and safety issues associated with the ever-increasing inventories of spent fuel at Indian Point, Riverkeeper has a vested interest in the instant NRC proposals. The NRC's Waste Confidence Decision Update and corresponding proposed rule change to 10 C.F.R. § 51.23 ("Temporary storage of spent fuel after cessation of reactor operation--generic determination of no significant environmental impact"), are grounded in unreasonable assertions which utterly lack meaningful environmental review, are unsupported by the facts, and violate the spirit if not the letter of the National Environmental Policy Act ("NEPA"). If implemented as proposed, these rules will also have the practical effect of preventing any public scrutiny of radioactive waste storage at operating nuclear plants in the U.S. Riverkeeper, therefore, submits the following comments due to the concerns presented by these proposals.

## II. The NRC's Unfounded "Confidence" in a Long-Term Disposal Facility

The NRC's Waste Confidence Decision Update proposes to revise "Finding 2" of the already revised decision, by taking out the Commission's "reasonable assurance" that at least one mined geologic repository will be available by 2025, and by extending the time frame by which the Commission has "reasonable assurance" that sufficient long term repository capacity can be expected to be available from 30 years beyond any reactor's licensed life for operation, to 50 to 60 years beyond any reactor's licensed life for operation.<sup>12</sup> These revised findings are reflected in the Proposed Rule Change by omitting all references to the timeframes for the availability of a long-term repository with sufficient capacity.<sup>13</sup>

Proposed Finding 2 perpetuates now unreasonable assumptions about the availability of sufficient disposal capacity for spent nuclear fuel in two related regards. First, Proposed Finding 2 unreasonably perpetuates an assurance of the availability of a mined geologic repository for waste disposal. Second, Proposed Finding 2 unreasonably perpetuates an assurance of sufficient disposal capacity in an available mined geologic repository. The proposed indefinite extension of NRC assurances in the WCD Update and Proposed Rule Change is unfounded and irrational, given the failure of the NRC to have implemented an anticipated mined geologic repository with sufficient capacity nearly thirty years after passage of the Nuclear Waste Policy Act ("NWPA"). Despite the NRC's assurances spanning a quarter of a century in the Waste Confidence Decision of 1984, the 1990 revisions thereto, and the 1999 review thereof, the current executive, administrative, and socio-political opposition to the sole contemplated mined geologic repository is undoubtedly increasing rather than diminishing. Simply put, the prospect of Yucca Mountain, or any other repository, opening and accepting spent nuclear fuel in the near future becomes less reasonable with each passing day.

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<sup>11</sup> See Riverkeeper.org, Indian Point, Radioactive Waste, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste](http://www.riverkeeper.org/campaign.php/indianpoint_waste) (last visited Feb. 6, 2009).

<sup>12</sup> See WCD Update, 73 Fed. Reg. at 59551, 59,553.

<sup>13</sup> Proposed Rule Update, 73 Fed. Reg. at 59551.

## Availability

The availability of a mined geologic repository is conditioned on a complex interplay of statutory directives and socio-political forces. The Nuclear Waste Policy Act of 1982, as amended (“NWPA”), and the 1987 amendments to NWPA (“NWPAA”), establish Yucca Mountain as the only site for characterization as a mined geologic repository. Not until 2002, twenty years after initiation of the formal process to develop a mined geologic repository, was Yucca Mountain recommended to Congress as the sole mined geologic repository. In the best case scenario, and, if and only if the long-delayed construction authorization application for Yucca Mountain submitted in 2008 is approved by the NRC, a mined geologic repository might become available in 2025.<sup>14</sup> However, the realization of a mined geologic repository has been veritably extinguished by opposition from President Obama and Congress. President Obama declared in 2007 that “Yucca Mountain has failed, the time for debate on this site is over, and it is time to start exploring new alternatives for safe long-term solutions.”<sup>15</sup> Since 2006, Congress has severely reduced funding for the Yucca Mountain program. The NRC and the Department of Energy (“DOE”) have acknowledged “having inadequate funds to meet their statutory obligations within the expected timeframes.”<sup>16</sup> Senate Majority Leader Harry Reid has said that funding for Yucca Mountain will be cut significantly again for 2009, and reduced to virtually nothing by 2010.<sup>17</sup>

