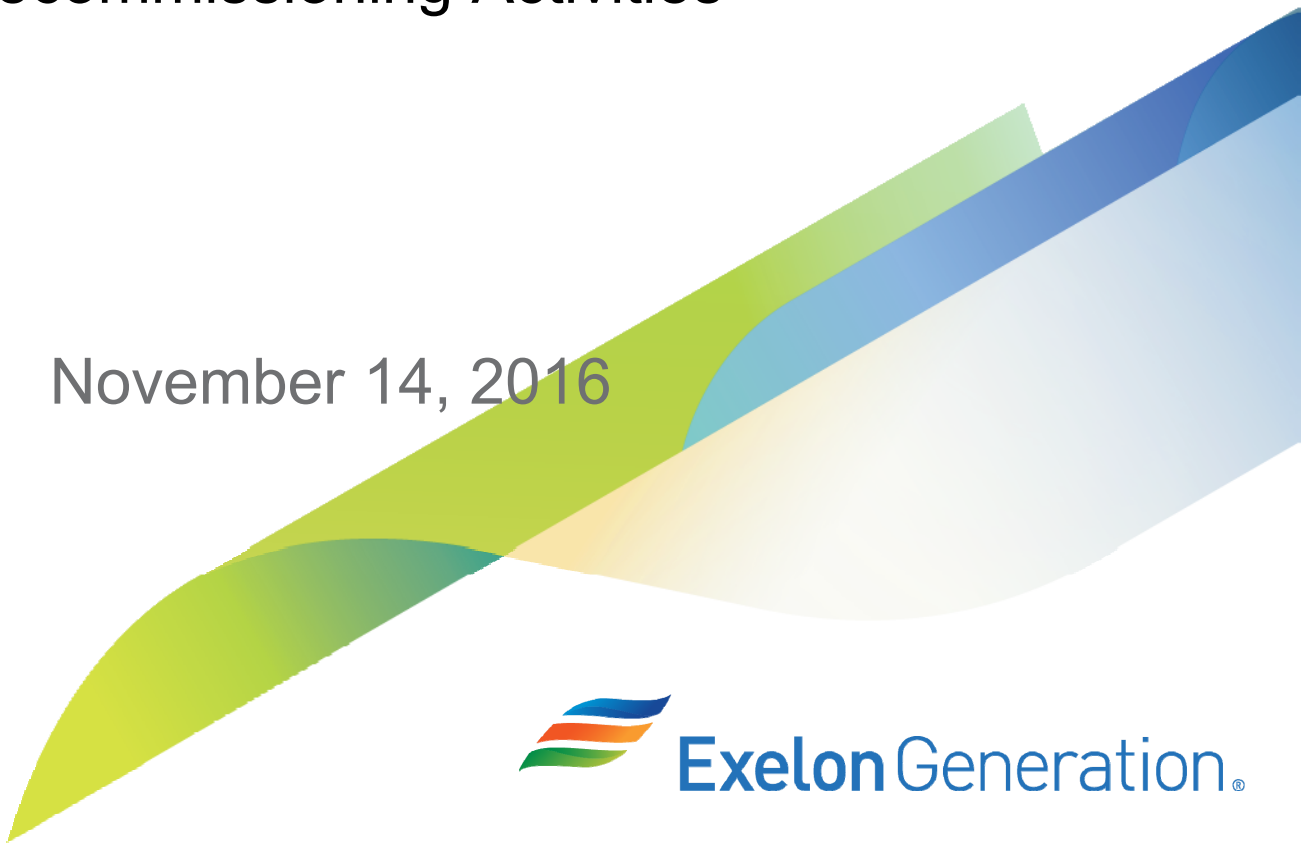
Part 37 Applicability to Reactor Vessels and associated Structures, Systems, and Components while in SAFSTOR Awaiting Active Decommissioning Activities

November 14, 2016



Exelon Generation®

Issue Summary

- Exelon announced closure of Clinton by June 1, 2017, Quad Cities 1 & 2 by June 1, 2018 and Oyster Creek by the end of December 2019

- Exelon plans on maintaining control rod blades, fuel support pieces, and possibly other non-SNM reactor components within the reactor vessel at sites in SAFSTOR awaiting decommissioning activities.

- Exelon needs to verify our understanding on the applicability of Part 37 to reactor vessels and their associated components/contents during the time between permanent shutdown /fuel removed to active dismantling of the reactor and associated structures, systems, and components (SSC).

Regulation Applicability and Review

- Exelon reviewed the appreciable amount of guidance provided within NUREG-2155, three sets of NRC published Q&A, EGM-14-001, and TI 2800-041.

- These documents appear to provide a sound basis for the applicability of Part 37 to reactor vessels and their associated SSC's for a decommissioning plant.

- The NRC previously acknowledged the inherent security of category 1 or category 2 quantities of radioactive material associated with large components or stored within robust structures when it issued Enforcement Guidance Memorandum (EGM) EGM-14-001.

Summation / Clarity Needed

- Exelon plans on maintaining control rod blades, fuel support pieces and possibly other non-SNM reactor components within the **closed (1)** reactor vessel at sites in SAFSTOR awaiting decommissioning activities.

- Delaying the removal of these components provides greater safety during their eventual removal and transport as waste material due to the decreased activity level due to natural decay of the radioactive materials.

