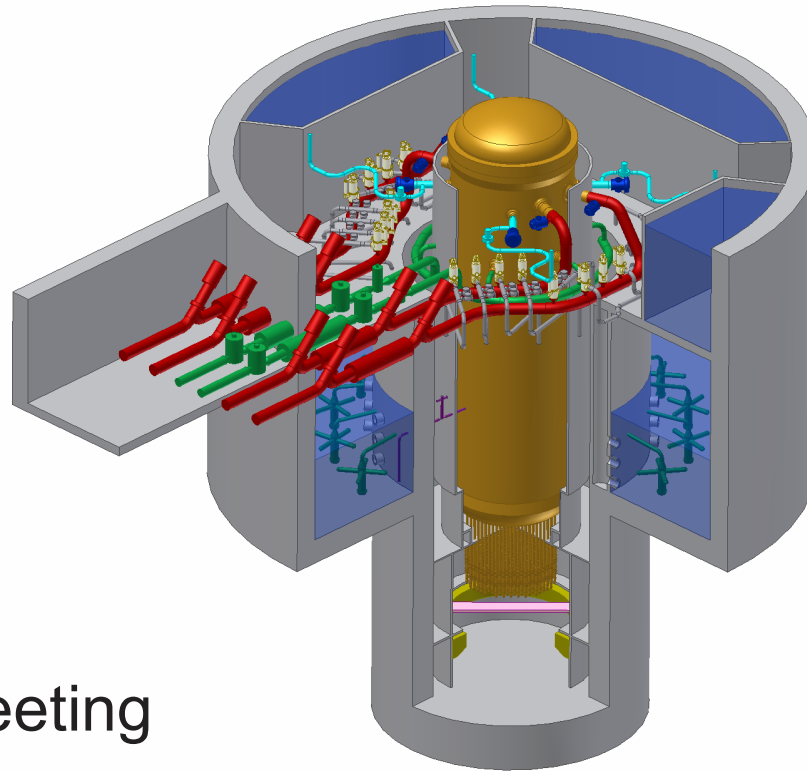


Drawings



ESBWR Pre-application Meeting
October 12 and 13, 2004

Drawings

- Process and Instrument Diagrams (P&IDs), General Arrangement (GA) Drawings and Logic Diagrams
 - > Drawings in DCD will be of sufficient detail to provide a full functional understanding of the structures, systems and components
 - Not as detailed as those in the ABWR DCD
 - Equivalent level of detail as submitted in most recent design certification
 - > Lesson learned from ABWR certification

Drawings (cont)

- P&IDs will include primary process components
 - > Component identification
 - > Pipe
 - Sizes
 - Design class
 - > Pumps
 - > Valves
 - Remotely operated
 - Containment Isolation
 - > Heat Exchangers
 - > Filters

Drawings (cont)

