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ASPEK KESELAMATAN TERHADAP BAHAYA RADIASI NUKLIR, LIMBAH RADIOAKTIF DAN BENCANA GEMPA PADA PLTN DI INDONESIA

ABSTRAK

Teknologi nuklir merupakan salah satu teknologi yang menghasilkan energi yang sangat besar. Untuk itu, peraturan-peraturan tentang keselamatan kerja pada lingkungan instalasi nuklir harus dipahami dan dijalankan dengan sebaik-baiknya. Aspek keselamatan yang menjadi perhatian adalah keselamatan terhadap potensi bahaya radiasi nuklir, limbah radioaktif dan bencana gempa.

Analisis dilakukan dengan mengkaji beberapa peraturan-peraturan dan laporan-laporan, baik internasional maupun nasional, serta kesiapan bangsa Indonesia dalam aspek teknis dan kultur nasional untuk penyelenggaraan PLTN. Badan-badan yang terkait langsung, Badan Tenaga Atom Nasional (BATAN) dan Badan Pengawas Tenaga Nuklir Nasional (BAPETEN), telah membuat beberapa peraturan nasional mengenai aspek tersebut dan dalam waktu berjalan juga memberikan sosialisasi kepada masyarakat mengenai peraturan keselamatan.

Dengan tercapainya hal-hal tersebut, Indonesia akan memiliki peraturan keselamatan nuklir yang signifikan dengan kapasitas *base loads* yang sesuai terhadap kebutuhan energi nasional.

Kata Kunci : Radiasi Nuklir, Limbah Radioaktif , Gempa, *Base loads*, Keselamatan

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SAFETY ASPECT CONCERNING HAZARD OF NUCLEAR RADIATION, RADIOACTIVE WASTE AND EARTHQUAKES AT NUCLEAR POWER PLANTS (NPP) IN INDONESIA

ABSTRACT

Nuclear technology was one of the technology that generates energy with a great magnitude. For that reason, there are regulations concerning the safety which have to be understood and operated, both strongly and carefully. Aspects which paid attention here were safety aspect concerning the potential danger on nuclear radiation, radioactive waste and earthquakes.

Analysis was done by studying several regulations and reports, both international and domestic, also technically and national culturally aspect preparedness of Indonesia to hold a Nuclear Power Plant (NPP). Badan Tenaga Atom Nasional (BATAN) and Badan Pengawas Tenaga Nuklir Nasional (BAPETEN), as two major institution which directly involved to the domestic nuclear activities, have made several regulations concerning those aspects and also conducted a socialization program for the society, especially for those who lived around the future NPP site.

With the achievement on those mentioned points, Indonesia will have a significant regulatory with sufficient base loads capacity concerning the domestic need of energy.

Keywords : Nuclear Radiation, Radioactive Waste, Earthquakes, Base Loads, Safety