

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

In the Matter of	)	Docket Nos. 50-247-LR
	)	and
	)	50-286-LR
ENTERGY NUCLEAR OPERATIONS, INC.	)	
	)	
(Indian Point Nuclear Generating Units 2 and 3)	)	
	)	February 14, 2014

**HUDSON RIVER SLOOP CLEARWATER, INC.  
PETITION FOR REVIEW**

HUDSON RIVER SLOOP CLEARWATER, INC.

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**I. SUMMARY OF THE DECISION OR ACTION  
OF WHICH REVIEW IS SOUGHT**

Intervenor Hudson River Sloop Clearwater, Inc. [hereinafter “Clearwater”] hereby seeks review of the November 27, 2013, partial initial decision of the Atomic Safety and Licensing Board Panel in this matter (ASLBP No. 07-858-03-LR-BD01) [hereinafter “Partial Initial Decision” or “PID”] upon NEPA Contention CW-EC-3A (Environmental Justice) found at pages 358 through 388 of the decision.

**II. STATEMENT WHERE THE MATTERS OF FACT AND LAW WERE  
PREVIOUSLY RAISED BEFORE THE PRESIDING OFFICER**

As acknowledged by the Panel in its decision below, the specific narrow issue set forth in this Petition was raised in the June 28, 2012, Hudson River Sloop Clearwater, Inc. Rebuttal Statement Supporting Contention EC-3A Regarding Environmental Justice at page 1 (Ex. CLE000045) (“the issue remaining for adjudication is how much further assessment of EJ the Staff would need to do after remand to satisfy NEPA.”). PID, 376. More generally, the matters of fact and law relevant to this issue in Contention CW-EC-3A were raised in Hudson River Sloop Clearwater Inc.’s Petition to Intervene and Request for Hearing (Dec. 10, 2007) [hereinafter Clearwater Petition]; in the July 31, 2008, ASLBP memorandum granting the Clearwater Petition and admitting Contention CW-EC-3A published as *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 196-201 (2008)); in the February 3, 2011, Motion for Leave to Amend and Extend Contention EC-3 Regarding Environmental Justice and Petition to Do So; in the July 6, 2011, Licensing Board Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions) at 56 and 60; in the December 22, 2011, Clearwater Initial Statement of Position for Clearwater’s Contention EC-3A Regarding Environmental Justice (Ex. CLER00002); in the evidence and

testimony of Entergy witnesses, Donald P. Cleary (Ex. ENT000133), Jerry L. Riggs (Ex. ENT000008), and Michael J. Slobodien (Ex. ENT000262), March 29, 2012, testimony of said witnesses (Ex. ENT000258) (admitted into evidence, Tr. at 1269)); the evidence testimony of NRC Staff, Jeffrey J. Rikhoff, (Ex. NRC000082) and Patricia A. Milligan (Ex. NRC000064), March 30, 2012 testimony of said witnesses (Ex. NRC000062) (admitted into evidence, Tr. at 1269); in the evidence and testimony presented by nine witnesses for Clearwater, Michael Edelstein (Ex. CLE000011, Ex. CLE000003, Ex. CLE000047, Ex. CLE000058, Ex. CLE000059), Dr. Andrew Kanter (Ex. CLE000049, Ex. CLE000048); Anthony Papa (dated Oct. 11, 2011 and submitted on Dec. 22, 2011) (Ex. CLE000004); Dr. Erik Larsen (Ex. CLE000020, Ex. CLE000005); John Simms (dated Oct. 11, 2011 and submitted on Dec. 22, 2011); (Ex. CLE000006), Aaron Mair (Ex. CLE000021, CLE000007), Dolores Guardado Regarding (Ex. CLE000008), Stephen Filler (Ex. CLE000009), Manna Jo Greene (Ex. CLE000024, Ex. CLE000010, Ex. CLE000046) (all admitted into evidence admitted into evidence on October 15, 2012, Tr. at 1269); the Contention CW-EC-3A Evidentiary Hearing transcript (beginning on October 15, 2012); and in the exhibits submitted by the parties (64 exhibits by Clearwater, 14 exhibits by the NRC Staff, and 57 exhibits by Entergy), see Appendix B to the Partial Initial Decision (all admitted into the record on October 15, 2012, Tr. At 1269); also Ex. ENT000266, Ex. ENT000261, Ex. ENT000260, Ex ENT 000264, and the FSEIS itself, primarily Sections 4.4.6 and 8.2.