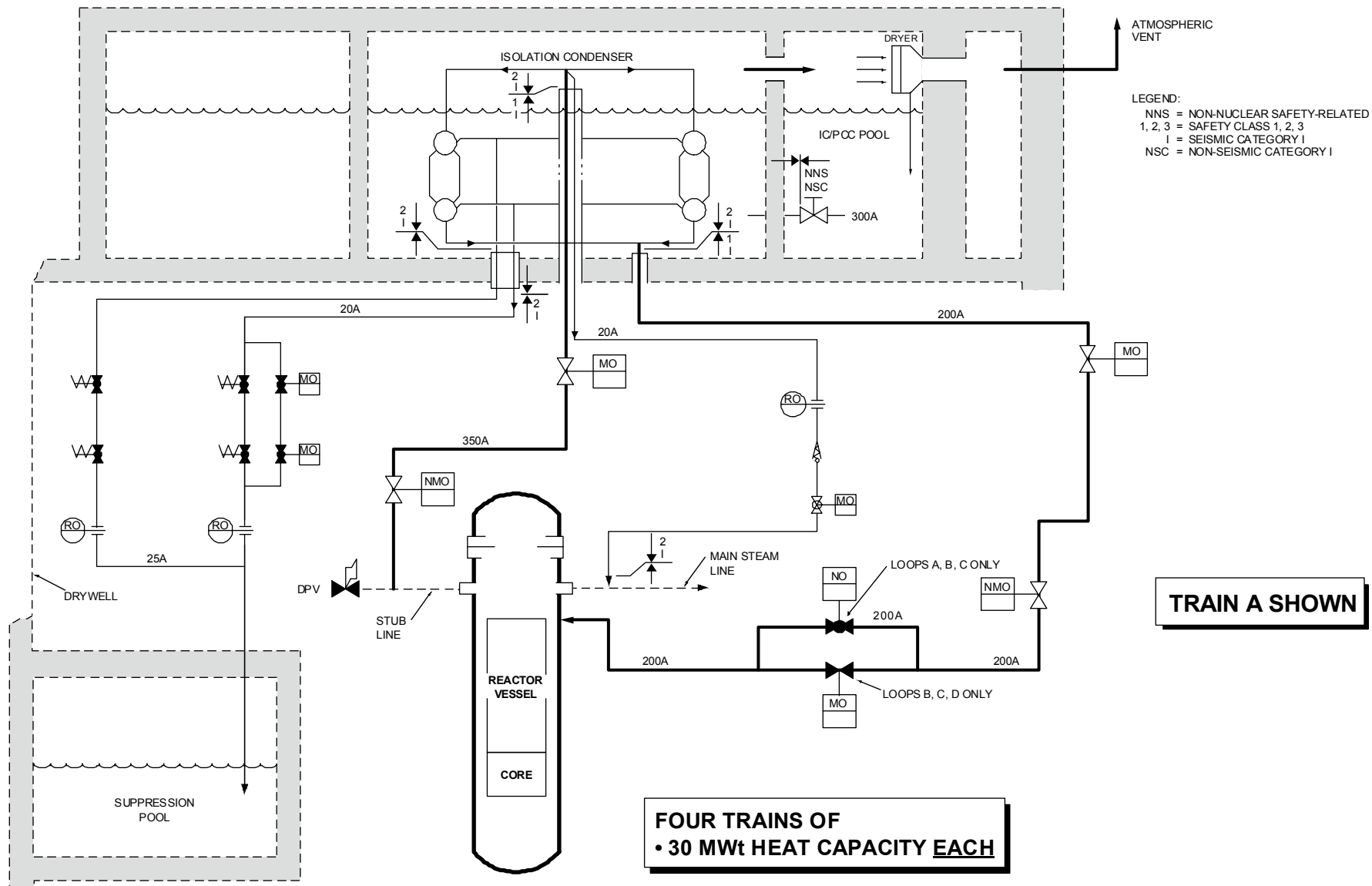
- P&ID items included (cont)

- > Primary Instrumentation

- Displayed in Main Control Room (MCR)
 - Parameters that are key inputs to the Digital Control Information System (DCIS)
 - Flow rate
 - Pressure
 - Temperature

