

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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))	
)	June 28, 2012

**REBUTTAL TESTIMONY OF MICHAEL EDELSTEIN REGARDING
CLEARWATER'S ENVIRONMENTAL JUSTICE CONTENTION EC-3A**

Q1. What is your name and have you already testified in this proceeding and provided your background details?

A1. My name is Michael Edelstein and I previously gave testimony supporting the environmental justice ("EJ") contention. At that time I provided details of my employment and expertise.

Q2. Have you prepared a rebuttal report responding to the testimony of NRC and Entergy witnesses?

A2. Yes I have. My report is called *Rebuttal to Respondents Testimony on the Environmental Justice Contention*. It is provided as Exhibit CLE000058.

Q3. Do you hereby incorporate that report into your testimony today and swear in accordance with 28 U.S.C. § 1746, under penalty of perjury, that the report is true and correct?

A3. Yes I do. My sworn testimony in this case comprises both this question and answer and the report itself.

Q4. As part of the preparation of your report have you carefully examined the testimony of NRC and Entergy regarding environmental justice ("EJ") and the relevant portions of all the documents listed in the references?

A4. Yes I have.

Q5. Did the testimony of the NRC Staff and Entergy change your opinion regarding the adequacy of the assessment of the potential EJ impacts from relicensing in the FSEIS?

A5. No it did not. In fact, the testimony of the NRC Staff and Entergy reinforces many of the points I made. In my rebuttal report I show that most of the facts I asserted are uncontested. CLE000058 at 1-2. Furthermore, the Staff has admitted that it did not consider the peculiar or unusual nature of the EJ communities when preparing the FSEIS. *Id.* at 2-4. The Staff attempt to justify this omission by excluding the effects of a severe accident from the analysis, which is not permissible because such an accident is reasonably foreseeable and must therefore be included in the environmental analysis. *Id.* at 4-8. Although both the Staff and Entergy attempt to suggest that EJ impacts from an accident would be adequately mitigated by sheltering-in-place, they have done no site-specific analysis of how suitable buildings are for this purpose, whether ventilation systems and window sealing need improvement, the effect of ordering people without private vehicles to wait outside at bus stops, or how quickly the protection offered by shelter-in-place degrades. *Id.* at 9 to 13. Indeed, a case study on a prison that was ordered to shelter-in-place for 12 hours shows that problems were experienced, many of which could have been be mitigated by careful preparation. *Id.* at 13 to 15.

Q6. Did the responsive testimony show that an evacuation plan exists for Sing-Sing?

A6. The testimony of NRC Staff and Entergy confirm that shelter-in-place is the primary option of Sing Sing, but based upon a single phone call to New York State Department of Corrections (“NYSDOC”), suggest that there is an evacuation plan. *Id.* at 17. Despite not having reviewed the plan, the NRC Staff and Entergy claim, without any foundation, that it would prevent disparate impact. *Id.* This assertion inadvertently reveals one of the major flaws in the reasoning of Entergy and the Staff. The mere existence of a plan, which is all they have shown, is not sufficient to show that there are no disparate impacts.

Q.7. Does the NRC Staff anticipate that there could be additional radiation exposure for Sing Sing prisoners?

A.7. Yes. The NRC Staff now admit that “specific populations such as Sing Sing might get higher doses [of radiation]” during a severe accident. *Id.* at 19. In itself, this shows that the Staff now recognizes the possibility for disparate impacts to occur. In contrast, the FSEIS found that Sing-Sing prisoners would only suffer the same adverse effects as the general population. Thus, the Staff has now admitted that the FSEIS is erroneous.

Q8. Did the responsive testimony admit the potential for disparate impacts to non-prisoners?

A8. Yes, the responsive testimony confirms that those without private vehicles will be ordered to go to outside bus stops for pick up. *See* CLE000056. Apparently, the NRC Staff imagines that EJ populations lacking cars will stand outside unsheltered contentedly waiting for the next bus. CLE000058 at 20. The absurdity of this recommendation is clear in light of the logic previously offered by Respondents for the importance of Shelter in Place. If Shelter-in-Place is an effective mitigation strategy, why doesn’t the plan call for those without cars to assemble at public buildings, rather than waiting outside unprotected?

Q.9. Has the NRC Staff made other statements that show that the analysis carried out for the Indian Point FSEIS was inadequate?

A.9. Yes. Ironically, David B. Matthews, Director, Division of New Reactor Licensing gave a presentation to a conference on April 22, 2012, entitled “Environmental Justice and the NRC, A Progression to Excellence.” CLE000051. The presentation shows how the NRC’s EJ analysis at the LES site was inadequate. *Id.* at 5-7. In that case the ASLB determined that NRC had limited its inquiry to a “facial review of LES’s ER” instead of (...) a thorough and in-depth investigation" concluding that "(...) the NRC Staff must lift some rocks and look under them.” *Id.* at 7. The Board also found that the “FEIS did not deal adequately with the impact on those...who must regularly make

the trip on foot [and] ordered the NRC Staff to revise the FEIS to deal with the road closure . . .” *Id.*

Mr. Matthews emphasized that the Commission has stated that “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.*” *Id.* at 8 (emphasis in original in red).

