



Chapter XXI

Remote Monitoring of Nuclear Power Plants in Baden-Württemberg, Germany

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Abstract

The technical implementation of a new remote monitoring system for nuclear power plants is described in this chapter as an example of a modern environmental monitoring and surveillance system. The concept, the architectural design and the user interface of this system had to meet extremely high demands. Fulfilling the imposed requirements, a system solution was developed which is suitable not only for environmental

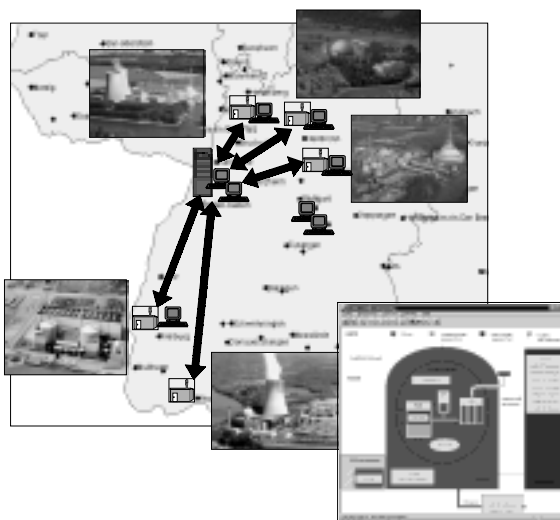
monitoring but also for hazard management and early warning systems. The pilot installation of this system has successfully passed the operational test phase and has been in full operation since August 2001.

Introduction

The Ministry of Environment and Transport in Baden-Württemberg, Germany, operates a system for the Remote Monitoring of Nuclear Power Plants (RM/NPP) in its role as a supervisory authority for nuclear facilities. This system is used to monitor the operation of the nuclear power plants in the Federal State of Baden-Württemberg (Obrigheim KWO, Philippsburg KKP I and II and Neckarwestheim GKN I and II) and those close to the border (Fessenheim, France and Leibstadt, Switzerland) (Figure 1).

The RM/NPP is a complex measuring and information system which records and monitors approximately 20 million data sets per day. The actual operational state of the nuclear facilities including their emissions into air and water, together with the radioactive emissions into the environment are automatically recorded around the clock independently of the operator of the nuclear power plant. In addition, the RM/NPP system continuously surveys the meteorological data at the sites and also receives data from external measuring networks.

Figure 1. Location of the nuclear power plants



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