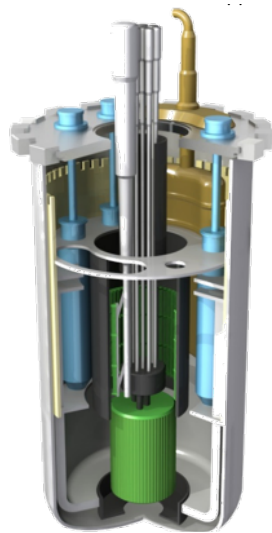
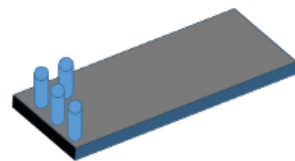


VTR Spent Fuel Treatment and Storage

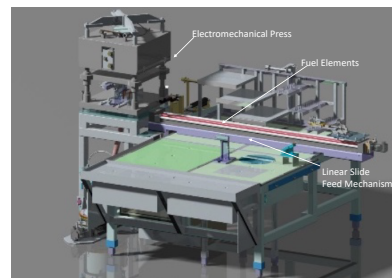


At the end of their useful lives in the reactor core, spent fuel assemblies would be stored within the reactor vessel for up to a year. This allows the fuel to cool and for radioactive elements to decay. Fuel could be stored in the outer ring of shield assemblies or in storage slots above the core.



Upon removal from the reactor core, spent fuel would be cleaned and placed into casks and transferred to the spent fuel pad.

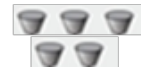
The spent fuel would be stored at the pad for at least 3 years for further cooling and radioactive decay. This makes the fuel easier and safer to handle during the spent fuel treatment process.



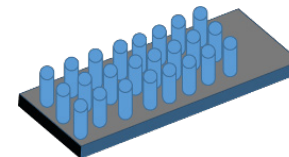
The cooled spent fuel would be transferred in a cask to the spent fuel treatment facility.

Here, individual fuel pins would be mechanically separated from the fuel assembly. The fuel pins would be chopped into smaller pieces, melted, and combined with a diluent (most likely the stainless steel scraps from the driver fuel assembly) to make a spent fuel ingot.

Spent fuel ingots

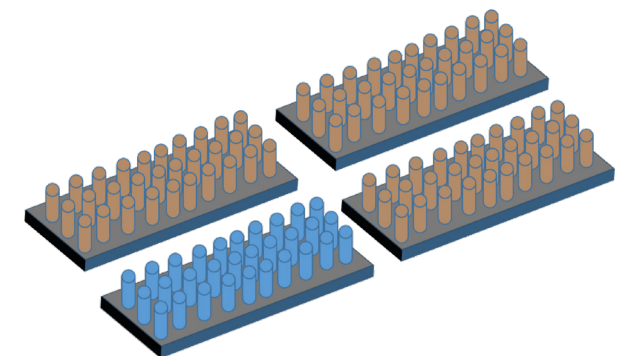
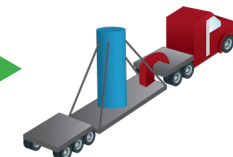


All spent VTR fuel would be converted to spent fuel ingots. No uranium or plutonium would be recovered from spent VTR fuel.



Spent fuel ingots would be placed in a storage cask and transferred back to the spent fuel pad.

The casks of spent fuel ingots would be temporarily stored at the spent fuel pad, pending availability of an offsite DOE or commercial storage or disposal facility.



When an offsite facility becomes available, either an interim storage facility or a permanent geologic repository, the spent fuel would be transported to that facility in accordance with its acceptance program.