The NRC acknowledges that “greater attention may need to be paid to developing societal and political acceptance” for a concept of long-term management and disposal of spent nuclear fuel; and that there is “no technical basis for making precise estimates of the minimum time needed” to arrive at a new plan for nuclear waste disposal if Yucca Mountain is not licensed.<sup>18</sup> The original Waste Confidence Decision of 1984 found reasonable assurance of the availability of a mined geologic repository by 2007-2009. By 1990, and under the revisions to the Waste Confidence Decision, the Commission found reasonable assurance of the availability of a mined geologic repository by 2025. In the Update, the Commission proposes to delete reasonable assurance of the availability of a mined geologic repository by any specific date, and therefore proposes to abandon one of the “duel objectives” of Finding 2.<sup>19</sup> From the outset of the proceeding that precipitated the original Waste Confidence Decision, the Commission has been charged with the explicit objective of addressing “the *specific problem* . . . whether there is reasonable assurance that an off-site storage solution will be available by the . . . expiration of the plants’ operating licenses.”<sup>20</sup>

If the Commission abandons reasonable assurance of any specific date for repository availability, this challenges the Commission’s fulfillment of the second objective of Finding 2, “to predict how long spent fuel may need to be stored at a reactor site.”<sup>21</sup> Absent a date for

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<sup>14</sup> WCD Update, 73, Fed. Reg. at 59551, 59557.

<sup>15</sup> Illinois Congressman Obama, 2007 letter to Senators Harry Reid and Barbara Boxer.

<sup>16</sup> NRC Chairman Klein, “Waste Confidence and Waste Challenges: Managing Radioactive Materials”, Speech February 8, 2008.

<sup>17</sup> Senator D-Harry Reid, Stephens Media Washington Bureau, January 6, 2009.

<sup>18</sup> WCD Update, 73 Fed. Reg. at 59551, 59560.

<sup>19</sup> *Id.* at 59551, 59556.

<sup>20</sup> *Minnesota v. NRC*, 602 F.2d 412, 418 (DC Cir. 1979) (emphasis added).

<sup>21</sup> WCD Update, 73 Fed. Reg. at 59551, 59556.

availability of any repository, it is patently unreasonable for the Commission to propose to find reasonable assurance that sufficient repository capacity will be available within 50-60 years beyond the licensed life for operation of any reactor in Proposed Finding 2. The 50-60 year time frame is no more than a construct that perpetuates the “kick the can down the road” policy for the problems of nuclear waste that the NRC Chairman Klein identified last year.<sup>22</sup>

At present, the Commission has before it a “considerably changed landscape” from that it has addressed in formulating and revising the Waste Confidence Decisions since 1984.<sup>23</sup> The sole proposed mined geologic repository site at Yucca Mountain faces executive, legislative, and administrative opposition and drastic budget cuts. Although the DOE presented a license application for Yucca Mountain to the NRC in June 2008, Chairman Klein has explicitly stated that NRC and DOE have “inadequate funds to meet their statutory obligations.”<sup>24</sup> As the Court in *Minnesota v. NRC* observed, the “complex and vexing question of disposal of nuclear wastes . . . is characterized by continuing evolution of the state of pertinent knowledge.”<sup>25</sup> Furthermore, the Court determined that “there is no implication that Congress intended that the NRC ignore new knowledge and analysis in its licensing decisions.”<sup>26</sup>

