NUCLEAR INFORMATION AND RESOURCE SERVICE

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July 26, 2006

Dr. Hansraj Ashar, Senior Civil Engineer
Division of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
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11555 Rockville Pike
Rockville, MD 20852

Dr. Ashar:

I am writing on behalf of Nuclear Information and Resource Service (NIRS) and the coalition of New Jersey citizen groups who have intervened in the Oyster Creek License Renewal Application.

Please find the attached memorandum dated July 26, 2006 from Dr. Rudolf Hausler of Corro-Consulta. It regards the age management review of inaccessible and embedded regions of the Oyster Creek drywell liner and other General Electric Mark I Boiling Water Reactors. Dr. Hausler is identified as our corrosion expert in support of an Atomic Safety Licensing Board (ASLB) hearing on the contention regarding the age management review of severe corrosion of the all important containment component at Oyster Creek nuclear generating station in Lacey Township, New Jersey.

We are providing this memorandum recognizing that the current ASLB has denied interveners' efforts to introduce the corrosion of the inaccessible and embedded region of the drywell liner into the current licensing proceeding. Therefore, this issue is not addressed in the current adjudicatory process now before the NRC licensing board to consider the twenty-year license extension.

However, we do understand that the NRC staff is engaged in developing interim guidance for the age management of inaccessible and embedded regions of the General Electric Mark I Boiling Water Reactor containment component, such as Oyster Creek. With this common concern, we are submitting Dr. Hausler's analysis for incorporation into your interim guidance review.

Dr. Hausler raises a number of significant questions. We respectfully request an answer to the following questions:

1) Dr. Hausler points out in the attached memo of July 26, 2006 to Paul Gunter (NIRS) that Oyster Creek's operators following the removal of the sandbed in 1992 identified that deteriorated concrete floor conditions of the sandbed floor contributed to inadequate drainage of water from the sand bed region of the drywell liner. He further notes that the concrete floor adjacent to the embedded drywell liner was cratered with large chunks of missing concrete and channels 12 to 13 feet long, 12 to 20 inches deep and 8 to12 inches wide exposing the steel rebar. Additionally, drainage channels were missing and the drain pipes, 6 to 8 inches above the sandbed floor, were clogged Dr. Hausler asks why the concrete floor deteriorated in the first place further identifying that this damage has never been satisfactorily explained. **Has NRC determined whether or not this damage to the concrete floor was the result of corrosion of the embedded steel rebar generating internal pressures powerful enough to break up the concrete floor?**

2) **What are the safety implications for corrosion of the inaccessible steel drywell liner immediately adjacent to and embedded below the damaged and subsequently repaired concrete floor?**

3) **With regard to AmerGen assumptions that water seepage into the former sandbed region came from above, has NRC confirmed whether or not ground water has intruded from below into the Oyster Creek drywell liner region to contribute as a potential driver of crevice corrosion in the inaccessible and embedded regions of the drywell liner containment component?**

4) With regard to NRC Information Request Form dated January 24, 2006[1], it identifies at (8c) the "blistering" of coatings in the torus (or "wetwell") and the downcomers (or "vent pipes") components of the Oyster Creek primary containment structure and states that "While blistering is considered a deficiency, it is significant only when it is fractured and exposes the base metal to corrosion attack. The majority of blisters remains intact and continues to protect the base metal; consequently the corrosion rates are low."[2] It concluded that that corrosion at the "cracked" blisters was substantial, but was "contained" at the blisters that had not cracked.

Dr. Hausler raises the concern that the blistering of the containment coating on the interior of these components is, in fact, formed as a result of corrosion of the base metal underneath the coating.

Given that the torus and the downcomers are as equally important to containment integrity as the drywell liner and hence an effective aging management program, what are the corrosion rates that NRC has determined as "low" for the base metal of these additional areas of Oyster Creek's containment structure?

5) **If corrosion rates of the torus / downcomers as evidenced by coating blistering have been observed and verified by quantitative measurement can you please provide a public copy of these measurements?**

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[1] NRC Information Request Form, Aging Management Program, Topic: IWE, Rich Morante/NRC to Joh Hufnagel/AmerGen, January 24, 2006 [Petitioners' Exhibit NC 1, NIRS et al Motion for Leave to Supplement Contention, June 23, 2006]

[2] Ibid

In closing, we thank you for the transparency and clarity that staff can bring to these containment integrity and public safety concerns in light of the Oyster Creek's application to extend its operating license for the additional 20-years. We look forward to your response.

Sincerely,

Paul Gunter, Director
Reactor Watchdog Project

Enclosure:
Memorandum of Dr. Rudolf Hausler, Corro-Consulta, July 26, 2006

Cc:
Mr. Frank Gillespie, NRR/NRC
Mr. Donnie Ashley, NRR/NRC
Dr. Mario Bonaca, NRC/ACRS
The Honorable Richard Lautenberg, United States Senate
The Honorable Robert Menendez, United States House of Representatives
The Honorable Frank Pallone, United States House of Representatives
Governor John Corzine, State of New Jersey
Lisa Jackson, New Jersey Department of Environmental Protection
Jill Lipoti, New Jersey Bureau of Nuclear Protection