

# Pilgrim Nuclear Power Station

*Where are we now  
Plans for the Future  
Outstanding Questions*

---

Mary E. Lampert

October 10, 2019

# Timeline

---

**August 1, 2018** – Entergy announces agreement to sell Pilgrim to Holtec

---

**November 16, 2018** – Entergy and Holtec file License Transfer Application and PSDAR.

---

**February 20, 2019** – Massachusetts Attorney General and Pilgrim Watch file Petitions to Intervene in License Transfer Application proceeding. Each made two contentions: Insufficient Funds and No Site Analysis.

---

**May 31, 2019** – Pilgrim stops generating electric power.

---

**July 17, 2019** – Pilgrim Watch files third contention: NRC must determine whether Holtec International (Holtec), SNCL-Lavalin (SNCL), Holtec Decommissioning International (HDI), and Comprehensive Decommissioning International (CDI) are trustworthy and reliable.

---

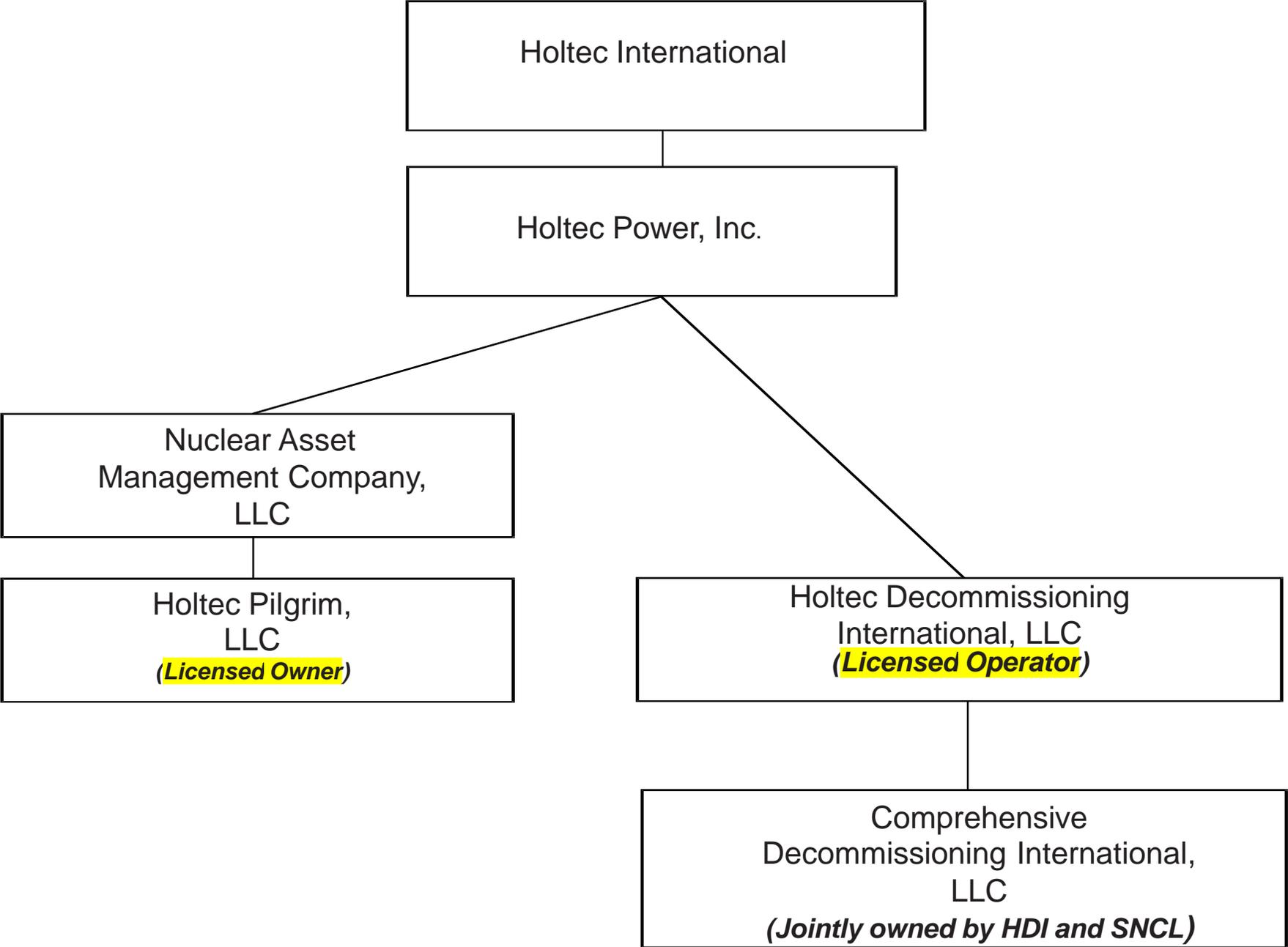
**August 22, 2019** – NRC approves license transfer and grants Holtec permission to use decommissioning trust fund for spent fuel storage and site restoration.