### Sufficient Capacity

NWPA sets a statutory capacity limit of 70,000 metric tons heavy metal (“MTHM”), of which 63,000 MTHM is allotted to spent nuclear fuel (“SNF”), for the first geologic repository, Yucca Mountain.<sup>27</sup> Also under NWPA this capacity limit will remain in place until a second repository is in operation.<sup>28</sup> Inventories of SNF in the United States currently exceed 58,000 MTHM and continue to increase at the rate of approximately 2,000 MTHM annually. Therefore, DOE expects that by 2010, SNF will exceed the 70,000 MTHM limit; if all existing reactors continue to operate for a total of 60 years through license renewals, SNF will exceed 130,000 MTHM.<sup>29</sup> Moreover, looking particularly at Indian Point, due to the large amount of spent fuel generated from the facility and the statutory cap, Yucca Mountain will only be able to accommodate perhaps 70% of Indian Point’s spent fuel.<sup>30</sup> Thus, it is clear that, absent a second repository, the statutory cap must be removed to ensure sufficient mined geologic repository capacity beyond 2010. Legislation to remove the statutory cap was introduced in 2007, but has languished. DOE has recommended removal of the cap to forestall a decision regarding a second repository.<sup>31</sup>

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<sup>22</sup> NRC Chairman Dale Klein, “Waste Confidence and Waste Challenges: Managing Radioactive Materials,” February 8, 2008.

<sup>23</sup> WCD Update, 73 Fed. Reg. at 59551, 59556.

<sup>24</sup> Remarks, Feb. 25, 2008, Waste Management Symposium.

<sup>25</sup> 602 F.2d 412, 418.

<sup>26</sup> *Id.* at 419.

<sup>27</sup> See NWPA, § 114, available at [http://www.ocrwm.doe.gov/documents/nwpa/css/nwpa\\_2004.pdf](http://www.ocrwm.doe.gov/documents/nwpa/css/nwpa_2004.pdf).

<sup>28</sup> *Id.*

<sup>29</sup> The Report to the President and the Congress by the Secretary on the Need for a Second Repository, DOE/RW-0595, December 2008.

<sup>30</sup> See Riverkeeper.org, Indian Point’s Spent Fuel, [http://www.riverkeeper.org/campaign.php/indianpoint\\_waste/the\\_facts/1255-indian-points-spent-fuel](http://www.riverkeeper.org/campaign.php/indianpoint_waste/the_facts/1255-indian-points-spent-fuel) (last visited Feb. 6, 2009).

<sup>31</sup> The Report to the President and the Congress by the Secretary on the Need for a Second Repository, DOE/RW-0595, December 2008.

The Final Supplemental Environmental Impact Statement for a Geologic Repository at Yucca Mountain (“Repository SEIS”) characterized the Yucca Mountain site for emplacement of the statutory limit of 70,000 MTHM, including 63,000 MTHM of SNF. The Repository SEIS also analyzed emplacement of two alternate Inventory Modules of up to 130,000 MTHM SNF as Reasonably Foreseeable Future Actions. While acknowledging that legislative action and regulatory authorizations would be necessary for the increase in inventory emplacement, the Repository SEIS fails to consider, analyze and fully characterize important technical and geologic limitations to increased inventory capacity.<sup>32</sup> For example, a report generated by the Electric Power Research Institute suggests that 570,000 MTHM SNF could be emplaced at Yucca Mountain.<sup>33</sup> Such widely varying estimates of physical capacity raise questions about the accuracy and objectivity of these analyses. The fact remains that the NWPA sets a legal limit on the capacity of a repository at 70,000 MTHM. The NRC cannot simply choose to disregard that limit in its efforts to forestall resolution of the spent fuel storage issue until some indefinite future date. It is unreasonable for the NRC to rely on the unfounded hope that the statutory capacity limit will someday be lifted to accommodate the actual and predicted inventory of SNF.

Based on the foregoing, the NRC’s proposed revision to Finding 2 and corresponding change to 10 C.F.R. § 51.23(a) is unreasonable, lacks sufficient foundation, and utterly fails to address ongoing concerns over the current and future disposal of radioactive waste.

