



MALAYSIAN
NUCLEAR
AGENCY
(NUCLEAR MALAYSIA)

MALAYSIAN NUCLEAR AGENCY

(NUCLEAR MALAYSIA)



*'Nuclear
Technology
Propels
The Nation's
Vision'*

www.nuclearmalaysia.gov.my

ROLES AND RESPONSIBILITIES

AIMS AND MAIN FACILITIES

RESEARCH AND TECHNOLOGY DEVELOPMENT

PRODUCTS AND SERVICES

MAP AND DIRECTORY

THE HISTORY

Malaysian Nuclear Agency (Nuclear Malaysia) has a role to introduce and promote the application of nuclear science and technology for national development.

Established in 19 September 1972, Nuclear Malaysia was then known as Centre for Application of Nuclear Energy (CRANE) before it was formally named as Tun Ismail Atomic Research Centre (PUSPATI).

In June 1983, PUSPATI was placed under the patronage of Prime Minister Department and was called Nuclear Energy Unit (UTN). It was then placed under the Ministry of Science, Technology and Environment in October 1990. In August 1994, its name was changed to Malaysian Institute for Nuclear Technology Research (MINT).

On 28 September 2006, following its restructuring, MINT was given a new identity, which is Nuclear Malaysia. Its strategic location, near higher learning institutions, colleges and national training institutions, besides its close proximity to the National Administration Centre, Putrajaya, and the Multimedia Super Corridor, Cyberjaya, has stimulated Nuclear Malaysia to meet its aspirations.



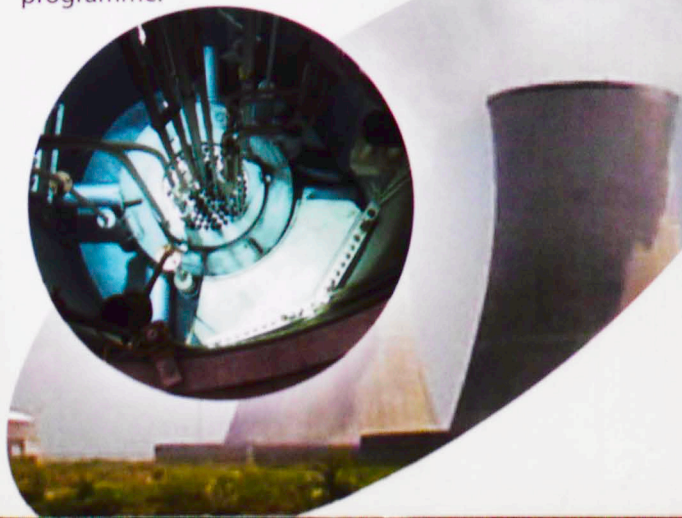
ROLES AND RESPONSIBILITIES

Since its establishment, Nuclear Malaysia has been given the responsibility to introduce and promote nuclear science and technology for national development, and until present, Nuclear Malaysia maintains its significance as an outstanding organisation in science, technology and innovation.

Nuclear Malaysia plays a pivotal role in providing quality and best-in-class research towards comprehensively generating new technologies to meet the needs of nuclear technology's variety of applications. This standing is acquired through professional workforce training and discipline, well-planned infrastructure, and well-resourced research laboratories.

To achieve excellence in R&D and services in nuclear technology, Nuclear Malaysia provides a conducive research environment to produce substantial achievement, a feat to be proud of.

Nuclear Malaysia has been chosen as the coordinator for national nuclear power development through inter-agency cooperation, mainly to generate acceptance on nuclear power. At organisational level Nuclear Malaysia is consolidating its resources, especially on human capital development in different aspects of nuclear power planning, on safety and security, in preparation for eventuality of Malaysia embarking on a nuclear power programme.



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AIMS AND FUNCTIONS

Vision

Nuclear science and technology for knowledge generation, wealth creation, and societal and national well-being.

Mission

Excellence in research and applications of nuclear technology for sustainable development.

Objectives

- To generate new products and technologies through research and innovation based on the national development agenda.
- To achieve an income, at minimum 30% of the annual operating budget, through transfer and commercialisation of technology.
- To enhance organisational excellence through planning and quality management.

Main Functions (P.U. (A) 312)

- To conduct research research development (R&D), services and training in the field of nuclear technology for national development.
- To encourage application, transfer and commercialisation of nuclear technology.
- To coordinate and manage the national and international nuclear affairs, and act as the liaison agency with international Atomic Energy agency (IAEA).



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MAIN FACILITIES

In the effort to boost implementation of missions, Nuclear Malaysia provides several major facilities, which utilise nuclear source application for research and commercialisation purposes. It encompasses:

- Reaktor TRIGA PUSPATI
- SINAGAMA irradiation plant
- ALURTRON irradiation plant
- Radioactive Waste Treatment plant
- RayMINTEX Plant
- Incineration plant
- Secondary Standard Dosimetry Laboratory
- Radioisotope Production Laboratory
- Neutron Activation Analysis Laboratory
- Non-Destructive Testing Laboratory
- Non-Ionising Radiation Laboratory
- Polymer Laboratory
- Tissue Culture Laboratory
- Biomaterial Centre
- Flora Park



RESEARCH & TECHNOLOGY DEVELOPMENT

Nuclear Malaysia conducts extensive R&D in the national socio-economy sectors such as in industry, medicine, radiation processing, agrotechnology and biosciences as well as environmental safety. These research projects generate a manifold of new products, which are practical in everyday lives.