---

**August 26, 2019** – Sale of Pilgrim to Holtec is completed.

---

**September 3, 2019** – Massachusetts Attorney General and Pilgrim Watch file motions to stay effectiveness of (i) license transfer and (ii) order allowing use of decommissioning trust fund for non-decommissioning purposes.



## Holtec's Planned Decommissioning Schedule

Move spent nuclear fuel from spent fuel pool into dry casks, and store dry casks in ISFSI (Interim Spent Fuel Storage Installation)

2019–2021

Decommission Pilgrim, i.e., remove or decontaminate equipment and structures, and restore site to a level that permits termination of NRC licenses. Does not include decommissioning ISFSI.

2019–2025

Store spent nuclear fuel in ISFSI. Assumes that, by end of 2062, DOE will have removed all dry casks from the Pilgrim site and sent them to an interim or permanent storage site.

2019–2062

Decommission ISFSI.

2063

# Outstanding Questions

What will the NRC do with respect to the many pending petitions and motions, and when?

How “clean” is Pilgrim?

What about spent fuel?

Is there enough money?

- For decommissioning?
- To clean-up the site?
- To store spent fuel after 2062?

What will Holtec do to protect Plymouth and other towns until the site is cleaned and all spent fuel has been removed from the site?

# How Clean is Pilgrim

**Holtec assumes that the Pilgrim site is “clean.”**

- It has not characterized the site to identify and quantify radiological and hazardous waste.
- Its planned site restoration costs (\$40.1 M) include only the “costs associated with conventional dismantling, demolition and removal from the site of structures and systems.”

**The Attorney General and Pilgrim Watch know that the site is not clean.**

- Contaminated radiological and hazardous materials have been buried on site.
- Pilgrim has a history of released radioactive and hazardous contamination.

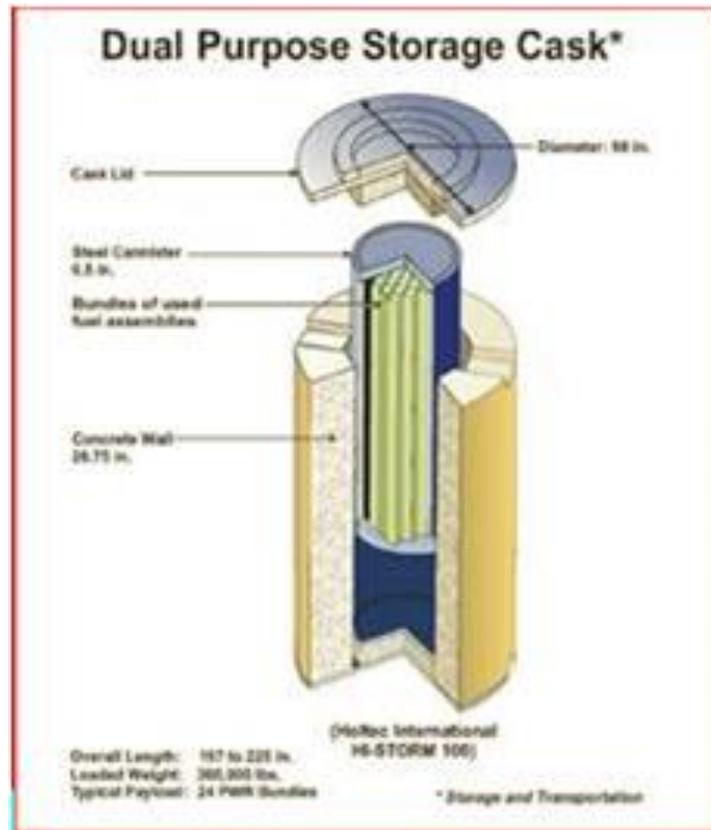
## Radiological Clean Up Standard

DPH Proposed:  
 All pathways - <10 mrem/yr. / < 4 mrem/yr.  
 Ground water sources drinking water