### **III. STATEMENT WHY COMMISSION REVIEW SHOULD BE EXERCISED**

This Petition seeks review of the narrow issue concerning the Licensing Board's resolution of a substantively flawed FSEIS environmental justice analysis following a sufficient

demonstration by Clearwater of the potentially disproportionate and adverse impacts on the EJ population surrounding Indian Point in the event of a severe accident. PID, 387. Instead of remanding and recirculating the FSEIS for further development of the environmental justice discussion and analysis, including necessary mitigation measures to address the EJ disparity and adverse impacts, the Board found that this testimony of Clearwater's witnesses constituted "...informed public participation and adequate analysis to foster informed decision-making, thus ensuring that the agency has met its NEPA requirements and will not act upon incomplete information. ...Therefore, the NRC despite the inadequate FSEIS, has met its NEPA burden with regards to the issues raised in CW-EC-3A." PID, 387.

Specifically, in its Partial Initial Decision, the Board found that the NRC Staff did not take the requisite "...hard look under NEPA at whether relicensing Indian Point would cause disproportionate and adverse impacts on the minority and low-income populations within the 50-mile environmental impact area around the plant when compared to the impacts on the non-EJ population within that radius in the improbable, but not impossible, event of a severe accident at Indian Point that releases radiation into the natural environment." PID, 382. The Board further found that:

...the Staff failed to follow its own internal procedure by omitting steps 2 and 3 of its analytic process to determine the possible disproportionate and adverse effects of a severe accident at Indian Point on the EJ population. The Staff neglected to (1) determine whether there would be any potential human health or environmental defects to the minority and low-income populations in the event of an accident that caused a radiological release from Indian Point, and (2) determine if any of the effects may be disproportionate and adverse when compared to the health and environmental effects to the general population.

More specifically, the Staff failed to: (1) determine whether the EJ population would suffer disproportionate and adverse effects during the PEO from relicensing Indian Point in comparison to those effects that the non-EJ population would experience during the PEO, and (2) determine if the members of the low-

income population who cannot afford to, or do not have the freedom to, self-evacuate or effectively shelter-in-place due to substandard housing would be disparately and adversely impacted in comparison to those who have the freedom, financial means, and readily available modes of transportation to self-evacuate or access adequate shelter. [The Board noted that no EJ analysis had been completed before the issuance of the original Indian Point operating licenses, and that, accordingly, no EJ comparison had ever been conducted by the NRC staff.]

In regards to the first item, we find that the Staff analyzed the wrong variables by comparing impacts of the EJ population during the PEO to the current impacts to this same group. The correct analysis would assess the effects of the PEO on the EJ population and non-EJ populations to ascertain any disparate impacts.

Relating to the second item, Staff Witness Ms. Milligan testified that “it is possible that special populations, such as those at Sing Sing[,] could receive radiation doses higher than other populations that are immediately able to self-evacuate[] . . . .”<sup>2096</sup> In the next breath Ms. Milligan stated that she, on behalf of the NRC, does not “specifically look at EJ populations in the context of emergency preparedness because . . . [the NRC prepares] for all populations, not just EJ populations.” [Tr. At 2760-61]

The Board finds that this type of total population analysis without a specific EJ population analysis defeats the purpose of EJ analyses under NEPA. As the Commission made clear in Louisiana Energy Services [47 N.R.C. 77, 100 (1998)], “[d]isparate impact analysis is [the NRC’s] principal tool for advancing environmental justice under NEPA. The NRC’s goal is to identify and adequately weigh, or mitigate, effects on low-income and minority communities that become apparent only by considering factors peculiar to those communities.” By failing to consider factors peculiar to the EJ community in the event of an accident, the Board finds that the Staff failed to identify and adequately weigh effects on low-income and minority communities surrounding Indian Point. Thus, we find that the Staff failed to take a reasonably hard look at environmental effects of relicensing Indian Point on the EJ population, and thus has failed to comply with its EJ obligations under NEPA.

