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FINAL REPLY:

David Lochbaum
Union of Concerned Scientists (UCS)

TO:

Commission

FOR SIGNATURE OF :

** PRI **

CRC NO: 04-0644

Chairman Diaz

DESC:

ROUTING:

Questioning, Not Appealing, The Director's
Decision on the Riverkeeper and Union of Concerned
Scientists Indian Point Containment Sump 2.206
Petition

Reyes
Virgilio
Kane
Merschhoff
Norry
Dean
Burns
Collins, RI
Cyr, OGC

DATE: 10/15/04

ASSIGNED TO:

CONTACT:

NRR

Dyer

SPECIAL INSTRUCTIONS OR REMARKS:

Ref. G20040574.
Coordinate response with Region I.

OFFICE OF THE SECRETARY
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AUTHOR: David Lochbaum
AFFILIATION: UCS
ADDRESSEE: Nils Diaz
SUBJECT: Questioning, not appealing, the Director's decision on the Riverkeeper and UCS Indian Point containment sump petition

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Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

October 8, 2004

Chairman Nils J. Diaz
Commissioner Edward McGaffigan, Jr.
Commissioner Jeffrey S. Merrifield

**SUBJECT: QUESTIONING, NOT APPEALING, THE DIRECTOR'S DECISION ON
THE RIVERKEEPER AND UNION OF CONCERNED SCIENTISTS
INDIAN POINT CONTAINMENT SUMP PETITION**

Dear Chairman Diaz and Commissioners:

The Union of Concerned Scientists (UCS) is all too aware that no appeal process of any sort exists for Director's Decisions on safety petitions we submit in accordance with 10 CFR 2.206. We know that the public lacks the plethora of appeal processes available to NRC's licensees when they disagree with an NRC regulatory decision. If we had even one appeal process available, we'd exercise it. But we don't. Thus, we are not appealing the Director's Decision (DD) dated June 18, 2004, for the petition submitted by Riverkeeper and UCS on the serious containment sump safety problem at Indian Point. Instead, we are merely questioning the NRC's actions and inactions along the way to their horribly wrong decision.

The Director's Decision stated:

By letter dated October 22, 2003, the NRC informed the Petitioners that their request for the NRC to issue an Order to immediately shut down IP2 and 3 was denied because there is currently no basis to conclude that IP2 and 3 are operating unsafely. The staff noted that there are sources of safety margin in plant design, compensatory measures were taken to mitigate potential risks associated with the issue, and the occurrence of any accident, especially one that could potentially challenge the sump, is very unlikely. DD, page 3, lines 6-11

With regard to "The staff noted that there are sources of safety margin in plant design," NRC conducted an inspection at Indian Point between April 1st and June 30th 2004 – as the Director's Decision was being finalized – and cited Entergy for violating the containment sump design bases:

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, for Entergy's failure to translate the emergency core cooling system (ECCS) design basis into recirculation sump modification instructions. Specifically, Entergy added penetration cover plates and alignment collars around several small pipes that penetrated the sump deck plating, and the annular gap between the collars and pipes exceeded the sump screen size. This finding is more than minor because it potentially affected the mitigating systems cornerstone objective of assuring the availability, reliability, and capability of ECCS. IR, page iii, finding 1

Thus, the NRC staff knew, or should have known, that Indian Point's design lacked the prerequisite safety margin when they denied our petition.

With regard to "*compensatory measure were taken to mitigate potential risks associated with the issue,*" the NRC inspection at Indian Point, in fact, cited Entergy for not taking required action to mitigate known risks:

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for Entergy's failure to promptly identify and take actions to address conditions adverse to quality associated with the ECCS recirculation sump. Specifically, Entergy did not identify debris in containment and recirculation sump bypass pathways that had the potential to adversely impact ECCS during containment recirculation. IR, page iii, finding 2

Thus, the NRC staff knew, or should have known, that Entergy had not even taken actions required by federal regulations to mitigate the known risks associated with the issue when they denied our petition.

