

April 3, 2002

Mr. David A. Lochbaum
Nuclear Safety Engineer
Union of Concerned Scientists
1707 H Street NW, Suite 600
Washington, DC 20006-3919

Dear Mr. Lochbaum:

I am responding to your letter of January 18, 2002 in which you raised questions regarding Indian Point Unit 2 (IP2) licensee event report (LER) 2001-006-00. This LER describes the circumstances surrounding minor service water leakage from a fan cooler outlet pipe from Fan Cooler 22 discovered during the October 2001 mid-cycle maintenance outage. The NRC resident inspectors have recently completed a review of this LER as a part of our baseline inspection program and a copy of their report is attached. In your letter, you questioned Entergy's basis for not considering the adverse effects of water leaking into containment on safety-related structures, systems, and components. You also questioned why Entergy did not include in their list of similar events a 1980 event in which a large quantity of water leaked from service water piping inside the containment, and whether this omission is a violation.

As you know, while in the October 2001 outage, Entergy identified wetted lagging on the service water pipe during a routine reactor compartment tour. Our followup on this event has focused on reviewing Entergy's determination of the cause of the leak; the feasibility of the leak becoming significantly greater; extent-of-condition in the piping system; potential impact on other safety-related structures, systems, and components; and the risk significance of the issue. The NRC inspector independently reviewed the discovery of the pipe leak during the outage and Entergy's follow up actions to characterize the defect, make repairs and complete the extent of condition determination. Specifically, we reviewed photographs and operations' records, including containment sump operation during periods of past plant operation and the results of visual inspection and nondestructive examinations conducted by Entergy of the 2-inch diameter, copper-nickel pipe.

The inspector independently verified the adequacy of Entergy's engineering assessment of the postulated containment leakage, evaluated the safety significance of the pipe defect, and coordinated with NRC Region I personnel to further assess the finding within the Significance Determination Process. Entergy's conclusion that the cause of the leak was accelerated erosion due to a defect in the root pass of a weld in the pipe, is reasonable. Furthermore, the erosion was localized, and neither the flaw itself nor the minor leakage that was present had an impact on overall structural integrity of the piping or other safety-related structures, systems, and components. Also, this condition was not one that would have led to a rupture of the pipe and significantly greater leakage. A code-approved weld repair was completed prior to the end of the outage and the completed repair was observed by the inspector.

We cannot be certain whether the leak existed prior to plant shutdown for the outage. However, if it did, there is a basis for concluding that it was not significant in magnitude. For

example, during plant operation prior to the outage, Entergy determined that containment sump operations were not abnormal, and monthly reactor compartment entries did not identify signs of leakage. Additionally, there were no other indications, such as containment humidity, that there was a leak of significant magnitude. Shortly following shutdown, there was work performed in the area where the leak was later identified. Although the leak was potentially present, it was minor enough that it was not identified.

In their safety analysis, Entergy assumed the service water pipe defect could have existed during past periods of plant operations, and evaluated potential containment leakage scenarios. The results of this analysis, which were reviewed by the NRC inspector, showed minimal safety consequences. The attached copy of our recently issued inspection report, that includes inspection of the above LER, concludes that even if the leak was present during plant operation, by the Manual Chapter 0609 Significance Determination Process the issue is considered to be of very low safety significance.

NRC inspector discussions with Entergy indicate they were aware of the 1980 event, but decided not to mention it as a similar event because the recent, minor leak was substantially different from the 1980 event. The 1980 event at IP2 resulted in NRC Information Notice 80-27 and IE Bulletin 80-24. The flooding inside containment during that 1980 event resulted from significant multiple service water (SW) leaks from piping and coolers. Additionally, issues with some containment support systems contributed to the significance of that event. Those equipment issues, which were addressed following the 1980 event, included both containment sumps being inoperable, no high level alarm on sump level indicating lights, and the containment dew point indicator not indicating elevated moisture levels. Finally, the inspection programs for that type of piping are better defined today, and include provisions to do inspections in areas that did not exist in 1980.

Although Entergy could have included a reference to this previous event, NRC regulation and/or guidance would not have necessitated such action. NUREG 1022, revision 2, section 5.2.5 and 10 CFR 50.73(b)(5) states, in part, that an LER shall contain: "reference to any previous similar events at the same plant that are known to the licensee. The term "previous occurrences" should include previous events or conditions that involved the same underlying concern or reason as this event, such as the same root cause, failure, or sequence of events. The licensee should use engineering judgement to decide how far back in time to go to present a reasonably complete picture of the current problem. The intent is to be able to see a pattern in recurring events, rather than to get a complete 10 to 20 year history of the system." Based on NRC's review, we don't believe Entergy violated 10 CFR 50.9, which requires the licensee to submit accurate information to the NRC. The NRC has determined that the licensee was aware of the August 1980 event while they prepared the LER, and chose not to include it because they determined the recent leak was substantially different from the 1980 event. Lastly, Entergy should have included an assessment in their LER of the potential adverse effects of water leaking into containment on safety-related structures, systems, and components as you have pointed out. Even though there were no such adverse effects, the residents have informed Entergy of this LER shortcoming.

I trust this addresses your concerns. If you have any further questions, please contact Mr. Peter Eselgroth at (610) 337-5234.

Sincerely,

David A. Lochbaum

3

/RA/

Hubert J. Miller
Regional Administrator

Attachment: (As stated)

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