PID, 383-85.

The Board also ruled as a matter of law that the NRC Staff could not evade this responsibility through any assertion that the risk to the EJ population was “small.”

Staff witness Mr. Rikhoff testified that the Staff did not evaluate the effects of a severe accident on the EJ population because Table B-1 within 10 C.F.R. Part 51 “concludes that the probability of a severe accident is small . . . .” [Tr. at 2757] Based on this finding the Staff summarily concluded, without analysis, that since the probability-weighted consequences of a severe accident

are small for all populations, including the EJ population, there is no disproportionate and adverse impact on minority and low-income populations due to a severe accident. [Tr. at 2756-58; Ex. NRC000063 at 17] However, “[o]nly if the harm in question is so ‘remote and speculative’ as to reduce the effective probability of its occurrence to zero may the agency dispense with the consequences portion of the analysis.” [*New York v. NRC*, 681 F.3d 471, 482 (D.C.Cir. 2012)] Here, Staff witness Mr. Rikhoff admitted it is possible that minority or low income populations could be disproportionately affected in the event of a severe accident at Indian Point despite the fact that the probability weighted consequences of an accident are small. [Tr. at 2757-58] Entergy provided similar testimony. [Ex. ENT000258 at 15]

While a regulation states that the probability weighted consequences of a severe accident at Indian Point are small, Staff witness Mr. Rikhoff conceded that there is no regulation exempting the Staff from considering the effects of a severe accident on the EJ population. [Tr. at 2758] Thus, the Board finds that there is no legal foundation for the Staff’s failure to analyze the possible disproportionate and adverse impacts of a severe accident at Indian Point on the EJ population within the 50-mile radius of the plant.

The Board also notes that regulations, such as 10 C.F.R. § 50.47(a)(1)(i), require nuclear power reactors to have emergency plans in place to respond to accidents despite the fact that Table B-1 within 10 C.F.R. Part 51 concludes that the environmental impacts of both design basis and severe accidents at a nuclear reactor are small for all plants. This is a clear indication that the NRC, while cautiously optimistic that a potentially severe accident will not occur at a licensed nuclear reactor, believes it necessary to prepare for just such a possibility. Thus, it escapes logic that the NRC would use this finding – that the probability-weighted consequences of a severe accident at a nuclear reactor are small – as the basis to exempt itself from evaluating the possible disproportionate and adverse effects of a severe accident on the EJ population. Also, to accept this position would run counter to the NRC requirements that nuclear reactor licensees create plans and devote resources to protecting the public from the consequences of a severe accident.

PID, 385.

The Board concluded:

Therefore, the Board finds that the Staff’s lack of EJ analysis regarding the possible disproportionate and adverse effects of an accident at Indian Point on the EJ population within the 50-mile radius of Indian Point fails to meet the NEPA reasonableness standard.

*Id.*

The 3-Step EJ analysis process referred to by the Board above utilized by the NRC Staff in the FSEIS, Sections 4.4.6 and 8.2 is as follows:

(1) identify[] the location of minority and low-income populations that may be affected by the continued operation of the nuclear power plant during the license renewal term and refurbishment activities associated with license renewal, (2) determin[e] whether there would be any potential human health or environmental effects to these populations and special pathway receptors, and (3) determin[e] if any of the effects may be disproportionately high and adverse.

