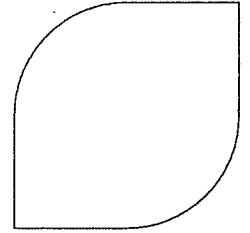


Response to Specific NRC Questions on TXS Service Unit – U.S. EPR

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Aug. 30, 2010



Question #1



➤ NRC Question:

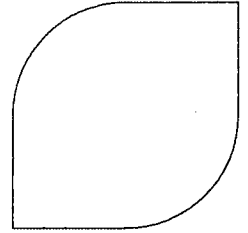
- ◆ Why do operators need to modify reactor trip and safety control system setpoints while the safety system is operating (e.g., is it to implement a manual operator action to perform a safety function)? What particular setpoints does AREVA anticipate that operators will need to modify while the unit is on-line?

➤ AREVA NP Response:

- ◆ The parameters that will be modified during operation are calibration factors for certain sensor inputs. For example, SPND calibration factors are modified every 15 effective full power days, following flux mapping. The affected processor is removed from service during modification.
- ◆ Normally, modifications to safety related setpoints are not needed while the safety system is operating.
- ◆ If setpoint modifications are needed, the affected safety processor is removed from service during the modification.

**NO MANUAL ACTIONS TO PERFORM A SAFETY FUNCTION ARE TAKEN FROM
THE SERVICE UNIT**

Question #2

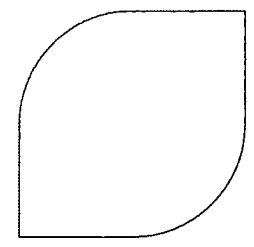
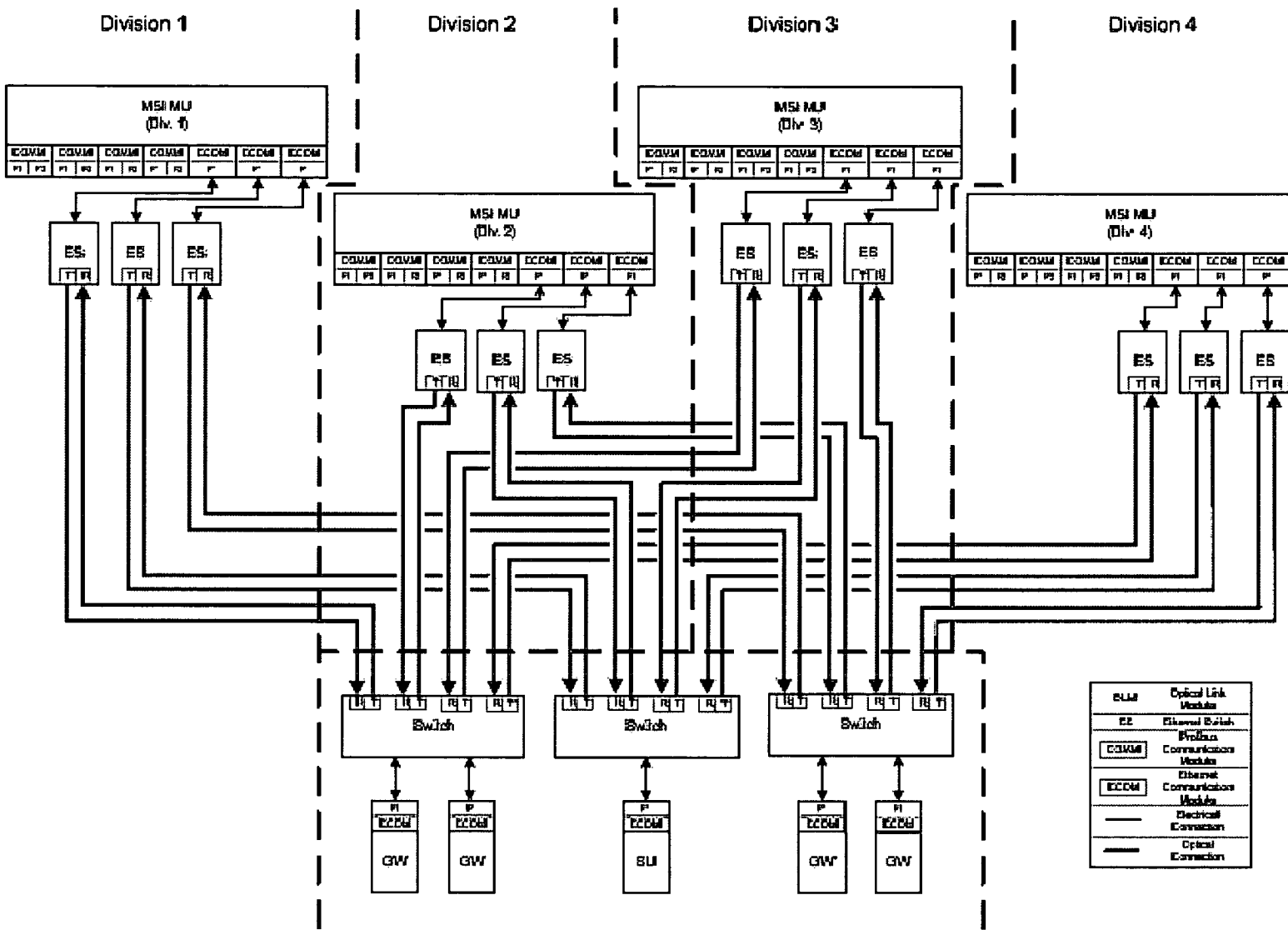


➤ NRC Question:

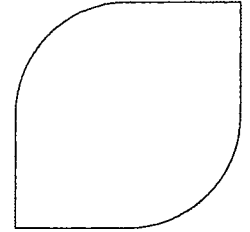
- ◆ **How is the service unit physically connected to the safety systems (i.e., network connections, equipment, etc.)? How does this physical arrangement make their proposal the best option from a safety standpoint?**

➤ AREVA NP Response:

- ◆ **The proposed arrangement is acceptable from a safety standpoint because the safety functions are protected from adverse influence by the service unit.**
 - The safety related MSI is the isolation barrier that prevents failures of the service unit or the service unit network from affecting the plant safety functions.
- ◆ **The critical design features that protect against adverse influence from the service unit were presented in detail during the July 21 public meeting on the service unit.**
- ◆ **The network configurations for the U.S. EPR protection system service unit connection are shown on the following slide (figure taken from PS Topical Report submittal, March 27, 2007).**



Question #3



➤ NRC Question:

- ◆ Some European regulators are saying the service unit is not permanently connected in their designs. AREVA says it is permanently connected for all EPRs at last public meeting, but would verify. If the service unit is temporarily connected in the European EPR designs, how is it technically being implemented?

➤ AREVA NP Response:

- ◆ At the July 21 meeting, the question was verbally posed to AREVA with reference to France (i.e., FA3).
- ◆ FA3: service unit is permanently connected.
- ◆ OL3: service unit is permanently connected.
- ◆ In the U.K., it has been agreed with HSE (September 2009), that the service unit will be disconnected during plant operation except when needed. It will simply be disconnected or powered down and will be connected when needed to maintain the system. Technical details of implementation have not been finalized.