

Kudankulam plant has in-built safety mechanism: experts

Special Correspondent

CHENNAI: The Kudankulam Nuclear Power Plant (KKNPP) has built into its design a multi-layered safety mechanism along with additional protocols to safeguard against systemic or human error at the 2000-MW station, nuclear experts said on Sunday.

The incorporation of broad-ranging safety features makes the plant completely safe and insulated from a set of worst-case radiation risk scenarios, including a Chernobyl-type calamity or a Fukushima-like disaster set off by a tsunami, scientists told an interactive public meeting hosted by the Chemical Industries Association to explain the safety aspects of the KKNPP.

The outreach initiative on raising awareness by the scientific community follows snowballing protests against the plant in Idinthakarai and the constitution of a panel of experts by the Government of India to dispel misconceptions about the project.

Sufficient safeguards

P. S. Pathak, additional chief engineer, Directorate of Projects, Nuclear Power Corporation of India, Mumbai, said the KKNPP had multiple safety barriers such as leak-tight circumference, four redundant safety trains (even though one was a sufficient safeguard) and closed loop systems.

The plant had a negative power coefficient that put itself in a self-terminating mode when there was an increase in reactor power and a

negative void coefficient that also led to automatic shutdown if there was a less water situation, he said.

The primary and secondary containment design also protected the plant from a scenario of missile attacks, aircraft crashes or shock waves, Mr. Pathak said. An innovative feature of the KKNPP was the passive heat removal system with a set of 154 hydrogen recombiners engaging the conversion of hydrogen into water and avoiding formation of explosive mixtures.

K. Ramamurthy, Director, Madras Atomic Power Station at Kalpakkam, said stringent safety protocols are in place at Kudankulam. "Even in the discharge of solid, liquid and air waste, what we have been doing all these days is well under the pre-

scribed limits," he said.

Experts also pointed to the importance of nuclear plants in improving the country's energy security, especially against the rising energy demand for industrial growth, the depletion of coal as a source for power generation, the up-and-down nature of production from alternatives like wind or hydel.

Mr. Ramamurthy later told reporters that MAPS would create an awareness programme to educate people about safety standards adopted in a nuclear plant and also encourage site visits. "We plan to conduct workshops on safety of nuclear reactors and also take those living near the plant on a visit to Madras Atomic Power Station at Kalpakkam," he said.