Ex. NRC000063 at 11-12. As previously stated, the Board found that the NRC Staff had completely “omitted” steps 2 and 3 as to the Indian Point EJ population. PID, 383. However, the Board found that in regards to these omitted steps the Clearwater witnesses had demonstrated that the issue of environmental justice compliance was not a meaningless exercise by providing evidence of disparate risks to low-income communities and communities of color within the 50-mile radius of Indian Point in the event of a severe nuclear incident particularly in the areas of risks of exposures, difficulty in evacuation to safe areas, in sheltering in place, and in medical services availability. PID, 376-81, 387.

The Board then found and ruled that the testimony of the Clearwater witnesses in merely demonstrating the disparate treatment as to some of the EJ population cured this substantive flaw, and that the NRC had thereby met its NEPA EJ burden. PID, 387, 388.

The fundamental problem with this “resolution” of the flawed EJ analysis in the FSEIS, is that the Clearwater witnesses merely “illustrated” (the Board’s term) the EJ population treatment disparities through the EJ examination, discussion, and analysis of a very small part of the population of concern. There was, and has not yet been, any sufficient EJ analysis of the entire EJ population at risk, identified by the NRC Staff and Clearwater in step 1, as required by NEPA.

For example, as discussed by the Board [PID, 376-78], witnesses Dr. Michael Edelstein, an environmental psychologist, and Mr. Anthony Papa, a former inmate at the Sing Sing prison, “focused” their testimony on Sing Sing prison, only one of 26 such institutions within the 50-mile radius of Indian Point, to illustrate the large minority and low-income populations of such institutions, the nearly insurmountable difficulty in evacuating a prison population in the event of a radiological release, and the in-suitability of Sing Sing prison as a shelter-in-place. *See*, Tr. at 2795; Ex. CLE000004, generally. Dr. Edelstein clearly limited the specifics of his testimony to Sing Sing prison:

DR. EDELSTEIN: ...In the case of Sing Sing, which I particularly looked at ...we have issues that in fact were missed entirely by the current analysis.

JUDGE McDADE: In this particular instance, a subset of the minority population such as Sing Sing ....

Tr. at 2791. And so forth, Dr. Edelstein focused almost his entire testimony regarding this “subset” of 26 detention institutions on Sing Sing prison. Tr. at 2791-2806. As to the subset, Dr. Edelstein opined in comparison to Sing Sing that “...the similarities are few, and the differences are many....” Tr. at 2795. Mr. Papa’s testimony was focused wholly on Sing Sing prison. The NRC Staff witnesses also focused solely on Sing Sing. Tr. 2768-71. Some testimony was provided by Clearwater witness Manna Jo Greene in regards to the Rockland County Jail. Ex. CLE000010 at 27-29. But, contrary to the assertion of the Board, there has been no sufficient development by these witnesses, the NRC Staff, nor anyone else of the EJ analysis of the institutionalized minority and impoverished populations at the other 24 prisons or detention institutions within the 50-mile radius of Indian Point.



In regards to the ability of the low-income and minority population within the 50-mile radius of Indian Point to evacuate or shelter-in-place as discussed in the Board's decision [PID, 378-81], general testimony was provided by Clearwater witnesses, Dr. Larsen, Dr. Kanter, and Manna Jo Greene. However, the only impacted population specific testimony was in regards to the community of Peekskill, New York, by Clearwater witnesses Aaron Mair and Dolores Guardado. Tr. at 2806-46, 2852-57; Ex. CLE000010 at 4-26. Peekskill, New York, is found in just one of the many minority population "Census Block Groups" the NRC Staff identified in its step 1 EJ analysis. Tr. at 2745-49; Ex. NRC000133B. The record contains a specific discussion or analysis by anyone of very few, if any, of these identified minority communities other than Peekskill within the 50-mile radius of Indian Point.

