

**From:** Michael Webb  
**To:** internet:kkingsl@entergy.com  
**Date:** 3/26/04 11:36AM  
**Subject:** Re: Spent Fuel Storage at Indian Point 1

INDIAN POINT 1 #13  
50-003  
Project Manager: Michael Webb

Kevin,  
For your consideration, I received the following additional comments regarding Unit 1 spent fuel storage.  
Regards,  
Mike Webb  
NRR Project Manager for Indian Point 1

>>> 03/25/04 3:17PM >>>

Without doing a lot of research, I would have the following issues with the proposal:

Indian Point 1 is a Part 50 licensee, and the General Design Criteria are written for wet storage. What design requirements would apply to dry storage other than Part 72? Part 72 requires confinement, shielding, cooling, and retrievability - all of which are satisfied at least in part by water for pool storage configurations.

Confinement - water captures potential radioactive releases from the fuel.

Shielding - Part 20 requirements to maintain occupational exposure ALARA; it's hard to argue that water shielding is not reasonably achievable in a pool.

Cooling - air cooling likely okay for 30 year old fuel, but water is more effective.

Retrievability - long-term exposure to oxidation in an air environment may threaten the integrity of the cladding; this is part of the reason dry casks are filled with inert gases.

In addition, Zirconium alloy cladding is flammable in air at high enough temperatures. This would be an NSIR issue if cooling under credible accident conditions remained acceptable, but it would be difficult to justify even the threat of low level releases from old fuel.

>>> 03/24/04 03:22PM >>>

With respect to the proposal to drain the IP-1 spent fuel pool and allow dry storage of the fuel assemblies in the spent fuel pool, we think that the current licensing basis for the facility would govern what the licensee plans to do. They would need to look to the FSAR which would describe the design and operation of the spent fuel pool and to the license. What they plan to do may require a license amendment if a license condition or tech spec is involved or an analysis under 50.59. I'm told that the regulations that govern fuel are 50.68 and GDC 61 and 62. If these are implicated, an exemption may be required.

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**From:** Michael Webb

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