

# Insights to the Future of High Level Waste Management:

## A State's Perspective on the Storage of Spent Nuclear Fuel, the Waste Confidence Process & Site-Specific Impacts and Mitigation Alternatives

March 14, 2013  
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Rockville, MD

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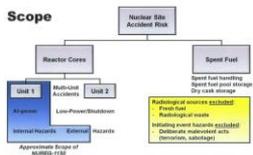
### High Density Spent Fuel Pools

- Site-Specific Impacts
- Site-Specific Alternatives & Mitigation Measures

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### Option 3: Site Level 3 PRA



Source: Figure taken from slides prepared by NRC Staff: Nuclear Regulatory Commission Office of Nuclear Regulatory Research, Severe Accidents and Options for Proceeding with Level 3 PRA Activities, ML112098927 (July 26, 2011).

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**Consideration of Other Site Radiological Sources**

To be complete, estimation of total site accident risk should also include an assessment of the risk from accidents involving other site radiological sources, to include spent nuclear fuel.

Source: Nuclear Regulatory Commission, Options for Proceeding with Future Level 5 Probabilistic Risk Assessment Activities, SECY-11-0035, at 6, ML11060A042 (July 7, 2011).

and site-specific mitigation measures and alternatives

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Fukushima Daiichi Summary Display	
Priority	Unit
STATUS AS OF 06:00 EDT (10:00 Local) - 03/16/2011	
4	<p><b>Core Status:</b> Severe core damage (based on the amount of hydrogen generated). Radiation has been detected. Possible RCD breach. (DC) Sea water injection to RPV.</p> <p><b>Containment:</b> Primary apparently intact. Secondary Containment destroyed.</p> <p><b>Spent Fuel Pool:</b> No information on SFP status.</p>
3	<p><b>Core Status:</b> Severe core damage likely. Radiation release has occurred. Possible RCD breach (DC). Sea water injection to RPV.</p> <p><b>Containment:</b> Primary apparently intact. Secondary Containment lost.</p> <p><b>Spent Fuel Pool:</b> No information on SFP status. Some reports attribute involvement coming from the SFP.</p>
2	<p><b>Core Status:</b> Severe core damaged (based on the amount of hydrogen generated). Radiation has been detected. Possible RCD breach. (DC) Sea water injection to RPV.</p> <p><b>Containment:</b> Primary apparently intact. Secondary Containment destroyed.</p> <p><b>Spent Fuel Pool:</b> May be in the same condition as Unit 4 SFP below. <b>Alternate SFPs are available for Spent Fuel Pools. Secondary Containment destroyed. Radiation release detected. No SFP status information available.</b></p>
1	<p><b>SFP status unknown. No SFP status information available.</b></p>
5	<p><b>Shielding status:</b> January 9, 2011. Core located in RPV. RPV CRFP levels lower than normal and decreasing. Unit 4 DSD providing make-up water to Unit 4 (AEA).</p>
6	<p><b>Shielding status:</b> August 14, 2011. Core located in RPV. RPV CRFP levels lower than normal. Unit 4 DSD providing make-up water to Unit 4 (AEA).</p>

Source: NRC ADAMS Accession No. ML12080A196 (frame 259 of 782) (placed on public ADAMS on March 23, 2012) (highlight added).

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Site-Specific Impacts Related to On-Site Storage of Spent Nuclear Fuel at the Indian Point Facilities, Westchester County, NY

- 24 miles from New York City
- 6 miles from New York City reservoir

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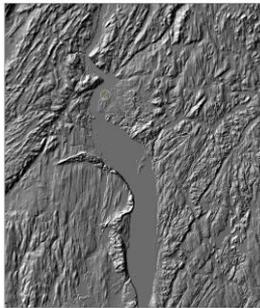
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