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## Radioactive Waste Management from TRR-1/M1 Operation and Decommissioning

TRR-1/M1 research reactor utilizes for basic and applied research in nuclear physics, radiochemistry, activation analysis, materials sciences, and nuclear medicine. It serves as powerful tool for production variety of radioactive isotopes. It has been used for education and training of nuclear science, nuclear engineering students and nuclear power plant staff. Since it has been used for more than 50 years, the amounts of operational radioactive waste have been produced depending on operational schedule and applications. The strategy for operational radioactive waste management was established and developed to minimize the radioactivity and radiotoxicity. The radioactive waste was classified by activity, concentration of radionuclides, physical form and chemical form based on IAEA No. GSG-1 guideline to ensure that proper and adequate provision is implemented for the safety implications according to the management and disposal. Thailand developed a decommissioning strategy with a small staff complement and inadequate regulations. The waste management is an important part of the decommissioning process. The decontamination methods, conditioned radioactive waste, containers, spent fuel storages, national waste repository and site reuse strategy have been considered. The radioactive waste processing is important based on volume reduction and processing cost. Economic and environmental consideration are significant factors for decommissioning. In conclusion radioactive waste management for operational and decommissioning of TRR-1/M1 requires effective planning and management but it is difficult for Thailand due to limitations in the availability of the necessary resources. The safety management and QA system have been designed according to limited staffs and resources.

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