



## CONTAINMENT LEAKAGE RATE TESTING PROGRAM IN NPP KRŠKO

**Mladen Dudaš**

**Zoran Heruc**

NPP Krško

Vrbina 12, 8270 Krško, Slovenia

[mladen.dudas@nek.si](mailto:mladen.dudas@nek.si)

[zoran.heruc@nek.si](mailto:zoran.heruc@nek.si)

### *Abstract*

NPP Krško adopted new regulations for testing of the reactor building containment as stipulated by 10CFR50 (Code of Federal Regulation) Appendix J, Option B instead of the previous requirement 10CFR50 Appendix J now renamed to 10CFR50 Appendix J, Option A.

In the USA a thorough analyses of nuclear power plants reactor building containment testing was conducted. As part of these analyses the test results obtained from testing of various reactor-building containments in the last ten years were reviewed. It was concluded that it would be meaningful to, based on test results historical data, reconsider possibility of redefining testing intervals. The official proposal of such approach was reviewed and approved by the NRC and published in September of 1995 in the FR Vol.60 No.186.

Based on directions from 10CFR50 Appendix J, Option B, the new criteria for definition of test intervals were created. Criteria were based upon past performance during testing (Performance-based Requirements) and safety impact.

At NPP Krško, the analyses of the Reactor Building Containment. Integrity Test results was performed. This included test results of the Containment Integrated Leak Rate Testing (CILRT or Type A tests), Containment Isolation Valves Local Leak Rate Tests (Type C tests) and Mechanical and Electrical Penetrations Local Leak Rate tests (Type B tests). In accordance with instructions from NEI 94-01 and based on analyses of test results, NPP Krško created Containment Leakage Rate Testing Program with the purpose to establish the performance-based definition of test intervals, inspection scope, trending and reporting. Equally, the program gives instructions how to evaluate test results and how to deal with the containment penetration or isolation valve repair contingency.

All changes caused with transition from Option A to Option B are marginal to public safety.

### Key words

10CFR50 Appendix J, Containment Integrated Leak Rate Testing, Containment Isolation Valves, Local Leak Rate Test