Industrial technology

- Development and characterisation of materials
- R&D of NDT methods
- Tracer technology application in environmental and industrial management
- System development for processing plant troubleshooting
- Environment, food and biological sample analysis facilities

Medical technology

- Development of radiopharmaceutical kits
- Development of monoclonal antibodies
- Development of medical tablets packaging technology
- Imaging technology
- Development of artificial bone graft product manufacturing technology

Radiation Processing

- Gamma and electron irradiation application on natural products such as chitin, chitosan, natural rubber and polysaccharides

RESEARCH & TECHNOLOGY DEVELOPMENT

- Development of heat shrinkable tubes
- Rubber wood, palm and kenaf fibre polymer composite
- Pressure-sensitive adhesive and ink cartridge
- Resin synthesis and modification from palm oil
- Industrial, flue gas and waste water treatment
- Cross-linking and biodegradable film

Agrotechnology and Biosciences

- Mutagenesis and plant biotechnology
- Development of DNA marker, application of flow cytometry and molecular biology in the production of new varieties of ornamental plants, food and industrial crops
- Production of enzymes
- Production of hydrogel and other biomaterials
- Development of bioproducts, e.g. animal feed, biofertilizers, bioactive compounds from natural resources
- Modernisation of gaharu industry

Environment

- Marine and air pollution
- Hydrology and flow of polluted items
- Soil erosion and deposition
- Sediment movement in river estuary and coastal shore
- Development of incineration technology



PRODUCTS AND SERVICES

Based on a multitude of technological research and development implemented to accommodate the requirements of various economic sectors, Nuclear Malaysia also extends numerous products and services with prospects of technology transfer and commercialisation.

Products

- ✦ Radiation vulcanised rubber latex
- ✦ Medical diagnostic kits
- ✦ Medical radioisotopes
- ✦ Industrial radioisotopes
- ✦ Agricultural radioisotopes
- ✦ New varieties of ornamental, fruit and food crops
- ✦ Biomaterials

Services

- ✦ Environmental research and assessment
- ✦ Environmental monitoring
- ✦ Radiological impact assessment
- ✦ Water resources management
- ✦ Agricultural, industrial and domestic waste management

Quality Assurance

- ✦ Personnel dosimetry
- ✦ Medical quality assurance
- ✦ Industrial quality assurance

Non-chemical Sterilisation

- ✦ Gamma irradiation
- ✦ Electron beam irradiation

Technical and Engineering Services

- ✦ Material, structure and industrial plant inspection and testing
- ✦ Industrial inspection and process control
- ✦ Agricultural technology
- ✦ Medical technology
- ✦ Material analysis and evaluation

Training

- ✦ Inspection and testing technology
- ✦ Environment and health safety
- ✦ Instrumentation and engineering
- ✦ Technology management
- ✦ Medical X-ray



GLOBAL ARENA

Several remarkable roles and achievement attained by Nuclear Malaysia locally and internationally include the following:

- ✦ Malaysian Nuclear Agency provides technical support to the Ministry of Foreign Affairs and Ministry of Science, Technology and Innovation in establishing relationship with international community especially in handling multilateral nuclear issues.
- ✦ Responsibility of representing the country in discussions pertaining to multilateral nuclear issues.
- ✦ Malaysian Nuclear Agency has established bilateral relation with International Atomic Energy Agency (IAEA), which has its headquarters in Vienna, Austria.
- ✦ Malaysian Nuclear Agency is selected to be the coordinator for several projects in the Regional Co-operative Agreement (RCA) and Forum for Nuclear Cooperation in Asia (FNCA).
- ✦ To enable the public to get a clearer view of the nuclear research reactor and other main facilities available in this agency through visits and exhibitions.
- ✦ To handle issues of social importance especially on radiation protection.
- ✦ First government agency accredited with ISO 9000, in 1991.
- ✦ 10 processes accredited with ISO 9001.
- ✦ 2 laboratories accredited with ISO 17025 (Testing and Calibration laboratories).

In the process of accreditation with OHSAS 18001 / IMS





DIRECTORY

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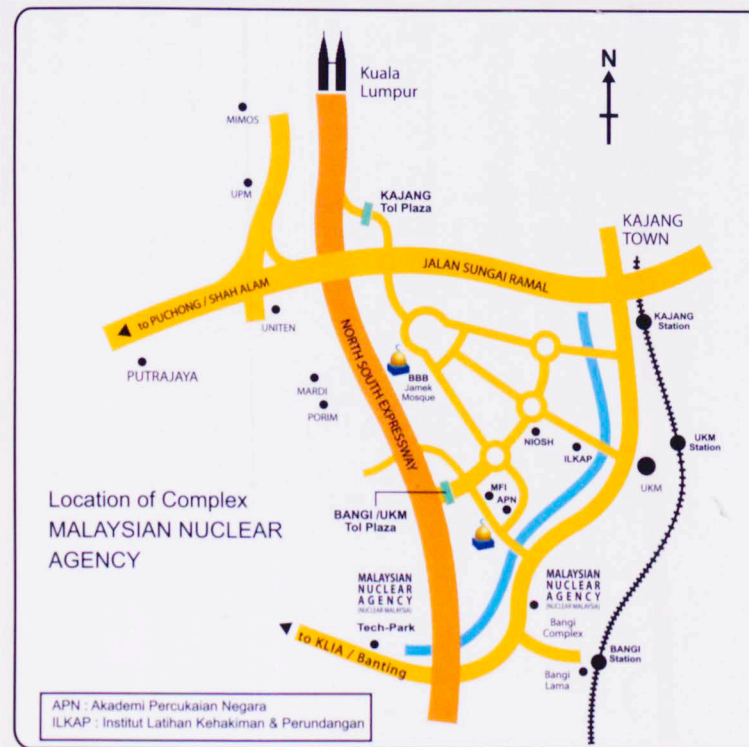
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LOCATION MAP



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