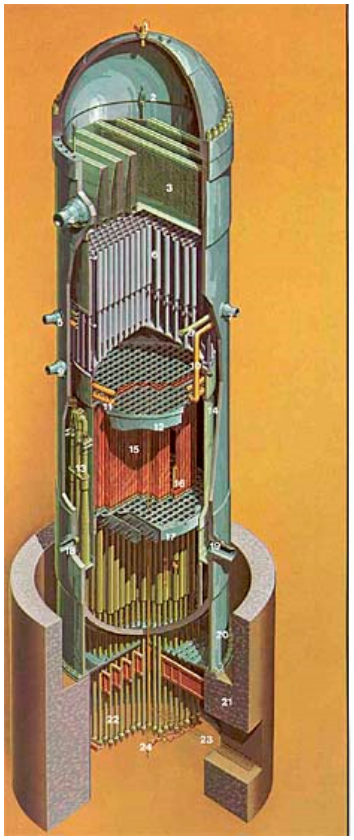
- Reactor vessel walls are nominally 8” thick. Reactor vessel heads typically weigh in excess of 100 tons. Access to the activated materials would require either head removal or through wall breaching.

(1) Closed means the vessel head is in place and no open pathways exist to enter the vessel.

Summation / Clarity Needed

- Based upon the inherent security provided by both the size and robust nature of the structure, we believe that the Part 37 is not applicable to the reactor vessel and associated Structures, Systems, and Components while the reactor remains in SAFSTOR awaiting active decommissioning activities

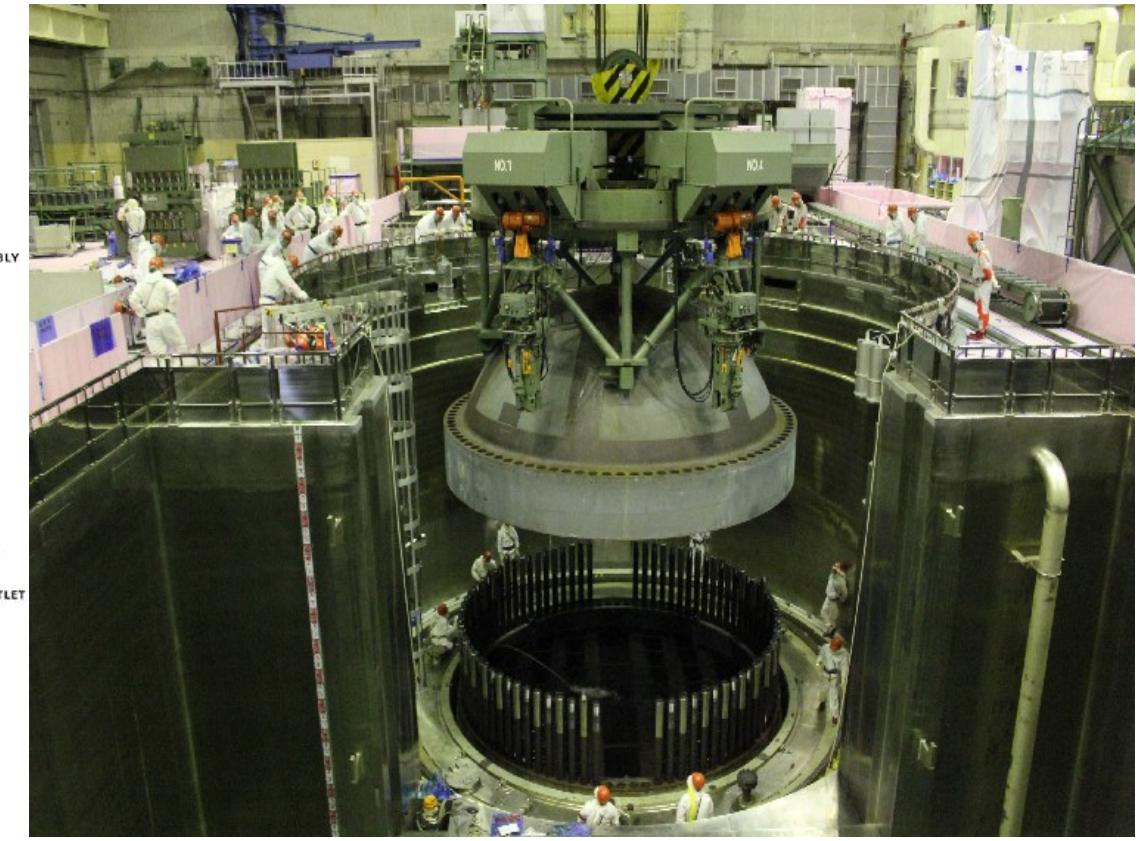
Illustrations



BWR/6
REACTOR ASSEMBLY

1. VENT AND HEAD SPRAY
2. STEAM DRYER LIFTING LUG
3. STEAM DRYER ASSEMBLY
4. STEAM OUTLET
5. CORE SPRAY INLET
6. STEAM SEPARATOR ASSEMBLY
7. FEEDWATER INLET
8. FEEDWATER SPARGER
9. LOW PRESSURE COOLANT INJECTION INLET
10. CORE SPRAY LINE
11. CORE SPRAY SPARGER
12. TOP GUIDE
13. JET PUMP ASSEMBLY
14. CORE SHROUD
15. FUEL ASSEMBLIES
16. CONTROL BLADE
17. CORE PLATE
18. JET PUMP / RECIRCULATION WATER INLET
19. RECIRCULATION WATER OUTLET
20. VESSEL SUPPORT SKIRT
21. SHIELD WALL
22. CONTROL ROD DRIVES
23. CONTROL ROD DRIVE HYDRAULIC LINES
24. IN-CORE FLUX MONITOR

GENERAL ELECTRIC



Questions ?