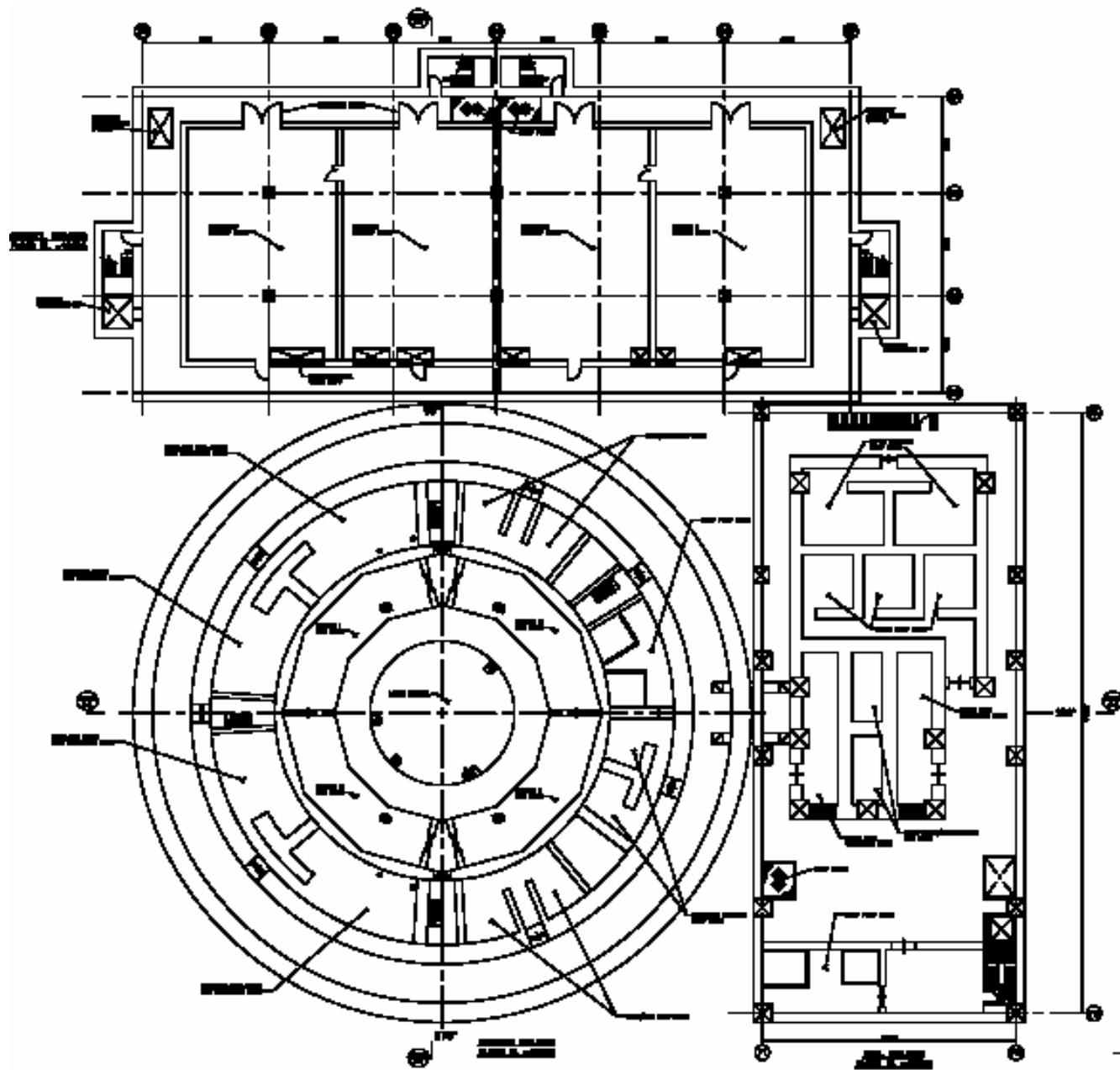
Drawings (cont)

- P&IDs will not typically include the following
 - > Local instrumentation
 - > Temporary instrumentation
 - > Instrumentation that is informational
 - > Manual maintenance valves
 - > Vent and Drain valves
 - > Temporary strainers or filters
 - > Piping details
 - Material type
 - Design pressure and temperature



Drawings (cont)

- General Arrangement Drawings will include
 - > Primary structural elements
 - Rooms and compartments
 - Identification
 - Corridors
 - Divisional boundaries
 - > Significant major equipment
 - Reactor Pressure Vessel
 - Main Turbine Generator
 - > Paper size 11" x 17"



Drawings (cont)

- Logic Diagrams

- > Diagrams for ABWR were tremendously complex
 - 100+ pages in cases
 - Hard to understand
 - Little benefit
- > ESBWR diagrams will be much simpler
 - Just a couple of pages
 - Primary inputs and actions
 - Easy to follow format

Summary

- The ESBWR P&IDs, General Arrangement Drawings and Logic Diagrams will include the necessary level of detail for the NRC Staff to perform their review
- Level of information is similar to that provided in most recent certification applications

Requested NRC Actions

- Confirm that the proposed level of drawing detail will be acceptable