The Board's review, including the adjudicatory record (pleadings, witness testimony and admitted exhibits), and its decision, comprise the record of decision and, in effect, is part of and modifies the FSEIS. 10 C.F.R. §51.103(b); *Hydro Res., Inc.*, CLI-01-04, 53 NRC 31, 53 (2001); *La. Energy Servs., L.P.*, CLI-98-3, 47 NRC 77, 89 (1998); see PID, 362. However, this does not relieve the NRC of its burden of demonstrating that environmental issues have been adequately considered in that consolidated record. *La. Energy Servs.*, 47 NRC at 89. Even with these additions to the FSEIS, the NRC may still not have met its burden.

Although not expressly bound by the Executive Order on Environmental Justice, EO 12,898 (1994), the NRC has committed to undertake environmental justice reviews. *Dominion Nuclear North Anna, LLC*, CLI-07-27, 66 NRC 215, 237-38 (2007).

As part of that commitment, the Commission issued a Policy Statement in 2004, setting out its position on the treatment of environmental justice issues in the agency's licensing and regulatory activities. The Policy Statement re-stated and expanded upon the "environmental justice" doctrines then emerging from a handful of the NRC's adjudicatory decisions and also from two Staff guidance documents. Although the Policy Statement charged the Staff with diligently

investigating potential adverse environmental impacts on minorities and low-income populations, it directed the Staff to conduct an even more detailed examination in situations where the Staff finds that “the percentage in the impacted area exceeds that of the State or the County percentage for either the minority or low-income population.” Under those circumstances, the Commission charged the Staff to consider environmental justice “in greater detail.” As explained below, the Board has suggested that we clarify the meaning of the quoted phrase and determine whether the Staff’s FEIS satisfied our “greater detail” standard in this proceeding.

*Id.*, at 238 (citations omitted).

“Environmental justice, as applied at the NRC, ...means that the agency will make an effort under NEPA to become aware of the demographic and economic circumstances of local communities where nuclear facilities are to be sited, and take care to mitigate or avoid special impacts attributable to the special character of the community.” *Private Fuel Storage, LLC*, CLI-02-20, 56 NRC 147, 156 (2002). “Disparate impact’ analysis is our principal tool for advancing environmental justice under NEPA. The NRC’s goal is to identify and adequately weigh, or mitigate, effects on low-income and minority communities that become apparent only by considering factors peculiar to those communities.” *La. Energy Servs.*, 47 NRC at 100.

This detailed environmental justice examination is mandated by NEPA to fulfill its purposes. “NEPA has twin aims. First, it places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision-making process. ... Congress did not enact NEPA, of course, so that an agency would contemplate the environmental impact of an action as an abstract exercise. Rather, Congress intended that the ‘hard look’ be incorporated as part of the agency’s process of deciding whether to pursue a particular federal action.” *Baltimore Gas and Elec. Co. v. N.R.D.C., Inc.*, 462 U.S. 87, 97,100 (1983) (citations omitted). “NEPA promotes its sweeping commitment to prevent or

eliminate damage to the environment and biosphere by focusing Government and public attention on the environmental effects of proposed agency action. By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 371 (1989).

In the matter at bar, that mandated gathering of information and the discussion and analysis of the disparate impacts upon the Indian Point EJ population are sorely incomplete. The hard look requires an examination of the circumstances and conditions and discussion and analysis of not just one or two but each of the movement restricted institutions or communities within the EJ population to determine the specific nature and scope of the risk, impact, and disparity so that a transparent and informed public discussion can be had and an informed decision can be made by the Commission.

NEPA also requires that the environmental impact statement include as a component of the “hard look,” among other information, a “detailed” statement of “any adverse environmental effects which cannot be avoided should the proposal be implemented.” 42 U.S.C. §4332(2)(C)(ii). The Supreme Court in *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989), construed this provision to require “**a detailed discussion of possible mitigation measures.**” “[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences. ...[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA.” *Robertson*, 490 U.S. at 351-52; *see also*, *South Fork Band Council of Western Shoshone of Nev. V. U.S. Dept. of Int.*, 588 F.3d 718, 727 (9<sup>th</sup> Cir. 2009); *Limerick Ecology Action, Inc. v. U.S. N.R.C.*, 869 F.2d 719 (3<sup>rd</sup> Cir. 1989); *Calvert Cliffs 3 Nuclear*

*Project, LLC*, LBP-09-4, 69 NRC 170, 228-29 (2009).

