

SPENT FUEL

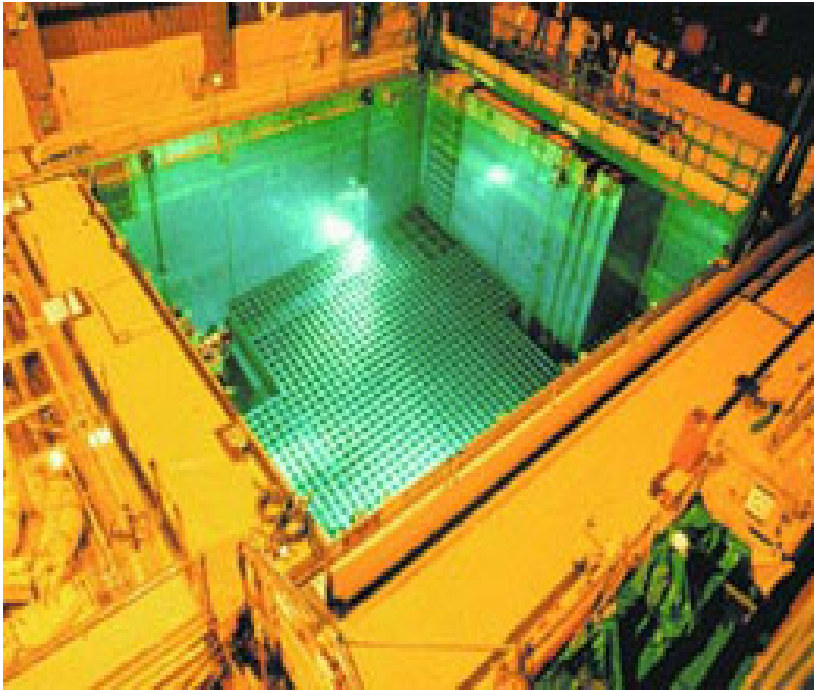
Risks and Recommendations

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Duxbury Nuclear Advisory Committee**

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POOL



CASKS



RISKS - SPENT FUEL POOL

PROBLEM	SOLUTION	ACTION
<p><u>FUEL POOL IS OVERCROWDED</u></p> <p>GREATER FIRE RISK</p> <p>SEVERE RESULTS</p> <p>\$488 Billion damages</p> <p>24,000 latent cancers</p>	<p><u>REDUCE AMOUNT OF SPENT FUEL TO ORIGINAL DENSITY</u></p> <p><u>USE ORIGINAL OPEN FRAME DESIGN</u></p>	<p><u>SUPPORT STATE LEGISLATION (SD 46) & PLYMOUTH ORDINANCE TO TAX SPENT FUEL IN POOL.</u></p> <p>Fuel NOT owned by the Government - Tax not pre-empted</p>

An Act Establishing Fee For Storage Spent Nuclear Fuel In Pools (SD 46)

Annual Fee: \$10,000 per assembly in pool; 30% to Plymouth

<u>Year</u>	<u>Assemblies in Pool</u>	<u>\$ to Plymouth</u>
2015-32	3,000 (average)	\$9,000,000
2033-89	3,300 (approximate)	\$9,900,000

RISK CASKS

CASKS ARE SAFER but...

EACH CASK = $\frac{1}{2}$ CHERNOBYL Cs-137 RELEASE

**CASKS MAY BE HERE FOR
300 YEARS**

RISK- SECURITY

PROBLEM	SOLUTION	ACTION
SECURITY	<ul style="list-style-type: none">•DISPERSE & BERM•PUT CASKS INSIDE BUILDING	NEGOTIATION ADVOCACY RULEMAKING



RISK – CASK FAILURE

PROBLEM	SOLUTION	ACTION
STRESS CORROSION CRACKING	MORE INSPECTION CASKS IN BUILDING EXTRA OVERPACKS ON-SITE	NEGOTIATION ADVOCACY RULEMAKING

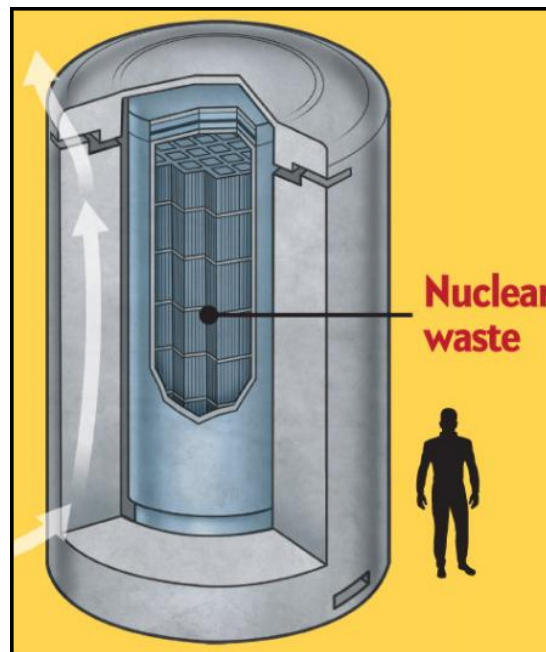
Dr. Kris Singh, CEO, Holtec International :

"...It is not practical to repair a canister if it were damaged... You will have... millions of curies of radioactivity coming out of canister

...A canister that develops a microscopic crack (all it takes is a microscopic crack to get the release), to precisely locate it... And then if you try to repair it (remotely by welding)...the problem with that is you create a rough surface which becomes a new creation site for corrosion down the road. I don't advocate repairing the canister."

RISK – CLOGGED CAST VENTS

PROBLEM	SOLUTION	ACTION
VENTILATION CLOGGED→ OVERHEATING CANISTER	CASKS IN A BUILDING TO PROTECT AGAINST ICE, SNOW, MUD, BIRD NESTS	NEGOTIATION ADVOCACY RULEMAKING



RISK – MONITORING

PROBLEM	SOLUTION	ACTION
MONITORING LIMITED - ONLY RADIATION - NOT MONITORED 24/7 NOTIFICATION AFTER CANISTER LEAKS	MONITOR FOR HELIUM, TEMPERATURE, RADIATION heat/helium provide early warning	NEGOTIATION ADVOCACY RULEMAKING

RISK – PAD LOCATION

PROBLEM	SOLUTION	ACTION
<u>TOO CLOSE TO SEA LEVEL</u> CLIMATE CHANGE → RISING SEA LEVEL-STORM SURGE	MOVE TO HIGHER GROUND	NEGOTIATION ADVOCACY

RISK - TRANSFER OF FUEL FROM POOL TO DRY CASKS

CASKS WEIGH 40 TONS = 7 ELEPHANTS



RISK – FUEL TRANSFER

PROBLEM	SOLUTION	ACTION
<u>CASK DROP</u> IN POOL ON REACTOR BLDG. FLOOR	<u>STOP</u> <u>OPERATION</u> DURING TRANSFER	NEGOTIATION ADVOCACY RULEMAKING

RISK – EARTHQUAKE

PROBLEM	SOLUTION	ACTION
<u>OUTDATED</u> SEISMIC ANALYSIS	<u>UPDATE</u> SEISMIC ANALYSIS - REPLACE EQUIPMENT THAT DOES NOT QUALIFY	NEGOTIATIONS ADVOCACY ENFORCEMENT PETITION