



PFAS

Pilgrim Nuclear Power Station (PNPS)

July 25, 2022

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The business of sustainability



PFAS

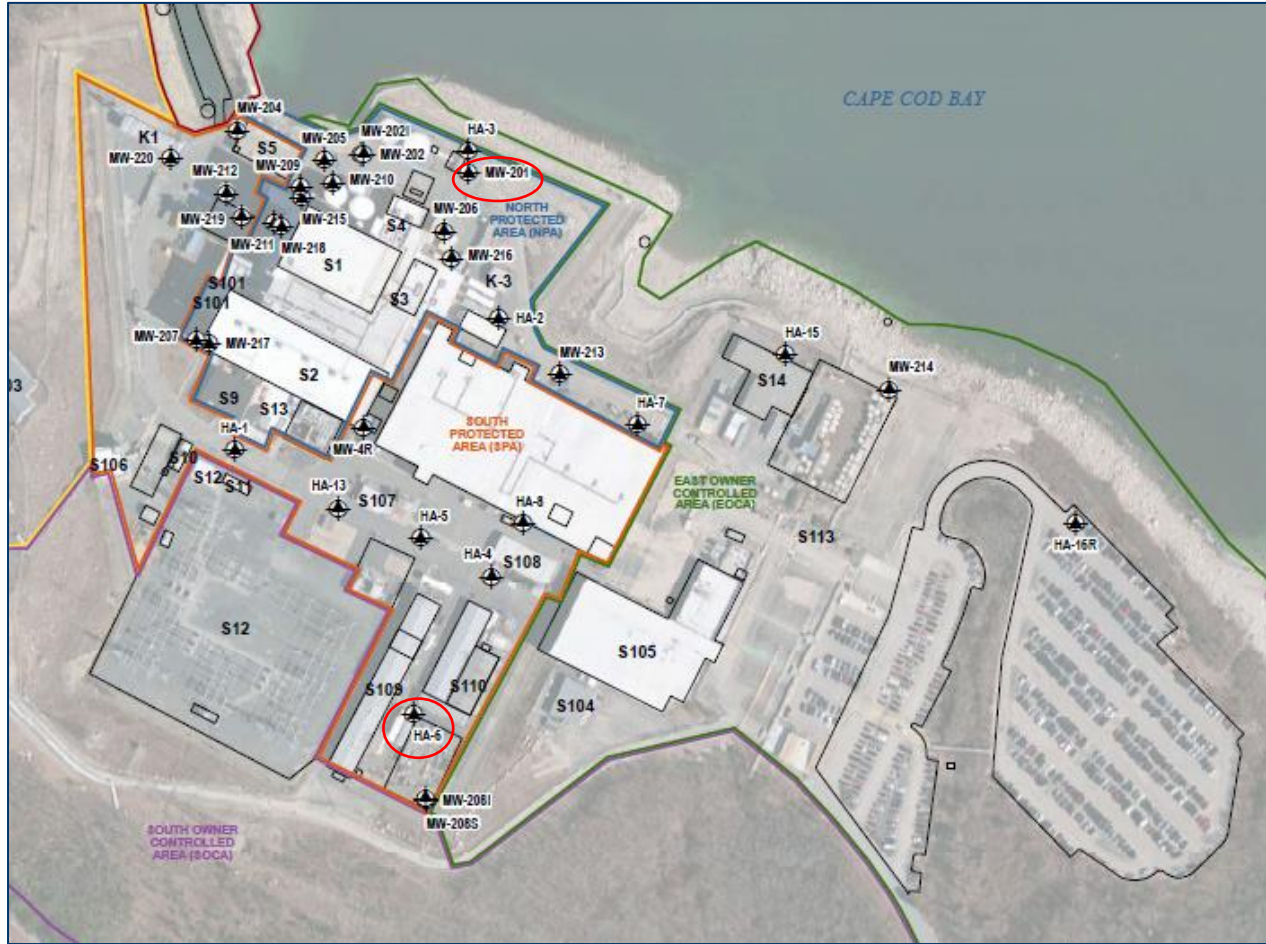
- Per- and Polyfluoroalkyl Substances (PFAS)
 - Family of synthetic organofluorine chemical compounds
 - Multiple fluorine atoms attached to an alkyl
 - Very resistant to breakdown, migrate easily, and bioaccumulate
- Uses & Sources
 - Used in a wide range of consumer and industrial processes and products since the 1940s
 - Processes: production of coatings, plastics, polymers, oil & water-repellent finishes
 - Products: Clothing, upholstery, paper, carpets, non-stick cookware, textiles
 - Firefighting foams, such as Aqueous Film Forming Foams (AFFF)
- Exposure
 - Most common exposure to humans is through the consumption of drinking water from public or private water supplies.