The implementing NRC regulation listing the information that must be included in the ER, 10 C.F.R. § 51.45(b)(2), restates this NEPA mandate. NRC regulation 10 C.F.R. §51.103(a)(4) also requires the Commission to state in the record of decision whether it “has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted. Summarize any license conditions and monitoring programs adopted in connection with mitigation measures.”

As the Supreme Court emphasized in *Robertson*, a detailed discussion of mitigation measures cannot be had without the gathering of the information necessary for that discussion. As the NRC itself has noted, “the population distribution in the vicinity of the site affects the magnitude and location of potential consequences from radiation releases.” 48 Fed.Reg. at 16,020. In regards to mitigating environmental justice issues here, that requires a full examination of all of the impacted EJ communities and institutions within the 50-mile radius of Indian Point, not of just a few. In *Limerick*, for example, the Circuit Court found that the Commission in a licensing proceeding violated NEPA and abused its discretion in failing to consider the training of civilian drivers who would be employed in the evacuation of inmates from a Pennsylvania prison near a nuclear facility in the event of a severe nuclear accident. *Limerick Ecology*, 869 F.2d at 754. The Court noted that emergency offsite responses to such nuclear incidents have been “dominated by an atmosphere of almost total confusion.” *Id.*, at 748. When discussing the Indian Point EJ population at Sing Sing, Dr. Edelstein testified of what he termed “a social disintegration” at the prison in New Orleans during the Katrina situation and compared that to Fukushima. Tr. at 2796-97, 2800; see also, Tr. at 2814-16 (Dr.

Larsen opining on this in regards to Sing Sing). Dr. Larsen also testified about the impact on the availability of medical services to minority and low-income populations in such situations. Tr. at 2807-16.

Because the EJ information, discussion, and analysis were all incomplete, the Board had only one option once it determined that Clearwater had established the existence of economic and racial disparity within the 50-mile radius of Indian Point: the remand of the issue back to the NRC Staff for the required detailed examination, discussion, and analysis, including a detailed discussion and evaluation of specific mitigation measures and the recirculation of the SEIS. *La. Energy Servs., L.P.*, 47 NRC at 110.

This year is the 50<sup>th</sup> anniversary of the Civil Rights Act and President Lyndon Johnson's "war on poverty." As President Johnson declared in his State of the Union address: "Unfortunately, many Americans live on the outskirts of hope – some because of their poverty, and some because of their color, and too many because of both. Our task is to help replace their despair with opportunity." It is also the 20<sup>th</sup> anniversary of President Clinton's Executive Order on Environmental Justice. Even though the working poor and people of color are the backbone of both our economy and democracy, the struggle against economic and racial disparity in our society is clearly a long and difficult one. The environmental justice doctrine recognizes not only the historical injustices but also the potential for future ones. It is incumbent upon the NRC to fully embrace here its commitment to the doctrine by the remand of this matter back to the NRC Staff for the authentic "hard look" mandated by NEPA and the Executive Order of the disparate impact upon low-income communities and communities of color and of the reasonable measures required to mitigate those impacts.

For all the foregoing reasons, this petition for your review must be granted.

Respectfully Submitted,

*Signed (electronically) by Andrew B. Reid*

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Dated: February 14, 2014, Denver, Colorado.

## CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305 (as revised), I certify that, on this date, copies of the HUDSON RIVER SLOOP CLEARWATER, INC. PETITION FOR REVIEW were served upon the Electronic Information Exchange (the

NRC's E-Filing System), in the above-captioned proceeding.

Dated: February 14, 2014.

*Signed (electronically) by Andrew B. Reid*

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