Mr. Matthews then went on to show that for the V.C. Summer licensing, the NRC went beyond initial GIS-based approaches and actually listened to comments at a community meeting about a low-income community that the census block group analysis failed to find. *Id.* at 11 to 15. The NRC then took a “harder look” at that community and found that because local roads were narrow and many people walked, there was a danger of disparate impact. *Id.* at 16. The NRC also took account of an informal survey of local residents. *Id.* at 17. As a result, the applicant committed to additional mitigation. *Id.* at 18.

This illustrates that the NRC has already recognized in other licensing actions that it must and should do exactly the type of detailed site-specific analysis that it has failed to do for the Indian Point FSEIS. Instead of emulating the example of VC Summer, the Staff appears to have reverted to the same cramped interpretation of EJ analyses that the ASLB and the Commission rejected in the LES case.

Q10. Do Entergy and the NRC Staff admit that lessons can be learned from the Katrina disaster about the potential for disparate impact during an emergency?

A10. No, both Entergy and the NRC Staff suggest that the Katrina disaster has nothing to teach us about the potential for disparate impact during an emergency. *Id.* at 20. This is based on highly simplistic reasoning. Although the Katrina disaster was not a nuclear incident, there is much to be learned from it. In my opening testimony, I showed how prisoners suffered major adverse consequences during Katrina. In addition, those without private vehicles suffered extreme distress and

sometimes death while waiting for evacuation vehicles to arrive. At minimum, Katrina should teach us that merely having an evacuation plan for EJ populations is not sufficient to avoid disparate impacts.

Q11. Does the Fukushima disaster show that EJ populations could suffer disparate impacts during a nuclear emergency at Indian Point?

A11. Yes, the Fukushima disaster tragically confirms that the most vulnerable populations suffer most in an emergency situation. *Id.* at 20-22. For those of us that have studied disasters, this is not unexpected, indeed it borders on the obvious. Unfortunately, the NRC tried to pretend otherwise in the FSEIS and the NRC Staff and Entergy are now attempting to defend that untenable position. A few examples from Fukushima should suffice to show that a nuclear emergency at Indian Point would be likely to cause serious disparate impacts. In one hospital three miles from Fukushima, 25 of the 435 patients died during the evacuation or at transit centers. *Id.* at 21. In addition, elderly patients were left in freezing conditions and there was inadequate provision for medical treatment at evacuation centers. *Id.* The disaster also confirmed that shelter-in-place does not work beyond a few hours, because people run out of food and water rapidly. CLE000050 at 7.

Newspaper articles sum up the grim realities of the situation. “Nuke evacuation fatal for old, sick” encapsulates in a nutshell that at Fukushima members of EJ populations died as a result of the accident, while healthy people with their own transportation were not as badly affected. CLE000054. The article shows that at one home for the elderly, the home's 96 residents were evacuated to Yokohama as they ran out of medicine and faced starvation, according to the home's director. *Id.* One of them died on the bus, and two others fell seriously ill. *Id.* Another article states “Japanese earthquake takes heavy toll on ageing population.” CLE000052. Dozens of elderly people were confirmed dead in hospitals and residential homes as heating fuel and medicine ran out. *Id.* In one particularly shocking incident, Japan's self-defense force discovered 128 elderly people abandoned by

medical staff at a hospital six miles from the stricken Fukushima nuclear plant. Most of them were comatose and 14 died shortly afterwards. Id. Another article states that “botched efforts to evacuate patients from area hospitals [close to Fukushima] lead to a number of deaths. CLE000053. By February 2012, 573 deaths had been certified as related to the Fukushima disaster. CLE000055. Notably, these deaths were not caused by radiation exposure, but by fatigue or aggravation of a chronic disease. Id. EJ populations, such as the elderly, the disabled, and the infirm, are most susceptible to these causes.

Over a year after the Fukushima disaster, its time to start spending our energies making nuclear plants safer and devising better mitigation plans for EJ populations based on bitter experience. I find it very disappointing that instead of learning the lessons of prior disasters, the NRC and Entergy have adopted a head in the sand approach by refusing to even openly acknowledge the potential for disparate impacts. The first step to solving a problem is recognizing that one exists. Unfortunately, despite overwhelming evidence, the NRC Staff and Entergy have yet to take this first step.

Q12. In accordance with 28 U.S.C. § 1746, do you state under penalty of perjury that the foregoing testimony is true and correct?

A12. Yes.

Executed in accord with 10 C.F.R. § 2.304(d)

/s/

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