### **III. The NRC’s Unfounded “Confidence” in Temporary Onsite Storage**

The NRC’s extended generic assurance that indefinite interim storage will not have any significant environmental impact is misplaced and wholly unreasonable. The NRC’s original Waste Confidence Decision of 1984 found reasonable assurance that spent fuel generated by any reactor could be safely stored without significant environmental impacts for at least 30 years beyond the expiration of that reactor’s operating license.<sup>34</sup> This timeframe was chosen to correspond to the NRC’s expectation at the time of when a long-term repository would be available.<sup>35</sup> The Commission made this finding of no significant impact without performing an environmental review pursuant to NEPA, explicitly stating that an environmental impact statement was not necessary.<sup>36</sup> Instead, the Commission based its finding on its then current generic understanding of temporary storage methods and safety risks.<sup>37</sup> This finding was reflected in a corresponding rule which was codified at 10 C.F.R. § 51.23(a).<sup>38</sup> The Commission

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<sup>32</sup> See Allison MacFarlane, Center for Strategic and International Studies, Washington, DC, “Assessing Strategies to Manage Nuclear Waste”, November 6, 2008.

<sup>33</sup> See EPRI, Analysis of the Maximum Disposal Capacity for Commercial Spent Nuclear Fuel in a Yucca Mountain Repository, 1013523, 5/31/2006.

<sup>34</sup> Final Waste Confidence Decision, 49 Fed. Reg. 34658 (1984) (Finding 4).

<sup>35</sup> See *id.*; see also Proposed Rule Change, 73 Fed. Reg. at 59549.

<sup>36</sup> Final Waste Confidence Decision, 49 Fed. Reg. 34658 (“[T]he Commission finds that NEPA does not require an EIS to support the fourth finding”).

<sup>37</sup> *Id.*

<sup>38</sup> See Final Rule, Requirements for Licensee Actions Regarding the Disposition of Spent Fuel Upon Expiration of Reactor Operating Licenses, 49 Fed. Reg. 34688 (codifying Waste Confidence Decision Finding 4 into 10 C.F.R. § 51.23(a)).

essentially perpetuated this same finding and rule when it reviewed the Waste Confidence Decision in 1990 and 1999.<sup>39</sup>

Now the NRC is proposing to revise this finding (i.e., Finding 4) and corresponding rule to reflect its new expectation of long-term repository availability.<sup>40</sup> Specifically, the Commission is proposing to change Finding 4 to say that spent fuel can be stored for at least 60 years beyond a reactor's licensed life of operation, and change the corresponding rule by omitting *any* reference to how long spent fuel can safely be stored in "temporary" on- or off-site facilities, but rather, simply stating that such waste can be so temporarily stored without significant environmental impact "until a disposal facility can reasonably be expected to be available."<sup>41</sup> Together, implementing the proposed actions would further extend the NRC's finding of no significant impact, now essentially to some indefinable point in the future. The NRC's reasonable assurance that spent fuel can be safely stored for these newly contemplated time periods is once again, not supported by an environmental impact statement, but rather, is based upon its review of experiences to date with spent fuel storage.<sup>42</sup>

At a minimum, taking any time frame out of the rule is erroneously inconsistent with the proposed revised finding language, and, in any event, wholly arbitrary and capricious. In *Natural Resources Defense Council, Inc. v. EPA*, the Court held that under "arbitrary and capricious" standard, the agency must show it has "considered the relevant factors and articulated a rational connection between the facts and its choices".<sup>43</sup> The NRC here has not provided any reasonable explanation as to why the proposed rule omits the reference to the time frame articulated in the corresponding finding.

Moreover, while the NRC continues to rely on the same bases proffered for the original Waste Confidence Decision and temporary storage rule, many simply do not hold up given current knowledge and circumstances and, therefore, no longer support the Commission's generic finding of no significant impact.

For example, the original Waste Confidence Decision emphasized the long-term integrity of spent fuel in storage pools, citing various studies suggesting that the encasements used would not

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<sup>39</sup> See Review and Proposed Revision of Waste Confidence Decision, 54 Fed. Reg. 39767 (1989); Final Rule, 55 Fed. Reg. 38472 (1990); Status Report on the Review of the Waste Confidence Decision, 64 Fed. Reg. 68005 (1999). The 1990 update to the waste confidence decision and corresponding rule retained the same language and also added that a reactor's license life included any term of a revised or renewed license, thereby extending the finding of no significant impact even further. See Review and Proposed Revision of Waste Confidence Decision, 54 Fed. Reg. 39767 (1989); Final Rule, 55 Fed. Reg. 38472 (1990). The 1999 status report was not a comprehensive review and once again, merely approved the previous findings. See Status Report on the Review of the Waste Confidence Decision, 64 Fed. Reg. 68005 (1999).