Worse, the NRC staff did no clue whether compensatory measures suggested by NRC in Bulletin 2003-01 or recommended by the Westinghouse Owners Group had been taken by Entergy when they denied our petition. Even though the NRC staff received Entergy's response to Bulletin 2003-01 by letter dated August 7, 2003, (last year, not this year), Mr. Patrick Milano, the NRC Project Manager for Indian Point, told me by phone this past week that the NRC staff deliberately waited until after denying our petition before they evaluated Entergy's response. When the NRC staff finally got around to the Entergy response, they found it incomplete. By letter dated September 30, 2004, the NRC staff requested additional information (RAI) from Entergy about their response to Bulletin 2003-01:

In Item 1 of Attachment 1 of its August 7 [2003] response, Entergy stated a lesson plan was being prepared that would present the mechanisms and potential consequences of sump clogging and that the initial training cycles would be completed by January 2004. However, the NRC staff finds that the response does not completely discuss the operator training to be implemented. RAI, question 1

POINT: The NRC staff does not yet know if Entergy's operating training is sufficient, but gave full credit for operator training when denying our petition.

The NRC staff notes that on page 14 of Attachment 1 of the Bulletin response, Entergy stated that operators are trained to look for erratic flow as a symptom of sump clogging. However, it did not state that operators take advantage of other indications, such as pump amperage fluctuations or cavitation noises that are likely to be available. Therefore, discuss all of the indications that operators are trained to monitor as being symptomatic of sump clogging. RAI question 1

POINT: Based on materials received from Entergy before we even submitted our petition, he NRC suspects that Entergy's operator training is incomplete and/or deficient, but gave full credit when denying our petition.

In Item 2 of Attachment 1, Entergy stated that it intended to participate in an Owners Group program that was being developed to assess potential changes to the generic [Westinghouse] Emergency Response Guidelines and that this information would be subsequently used to identify potential plant-specific changes to the Emergency Operating Procedures (EOPs) for IP2 and IP3. ... Provide a discussion of Entergy's plans to consider implementing this new WOG guidance. Include a discussion of the WOG-recommended compensatory measures that have been

or will be implemented at IP2 and 3 and the evaluations or analyses performed to determine which of the WOG recommended changes are acceptable at these facilities. RAI question 2a

POINT: The NRC staff does not yet know if Entergy implemented any of the recommended changes to the Emergency Operating Procedures, but gave full credit for all when denying our petition.

Provide the technical justification for those WOG [Westinghouse Owners Group] recommended compensatory measures not being implemented. RAI question 2b

POINT: The NRC staff does not know if Entergy's justification for not adopting recommended compensatory measures is valid, but gave full credit when denying our petition.

Include a detailed discussion of the procedures being modified, the operator training being implemented, and the schedule for implementing these compensatory measures. RAI question 2c

POINT: The NRC staff does not know what the nature, scope, or timing of compensatory measures, but did not let that lack of knowledge prevent them from giving full credit for compensatory measures when denying our petition.

The NRC staff had Entergy's Bulletin 2003-01 response dated August 7, 2003, before we submitted our petition dated September 8, 2003, and throughout their entire deliberations on our petition. Yet the NRC staff intentionally waited until after denying our petition before reviewing Entergy's response about compensatory measures. By waiting, the NRC staff was able to place full faith and credit in compensatory measures because they had no information to the contrary. Of course, their deliberate inaction was solely responsible for that lack of information. Had the NRC staff processed Entergy's August 7, 2003, response in a timely manner, they would have been unable to rely on compensatory measures in the Director's Decision.

The NRC staff behaved disturbingly similar to how it misbehaved in the Davis-Besse debacle. In November 2001, the NRC staff decided not to issue an order requiring FirstEnergy to shut down the Davis-Besse reactor in Ohio for safety inspections based largely on compensatory measures promised by the company. When the NRC staff examined the merits of the compensatory measures after the decision had been made, they judged them to have no safety value. The NRC staff has a very nasty habit of accepting compensatory measures on blind faith. This is unsafe and unwarranted. The NRC staff must evaluate the merits of compensatory measures BEFORE making regulatory decisions relying upon them.

