

October 7, 2005

MEMORANDUM TO: John R. White, Manager  
Special Inspection

James D. Noggle, Senior Inspector  
Special Inspection

FROM: A. Randolph Blough, Director **/RA/**  
Division of Reactor Safety

SUBJECT: SPECIAL INSPECTION CHARTER - INDIAN POINT UNIT NO. 2  
(UPDATED)

This memorandum updates my memorandum of September 20, 2005, instructing you to complete a special inspection at Indian Point 2.

Background:

Indian Point Unit 2 has been conducting excavation of the Fuel Storage Building (FSB) Loading Bay adjacent to the south wall of the Spent Fuel Pool (SFP) in preparation for installation of a gantry crane required to complete the Independent Spent Fuel Storage Installation Project. In early September while removing material along the south wall of the SFP, several 1/64" wide cracks were found. Two of these cracks exhibited wetness along the seams. Collected leakage from these seams has been small; recently Entergy staff efforts to collect leakage have yielded less than a pint a day. Subsequently, Entergy initiated actions to assess this condition and informed the NRC.

The moisture collected from these cracks and immediately adjacent soil have been analyzed and found to have the radiological characteristics of spent fuel pool water. However, to date, the licensee has been unable to establish if the material is due a previous leak that was detected in the early 1990's and subsequently repaired, or is of more recent origin.

On October 5, 2005 Entergy reported that some tritium activity had been identified in one on-site ground monitoring well. Three other monitoring wells showed no detectable activity and other samples were being analyzed.

Information and observations to date continue to suggest that the condition does not currently pose any actual health and safety concern or adverse impact to the environment. On September 20, NRC Region I had deemed it prudent to conduct a special inspection since the nature and extent of the condition are not yet completely known, and in view of the technical complexity of the issue. This memorandum updates the charter to account for new information learned since then.

This Special Inspection was initiated in accordance with NRC Management Directive 8.3, "NRC Incident Investigation Program." The purpose is to better understand the source of the radiological contamination, the cause, the extent of condition, and any potential impact on spent fuel pool integrity.

The inspection will be performed in accordance with the guidance of NRC Inspection Procedure 93812, "Special Inspection," and the inspection report will be issued within 45 days following the exit meeting for the inspection.

#### Objectives of the Special Inspection:

The objectives of this Special Inspection are to evaluate the circumstances associated with the conditions described above. The objectives and inspection tasks are amplified in the attached charter. In the event that information is determined that the nature of these conditions are significantly different than currently understood, i.e., the circumstances and conditions may be beyond the scope of a Special Inspection, the Lead Inspector will immediately inform the Special Inspection Manager.

#### Team Composition:

The team will be:

Manager:	John R. White, Chief, Division of Reactor Safety Plant Support Branch 2
Lead Inspector :	James D. Noggle, Senior Health Physicist, DRS
Members:	Suresh K. Chaudhary, Health Physicist, DNMS (part-time) Mark Cox, Senior Resident Inspector, IP2 (part-time) Chris Long, Resident Inspector, IP2 (part-time) Robert Bores, Health Physicist, ORA (part-time) James Kottan, Health Physicist, DNMS (part-time) Dr. Richard Codell, Hydrologist, NMSS (part-time)

#### Schedule:

On-site inspection effort was conducted following identification of the cracks. The decision for a special inspection was made on September 20, 2005. The licensee's excavation activities and response efforts will be monitored by resident inspectors and the Team Leader, and other regional inspectors, as appropriate. Additional on-site inspection effort will be conducted to complete the scope of the inspection.

Questions regarding the objectives of this Special Inspection may be directed to Mr. John R. White, Chief, Division of Reactor Safety-Plant Support Branch 2 (610-337-5114).

Attachment: Special Inspection Team Charter - Indian Point Unit 2

Distribution:

- A. Blough, DRS
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OFFICE	RI:DRS	RI:DRS	RI:DRS		
NAME	Jwhite (JRW)	Bholian/DJackson	Rblough (ARB)		
DATE	10/07/2005	10/07/2005 (BEH)	10/07/2005		

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Special Inspection Charter  
Indian Point Unit 2  
Spent Fuel Pool Leak

The objectives of the inspection are to determine the facts and assess the conditions surrounding the Indian Point Unit 2 Spent Fuel Pool (SFP) leak identified in September 2005. Specifically the inspection should:

1. Develop a Sequence of Events associated with the Unit 2 spent fuel pool relative to its construction, previous history of leaks, pool modifications, and present leak identification and management activities.
2. Assess the adequacy of Entergy's determination of the source and cause of leakage, extent of condition review, operational experience usage, and corrective actions for the condition. Independently assess new information obtained during Entergy's investigation, including the discovery of tritium contamination in an on-site monitoring well on October 5, 2005.
3. Evaluate Entergy's assessment of the risk significance of the condition, and evaluations of structural integrity and radiological impact.
4. Evaluate current mitigation strategy for the SFP leak.
5. Evaluate repair strategy and time line for the SFP leak.
6. Evaluate the licensee's plans, both near-term and long-term, for assessing SFP liner integrity, including any relevant design considerations.
7. Review the effectiveness of Entergy's efforts to monitor and control the water inventory used in the Unit 1 fuel and equipment storage pools.
8. Identify any issues requiring additional review for generic applicability.
9. Document the inspection findings and conclusions in a special inspection report in accordance with Inspection Procedure 93812 within 45 days of the exit meeting for the inspection. Periodic updates will be provided as the inspection is ongoing.