<sup>40</sup> Proposed Rule Change, 73 Fed. Reg. at 59549 (referring the WCD Update rationale) (explaining that the original 30 year timeframe for safe interim spent fuel storage was related to the NRC's expectation of when sufficient repository capacity would be available, and now the Commission no longer finds a timeframe useful since an unknown amount of time will be needed to bring about the necessary societal and political acceptance for a repository site.).

<sup>41</sup> WCD Update, 73 Fed. Reg. at 59551, 59563-59569; Proposed Rule Change, 73 Fed. Reg. at 59551.

<sup>42</sup> WCD Update, 73 Fed. Reg. at 59551, 59563-59569.

<sup>43</sup> 338 U.S. App. D.C. 340 (D.C. Cir. 1999).

degrade to any significant extent.<sup>44</sup> In its 1990 review, the Commission confirmed that pool storage would not lead to significant degradation of spent fuel integrity, insisting that degradation mechanisms are well understood.<sup>45</sup> In the instant NRC actions, the Commission is once again reaffirming its confidence in long-term spent fuel pool storage.<sup>46</sup>

However, the NRC's confidence is completely inconsistent with the reality that multiple reactors around the United States have been leaking radioactive water into the subsurface, contaminating groundwater and public waterways.<sup>47</sup> Given this situation, the long-term integrity of spent fuel pool storage is highly questionable. The NRC is not dealing with a few isolated occurrences. Rather, the degree of deterioration seen to date seriously calls into question the NRC's consistent conclusions that degradation mechanisms are fully known and manageable. Such conclusions, therefore, no longer support the NRC's "assurance that no significant environmental impacts or safety concerns will result from extended storage in spent fuel pools."<sup>48</sup>

The NRC actually recognizes the leaks that have occurred at various plants, but insists that the problems have been taken care of or will be addressed through various revisions to regulatory guides (dealing predominantly with monitoring and detection), and continued regulatory oversight.<sup>49</sup> The NRC emphasizes conclusions about dose calculations showing negligible impact to public health.<sup>50</sup> However, the Commission's rationale here is utterly flawed. Promises to continue regulatory oversight and conclusions that public health has not been significantly impacted do not demonstrate that adequate environmental analysis has been performed to be able to generically conclude there are no significant environmental impacts from spent fuel pool storage. Indeed, this is exactly the kind of previously unforeseeable environmental impact that necessitates the "hard look" required by NEPA. In light of such demonstrable difficulties relating to the structural integrity of spent fuel pools, it truly defies logic to continue with such a generic determination as NRC is doing.

The NRC's original Waste Confidence Decision also relied upon a positive analysis of the risks of accidents and acts of sabotage at spent fuel storage facilities.<sup>51</sup> Specifically, the Commission found that risks of major accidents with resulting offsite consequences were remote due to resistant protective structures enclosing the spent fuel.<sup>52</sup> The NRC's 1990 Waste Confidence Decision review recognized the possibility of pool fires, but confirmed the Commission's previous finding by concluding that safety margins were high in spent fuel pool design and construction.<sup>53</sup> The instant proposals continue to find that spent fuel in interim storage facilities

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<sup>44</sup> See Final Waste Confidence Decision, 49 Fed. Reg. 34658 (1984).

<sup>45</sup> See Review and Proposed Revision of Waste Confidence Decision, 54 Fed. Reg. 39767 (1989); Final Rule, 55 Fed. Reg. 38472 (1990).

<sup>46</sup> See WCD Update, 73 Fed. Reg. at 59564.

<sup>47</sup> See Radioactive Release Task Force Report (discussing leaks at Indian Point, Seabrook, Salem, Watts Bar, and Palo Verde).

<sup>48</sup> WCD Update, 73 Fed. Reg. at 59566.

<sup>49</sup> See WCD Update, 73 Fed. Reg. at 59566. The NRC's dependence upon regulatory guides currently under revision is speculative and does not provide any support for the assertion that unplanned releases from spent fuel pools will be adequately addressed.

