



State of Illinois
Illinois Emergency Management Agency

Remote Monitoring

of Nuclear Power Plants in Illinois

IEMA Remote Monitoring System

The Illinois Emergency Management Agency (IEMA) is responsible for conducting real-time environmental and radiological monitoring of seven nuclear power plant sites in Illinois which include 11 commercial nuclear reactors and three permanently shut down nuclear facilities. The IEMA Remote Monitoring System (RMS) is an advanced, integrated, computer-based system that continually monitors selected plant operational parameters at each facility and is capable of identifying and measuring the presence of radioactive materials in the surrounding environment. The unique, one-of-a-kind RMS consists of three separate subsystems: the Reactor Data Link (RDL), the Gaseous Effluent Monitoring System (GEMS), and Gamma Detection Network (GDN)

Data from the RMS is collected and monitored 24/7. IEMA has developed software to continually monitor and analyze the RMS data and provide notification of unusual occurrences to on-call IEMA personnel.

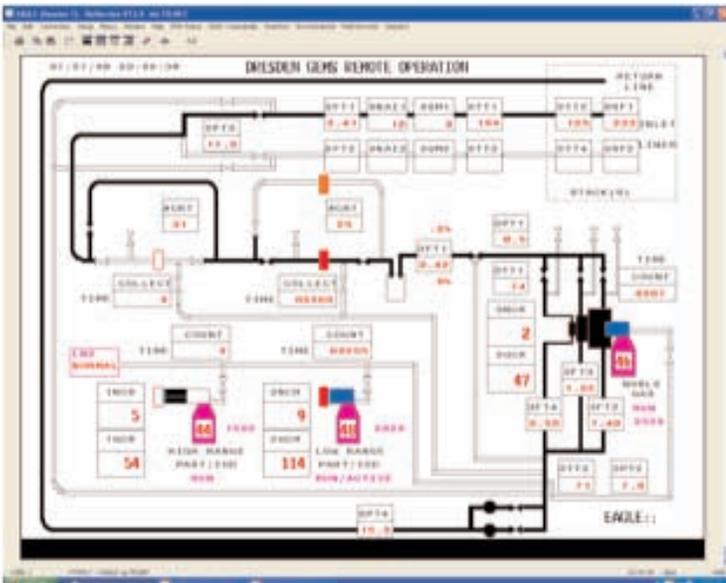


Shown below are typical IEMA GDN Field Installations



The Gaseous Effluent Monitoring System

The Gaseous Effluent Monitoring System (GEMS) provides automatic, on-line, continuous sampling of each nuclear power plant effluent stack(s). The GEMS is capable of measurement and identification of particulates, noble gases, and iodines over a wide range of concentrations, from background levels to releases under emergency conditions. The GEMS can be controlled remotely during nuclear power plant emergencies to provide flexibility in sampling. The screen shown below details the remote operation data for the Dresden Nuclear Station GEMS Equipment.



The GEMS Equipment shown in the pictures below were designed, built, installed and are maintained by IEMA Personnel