In developing our petition, we relied on information about PWR containment sump vulnerabilities in a parametric study documented by the Los Alamos National Laboratory (LANL) and issued by the NRC as NUREG/CR-6771. The Director's Decision took us to task for using this "outdated" LANL information:

The NRC staff considers the risk estimates in LANL Report LA-UR-7562 to be more realistic estimates of the risk associated with the sump clogging issue. LANL Report LA-UR-02-7562, in effect, supercedes NUREG/CR-6771 since it provides updated risk estimates that utilize the latest information on pipe break frequencies and it accounts for operator actions that were not originally considered in NUREG/CR-6771. Based on the LANL risk studies, the average plant core damage frequency (CDF) calculate for the GSI-191 containment sump issue is slightly less than 1E-5 per reactor year. This generic estimate indicates that, in combination with the action taken in response to Bulletin 2003-01, it is safe for plants to continue operating while they are performing the necessary plant-specific analyses. DD, page 11, lines 6-15

So, the NRC staff criticized us in June 2004 because we had used the risk information from “superceded” NUREG/CR-6771 in our September 2003 petition. We find it extremely curious, then, that the NRC staff used the risk information from NUREG/CR-6771 – not from LA-UR-02-7562 – in its September 2004 Regulatory Analysis (RA) for Bulletin 2004-02:

In estimating the quantitative values and impacts associated with Generic Letter 2004-02, the NRC staff conducted three sensitivity analyses. The first sensitivity analysis accounts for the uncertainty in the number of operating PWRs that will require physical modifications under the generic letter. For purposes of this analysis, the NRC adopted a low estimate of 25 PWRs and a high estimate of 37 PWRs. These estimates are based on work performed by Los Alamos National Laboratory (LANL) on GSI-191.¹⁰ RA, Page 15, section 3.2.5 – footnote 10 is NUREG/CR-6771

In some bizarre nuclear hokey-pokey, the NRC staff puts NUREG/CR-6771 in and pulls it out as needed to support its position du jour. Had the NRC staff used the risk information in NUREG/CR-6771 as we did in our September 2003 petition and they did in their September 2004 regulatory analysis, they would have been unable to dismiss our logic in their June 2004 Director’s Decision.

In denying our petition, the NRC faulted us for not providing it sufficient information:

The Petitioners did not provide any detailed analysis or valid assessment to demonstrate the applicability of the generic study to support their assertion of its applicability to the actual IP2 and 3 sump design. DD, page 4, lines 13-15

Perhaps we failed to “provide any detailed analysis or valid assessment.” Whether we did or not is immaterial. What is relevant is that the NRC staff already had “detailed analysis or valid assessment” in hand and opted to overlook this information when crafting their Director’s Decision.

- NRC inspectors at Indian Point between April 1st and June 30th 2004 identified that (a) Entergy was operating Indian Point outside the design basis for the containment sumps, and (b) Entergy violated federal regulations by failing to prevent debris from residing in containment and even on the containment sump screens.
- NRC staff had received Entergy’s response dated August 7, 2003, to Bulletin 2003-01 that failed to adequately address operator training and compensatory measures.

So, it’s disingenuous for the NRC staff to fault us for failing to provide them with information when they failed to properly evaluate information they possessed. As demonstrated in the Davis-Besse debacle and again here, NRC senior management seems pre-disposed to reject any assertion that nuclear plants might be unsafe regardless of information to the contrary.

If an appeal process for Director’s Decisions existed, we’d use the aforementioned materials to fashion an appeal. Lacking one, we must accept a decision we sincerely believe to be horrendous.

We cannot appeal the Director's Decision, but we can and do appeal to you now to expeditiously resolve the PWR containment sump safety problem.

Don't allow resolution of this long-standing safety problem to slide past any more deadlines.

Don't allow your staff to accept "compensatory measures" of any type for real resolution of this safety problem at every PWR by December 2007.

Don't prolong this undue threat to millions of Americans.

Sincerely,

A handwritten signature in black ink that reads "David A. Lochbaum". The signature is written in a cursive, flowing style.

David Lochbaum
Nuclear Safety Engineer
Washington Office