<sup>50</sup> See *id.* at 59565.

<sup>51</sup> See Final Waste Confidence Decision, 49 Fed. Reg. 34658 (1984).

<sup>52</sup> See *id.*

<sup>53</sup> WCD Update, 73 Fed. Reg. at 59564.

will be adequately protected, touting increased protective measures implemented since September 11, 2001.<sup>54</sup>

However, recent studies by the National Academy of Sciences and independent experts contradict the NRC's findings, suggesting that spent fuel pools are susceptible to fire and radiological release from a wide range of conditions, including natural phenomena and intentional attacks.<sup>55</sup> The environmental impacts of a fire in a spent fuel pool could be quite severe and encompassing enormous geographic areas and lasting for decades.<sup>56</sup> Thus, the NRC's conclusions that terrorism continues to not pose any significant environmental impacts are uncertain at best. Moreover, the National Academy of Sciences Report also concludes that the "potential vulnerabilities of spent fuel pools to terrorist attacks are plant-design specific. Therefore, specific vulnerabilities can be understood only by examining the characteristics of spent fuel storage at each plant."<sup>57</sup> This makes it even more clear that a generic finding is wholly inappropriate.

It is, thus, apparent that the NRC's rationale for generically finding that interim spent fuel storage will not pose significant environmental impacts has eroded over time. The NRC now wants to apply its flawed rationale to extend this finding into the indefinite future. This is patently inappropriate.

This extended finding of no significant impact is problematic because it completely precludes any kind of meaningful, *site-specific* environmental or safety review of temporary interim spent fuel storage, due to the concomitant provision in the regulations prohibiting the

discussion of *any* environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations for the period following the term of the reactor operating license . . . 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 reactor or in connection with the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.<sup>58</sup>

This language was codified into regulation when the original Waste Confidence Decision findings were codified,<sup>59</sup> and it has worked to effectively prevent analysis of all environmental

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<sup>54</sup> See *id.*

<sup>55</sup> National Academy of Sciences Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, *Safety and Security of Commercial Spent Nuclear Fuel Storage* (The National Academies Press, 2006); Gordon Thompson, *Risks and Risk-Reducing Options Associated with Pool Storage of Spent Nuclear Fuel at the Pilgrim and Vermont Yankee Nuclear Power Plants* (May 25, 2006).

<sup>56</sup> See Dr. Jan Beyea, *Report to the Massachusetts Attorney General on the Potential Consequences of a Spent-Fuel Pool Fire at the Pilgrim or Vermont Yankee Nuclear Plant* (May 25, 2006).

<sup>57</sup> National Academy of Sciences Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, *Safety and Security of Commercial Spent Nuclear Fuel Storage* (The National Academies Press, 2006).

<sup>58</sup> See Final Rule, Requirements for Licensee Actions Regarding the Disposition of Spent Fuel Upon Expiration of Reactor Operating Licenses, 49 Fed. Reg. 34688 (emphasis added).

<sup>59</sup> See *id.*; see also 10 C.F.R. § 51.23(b).

and safety concerns associated with interim storage of spent fuel after cessation of reactor operations in any other NRC proceedings: the NRC has, in individual licensing proceedings, rejected any contentions that challenge the safety of onsite spent fuel storage and/or the prospects for safely disposing of spent fuel;<sup>60</sup> denied challenges to individual license renewal decisions;<sup>61</sup> refused to entertain challenges to its finding of no significant impact in license renewal proceedings;<sup>62</sup> and rejected similar challenges in cases for new nuclear power plants.<sup>63</sup>

The NRC's instant proposals will now perpetuate this exemption, based on a flawed generic finding of no significant environmental impact. This is an unreasonable, unfounded result. Quite the opposite, the environmental and safety concerns associated with interim storage of spent nuclear fuel should be subject to site-specific review through the NEPA process in other proceedings to address the concerns unique to each situation.<sup>64</sup>