Regulatory Context

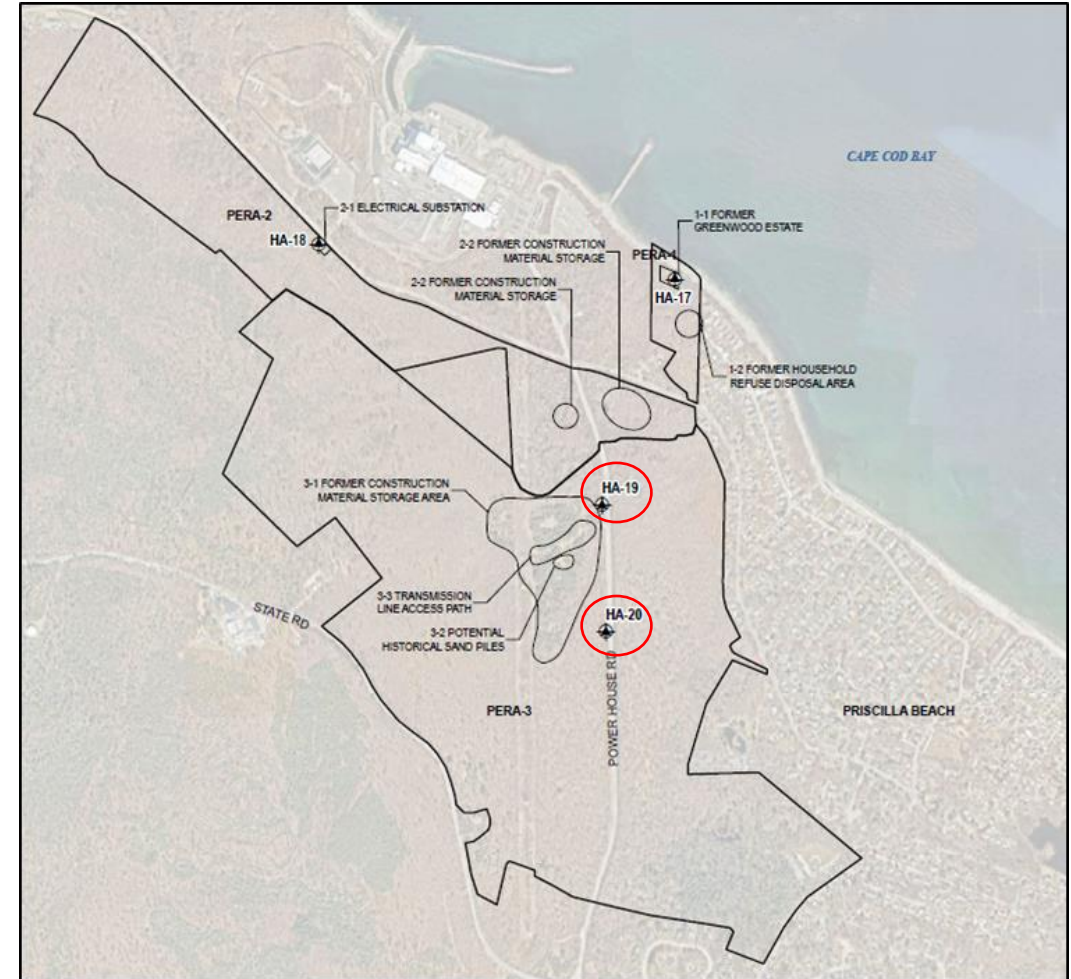
- PFAS are considered hazardous materials under the Massachusetts Contingency Plan (MCP) because of adverse health effects.
- Potential risks posed by PFAS PFAS contamination at a disposal site must be addressed under the MCP.
- MassDEP has established a drinking water standard (20 ppt), as well as Reportable Conditions for PFAS.
- A release indicated by the measurement of PFAS at or above Reportable Concentrations and/or Reportable Quantities requires notification to MassDEP.
- Groundwater at site is classified GW-1 as site is situated over an EPA classified Sole Source Aquifer indicating current and future use as a water supply. Currently no drinking water withdrawals in the area.

	RQ (pounds)	RCGW-1 mg/L	RCGW-2 mg/L	RCS-1 mg/kg	RCS-2 mg/kg
Σ 6 PFAS (listed below)	-	2E-05 (20 ng/L or ppt)	-	-	-
PERFLUORODECANOIC ACID (PFDA)	1	See Σ6 PFAS	40	3E-04 (300 ng/kg)	0.4
PERFLUOROHEPTANOIC ACID (PFHpA)	1	See Σ6 PFAS	40	5E-04 (500 ng/kg)	0.4
PERFLUOROHXANESULFONIC ACID (PFHxS)	1	See Σ6 PFAS	0.5	3E-04 (300 ng/kg)	0.4
PERFLUORONONANOIC ACID (PFNA)	1	See Σ6 PFAS	40	3.2E-04 (320 ng/kg)	0.4
PERFLUOROOCETANESULFONIC ACID (PFOS)	1	See Σ6 PFAS	0.5	2E-03 (2,000 ng/kg)	0.4
PERFLUOROOCETANOIC ACID (PFOA)	1	See Σ6 PFAS	40	7.2E-04 (720 ng/kg)	0.4

PFAS in Groundwater at PNPS



Industrial Parcel: HA-6 & MW-201



Perimeter Area 3: HA-19 & HA-20