Achievable

Exposure-millirem/year	Lifetime Cancer Incidence Risk	Cleanup Standards
10 millirem/year	70/100,000 (0.7/1,000)	Current Massachusetts Limit for Unrestricted Use for its licensees- <u>does not apply to Pilgrim</u> , a NRC Licensee
25 millirem/year	175/100,000 (1.75/1,000)	NRC Limit for Unrestricted Use site
100 millirem/year	700/100,000 (7/1,000)	NRC & Mass. Limit for Restricted Use site
500 millirem/year	3,500/100,000 (35/1,000)	
<b>Cancer Incidence Risk</b> resulting from whole body exposure is about <u>2 times mortality risk</u>		<b>Reproductive disorders</b> occur at lower levels of radiation exposure than cancer

# What About Spent Fuel?



# Spent Fuel - Issues

---

## How long will the spent fuel remain at Pilgrim?

Pilgrim's spent fuel will be moved from the spent fuel pool into 61 (Holtec Hi-Storm 100's) casks, each holds 68 fuel assemblies. Emptying the remaining 2,958 assemblies in the pool will take 2-3 years. The dry casks will remain at Pilgrim for an indefinite period of time until the Department of Energy accepts them and moves them to some off-storage site. No one knows when such a site will be built or available.

---

**Location-Security:** The ISFSI (Independent Spent Fuel Storage Installation) is being relocated uphill, 362' from Rocky Hill Road. The casks are lined up vertically on the pad. There is no building around the ISFSI or physical barrier to prevent line-of-sight attack.

---

**Casks- Corrosion:** Casks are half-inch thick stainless- steel canisters- subject to corrosion. No currently available technology to inspect, repair, or replace them if they leak.

# Is There Enough Money?

There is now about \$1.03 billion in the decommissioning trust fund.  
Holtec's PSDAR cost estimate is \$1.134 billion

Decommissioning -  
\$592.6 million

Spent Fuel  
Management - \$501.5

Site Restoration –  
\$40.1 million

Holtec's cost estimates make incorrect assumptions. Examples:

Decommissioning costs will not  
increase faster than inflation.

No spent fuel management costs  
after 2062.

Monies recovered from DOE for spent fuel management costs will not go back into the DTF to refurbish what was taken out. The NRC incorrectly assumes that its regulations ensure that Holtec, a limited liability company with no parent guarantee, will make-up any funding shortage.

# What about the state, Plymouth and Other Towns?

Since 1972, Pilgrim's owner has given

- DPH money to pay for DPH's radiation monitoring and emergency management costs
- The state, Plymouth and other towns in the EPZ - money to pay their radiological emergency planning costs

Starting in April 2020

- Offsite Emergency planning effectively disappears 10 months after reactor defueled
- DPH and MEMA will receive no funds
- Towns in the EPZ - Plymouth will receive reduced funds; other towns will receive none

Plymouth's demands Have Not Been Met

# What Can You Do?

**ESTABLISH CITIZEN ADVISORY BOARD**

[HTTPS://WWW.MASS.GOV/EEA/NDCAP/](https://www.mass.gov/eea/ndcap/)

MEET WITH GOVERNOR'S STAFF, AGO,  
FEDERAL/STATE/LOCAL ELECTED OFFICIALS

READ ALL DOCUMENTS-  
PSDR,LTA,EXEMPTIONS

INTERVENE

PUBLIC EDUCATION

# Resources

- NRC Practice and Procedures Digest <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0386/index.html>
- Pilgrim Watch Motion to Intervene & Request for Hearing (ML19051A019)
- Pilgrim Watch Motion to Supplement Request (ML191129A473)
- Pilgrim Watch Motion to File New Contention (ML19197A330)
- Commonwealth Motion to Intervene & Request for Hearing (ML19051A019)
- Applicant Answer Opposing Pilgrim Watch Motion to Intervene (ML19077A235)
- Pilgrim Watch Reply Applicant Answer (ML19091A189)
- Applicant Answer Opposing Commonwealth (ML19077A232)
- Holtec PSDAR (ML18320A040.pdf)
- License Transfer Application (ML18333A240.pdf)

Thank you!

Questions & Discussion

---

**Pilgrim Watch: [www.pilgrimwatch.org](http://www.pilgrimwatch.org)**

[mary.lampert@comcast.net](mailto:mary.lampert@comcast.net)