



ENSI's requests for the continued operation of the Mühleberg NPP (KKM) until Permanent Cessation of Operations (PCO), planned for the year 2019

Periodic:

- **PCO2019-Request 1:** Non-destructive tests using qualified testing systems must be carried out on KKM's core shroud during every annual outage.
- **PCO2019-Request 2:** As part of every annual outage, the findings from the core shroud tests must be assessed on the basis of the latest developments in science and technology and international operating experience. The permit to restart the plant after the annual outage will be issued by ENSI if the following criteria are met:
 - stress intensity factor $K_{I,max} < 75 \text{ MPa}\sqrt{\text{m}}$ regardless of orientation and flaw depth
 - length $l_{axial} < 320 \text{ mm}$ for axial through-wall flaws

By the end of April 2015:

- **PCO2019-Request 4:** KKM must investigate the effects of leaks in the pipe sections inside the reactor building joining the RCIC and/or the hilltop reservoir piping to the feedwater pipes. The analysis must be submitted to ENSI by 30 April 2015.
- **PCO2019-Request 6:** KKM must examine the extent to which limiting conditions for operation (LCO) in the technical specifications must be adapted so that an adequate number of safety systems are available for fire scenarios in the reactor building during operating mode 4. The results must be submitted to ENSI by 30 April 2015.

By the end of the 2015 annual outage:

- **PCO2019-Request 5:** By the end of the 2015 annual outage, Emergency Operating Procedure SYA-B-003 must be reviewed and adapted as appropriate, taking account of the improvement measures to counteract internal flooding in the reactor building derived from the current flooding analysis.
- **PCO2019-Request 7:** By the end of the 2015 annual outage, KKM must backfit the planned emergency injection (independent of the river Aare) into the CWS as per Report AN-AM-2014/076 Rev. a dated 24 October 2014.
- **PCO2019-Request 9:** By the end of the 2015 annual outage, KKM must backfit the planned improvements to reduce the internal flooding hazard as per Report AN-AM-2014/076 Rev. a dated 24 October 2014.



By the end of 2015:

- **PCO2019-Request 3:** Before a fuel cask is loaded the next time, but in any case no later than by 31 December 2015, KKM must submit deterministic safety proof to show that the precautionary measures for the "Fuel cask drop" accident are adequate.

By the end of the 2016 annual outage:

- **PCO2019-Request 10:** By the end of the 2016 annual outage, KKM must backfit an additional emergency water injection into the reactor pressure vessel, which must be resistant to earthquakes and flooding, as per Report AN-AM-2014/076 Rev. a dated 24 October 2014.

By the end of 2016:

- **PCO2019-Request 8 (part 1):** By the end of **2016**, KKM must backfit the planned emergency cooling system for the spent fuel pool as per Report AN-AM-2014/076 Rev. a, dated 24 October 2014.
The emergency cooling system for the spent fuel pool must be converted into a safety system by 30 September **2020**.

By the end of September 2020:

- **PCO2019-Request 8 (part 2):** By the end of **2016**, KKM must backfit the planned emergency cooling system for the spent fuel pool as per Report AN-AM-2014/076 Rev. a, dated 24 October 2014.
The emergency cooling system for the spent fuel pool must be converted into a safety system by 30 September **2020**.