#### IV. Conclusion

The NRC's instant proposals seek to greatly extend its assurance of long-term repository availability and concurrent safe interim storage. The Commission has suggested these revisions to the current "waste confidence" landscape, essentially to conform to the delay and increasing difficulty of siting and licensing a geologic repository, and has not provided sufficient analysis to support its "confidence" that such a repository will ever come to fruition. Nor has the NRC provided sufficient scientific and technical support for its generic finding of no significant impact. On the contrary, the NRC is attempting to recycle its finding from 1984 without any further analysis. This cavalier approach to the basic tenets of NEPA should be rejected by the NRC outright. Finally, the NRC's continued reliance on some as yet undetermined future opening date of Yucca Mountain to exempt spent fuel storage from any meaningful environmental review is simply unreasonable.

Accordingly, Riverkeeper urges the NRC to reconsider taking these two actions. Instead, the NRC should withdraw the proposed rule and implement a comprehensive environmental review

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<sup>60</sup> *Carolina Power & Light Co. and North Carolina Eastern Municipal Power Agency* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-82-119A, 16 NRC 2069, 2081, 2102 (1982); *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 465 (1980); *Public Service Electric and Gas Co., et al.* (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 69 (1981).

<sup>61</sup> *See, e.g., Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 344-45 (1999); *Entergy Nuclear Vermont Yankee, L.L.C.* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 167-68 (1996).

<sup>62</sup> *See, e.g., Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), and *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-03, 65 NRC 13, 17-18 (2007); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 21-23 (2001); *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Station), LBP-08-13, 68 NRC \_\_\_ (slip op. July 31, 2008).

<sup>63</sup> *See, e.g., Dominion Nuclear North Anna, L.L.C.* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-69 (2004); *Exelon Generating Company* (Early Site Permit for Clinton ESP Site), LBP-04-17, 229, 246-47 (2004); *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296).

<sup>64</sup> In fact, the CEQ regulations defining "significantly," requires consideration of the *context* in which a proposed action is situated. *See* 40 C.F.R. § 1508.27; *Sierra Club v. Bosworth*, 496 F.Supp.2d 931 (N.D. Cal. 2006).

of spent fuel storage that includes robust public participation and allows for site specific review of the environmental impacts of spent fuel storage in licensing proceedings.

Thank you for your consideration of the foregoing comments.

Sincerely,



Deborah Brancato  
Staff Attorney  
Riverkeeper, Inc.  
828 South Broadway  
Tarrytown, NY 10591  
914-478-4501 (ext. 230)  
[dbrancato@riverkeeper.org](mailto:dbrancato@riverkeeper.org)

## Rulemaking Comments

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**From:** Deborah Brancato [DBrancato@riverkeeper.org]  
**Sent:** Friday, February 06, 2009 8:32 PM  
**To:** Rulemaking Comments  
**Subject:** Comments of Riverkeeper on NRC's Waste Confidence Decision Update and Temporary Storage Rule Change  
**Attachments:** Comments of Riverkeeper Inc. on NRC's Waste Confidence Decision Update and Temporary Storage Rule Change (Feb 6, 2009).pdf

Dear Secretary and Rulemakings and Adjudication Staff,

Attached please find the comments of Riverkeeper, Inc. on the NRC's Waste Confidence Decision Update, 73 Fed. Reg 59,551 (Oct. 9, 2008) and Proposed Rule on the Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 73 Fed. Reg. 59,547.

A hard copy will follow by mail.

Thank you for your consideration.

Sincerely,

Deborah Brancato  
Staff Attorney  
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914-478-4501 (ext. 230)  
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Riverkeeper---Defending the Hudson. Protecting Our Communities.

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From: Deborah Brancato <DBrancato@riverkeeper.org>

To: "Rulemaking.Comments@nrc.gov" <Rulemaking.Comments@nrc.gov>

Date: Fri, 6 Feb 2009 20:32:21 -0500

Subject: Comments of Riverkeeper on NRC's Waste Confidence Decision Update  
and Temporary Storage Rule Change

Thread-Topic: Comments of Riverkeeper on NRC's Waste Confidence Decision  
Update and Temporary Storage Rule Change

Thread-Index: Acmlw+vadiVusBvmSIK9sf3QcViWAQ==

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