ÚJV Řež, a. s.
Division ENERGOPROJEKT PRAHA











DECOMMISSIONING OF NUCLEAR FACILITIES

ÚJV Řež, a.s. division ENERGOPROJEKT PRAHA (UJV EGP) ensures comprehensive services in the field of the nuclear and conventional energetics, focusing on the preparation and implementation of new energy sources, on support the operation of existing power plants and on the decommissioning of the nuclear facilities.

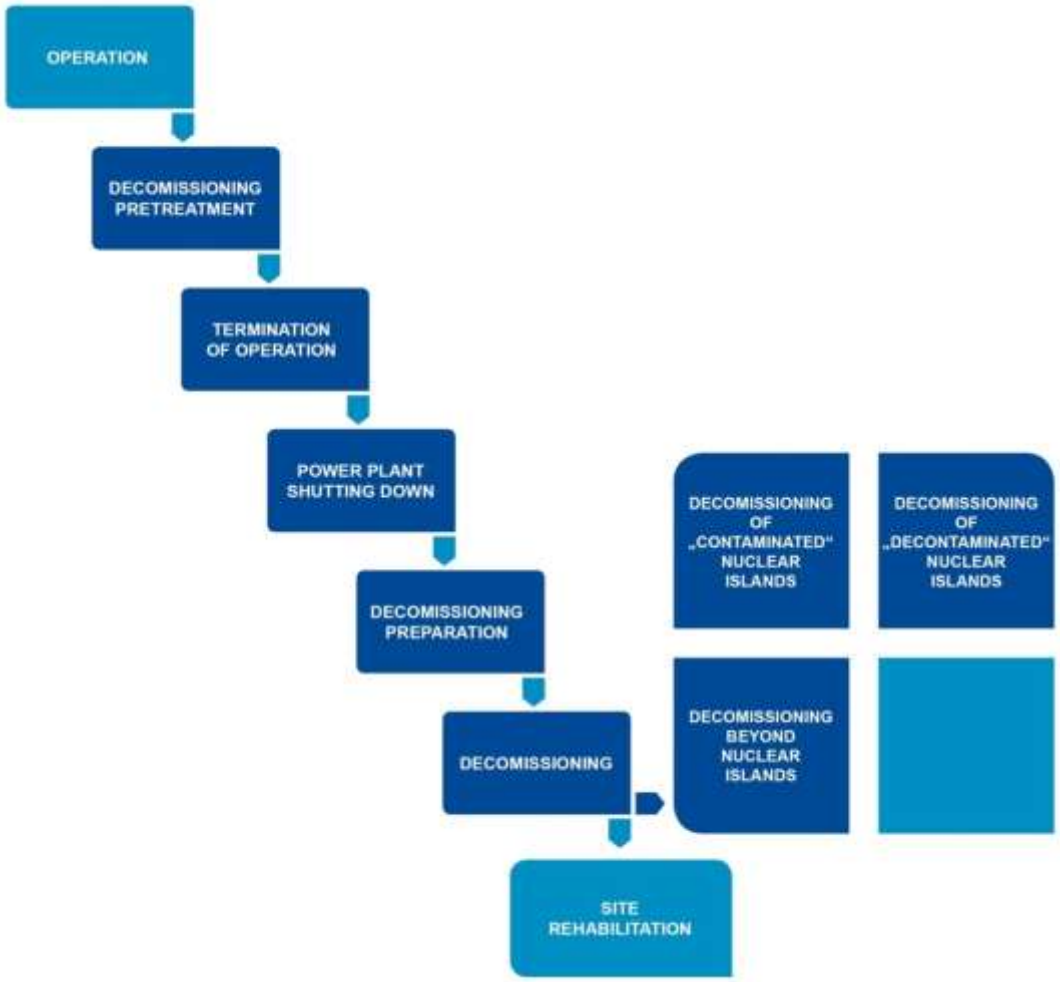
Project activities and engineering services in the area of decommissioning:

- Recommendation of strategy for decommissioning process, evaluation of time-consuming of individual processes.
- Description of variants and selection of optimal solution, specification of stages of the decommissioning process.
- Database of design data and documents for decommissioning.
- Postulation of input data (radioactivity and hazardous substances, liquid and solid radioactive waste, etc.).
- Specification of technological equipment, systems, buildings, locality, postulation of operational data.
- Determination of surface contamination of technological equipment, building surfaces and the atmosphere radionuclide composition of radioactive waste.
- Balance, methodology and evaluation of activities during the decommissioning (pre-decontamination, dismantling, post-decontamination, demolition, processing and treatment of radioactive waste, inactive waste disposal, waste release into the environment).
- Documentation for individual stages of decommissioning including documentation for the supervising state authorities, implementation of national and international legislation requirements.
- Organization and implementation of decommissioning projects – organization of works, interface management, operational constraints, requirements for training, project schedule and project milestones, communication, reporting, document management, quality assurance, risk management, safety requirements, waste management.
- Elaboration of projects of temporaries for dismantling and decontamination (supply of media, special HVAC, special drainage system, unplugging of electrical equipment, etc.).
- Solutions of radiation control during decommissioning – radiation monitoring program.
- Evaluation of radiation protection, environmental impact assessment and analysis of radiological incidents.
- Physical protection assurance during decommissioning.
- Safety assessment of decommissioning.
- Economic evaluation.

Used software tools for decommissioning:

- MS Excel, Project, Access
- **KROS plus** – pricing of construction works, budgets, complex pricing system including demolition works
- **HAVAR** – assessment of radiological consequences of radioactive discharges to atmosphere in the vicinity of nuclear facilities
- **VISIPLAN 3D ALARA** – planning, analysis, evaluation and optimization of radiation doses

ÚJV Řež, a. s., divize ENERGOPROJEKT PRAHA
Na žertvách 29, 180 00 Praha, Tel.: +420 227 133 301, E-Mail: energoprojekt@ujv.cz
www.ujv.cz



References UJV EGP in the decommissioning area

- NPP Jaslovské Bohunice A1 (HWR KS-150 type) - Concept of decommissioning.
- NPP Jaslovské Bohunice V1 (2 reactors VVER 440/V230 type) - Concept of decommissioning.
- NPP Dukovany (4 reactors VVER 440/V213 type) – Concept of decommissioning and cost estimation.
- NPP Temelín (2 reactors VVER 1000/V320 type) - Concept of decommissioning and cost estimation.
- Temelín and Dukovany spent fuel storages (dry storage) - Concept of decommissioning and cost estimation.
- Research reactor LVR-15 (light-water moderated and cooled reactor – 10 MW thermal power) - Concept of decommissioning and cost estimation.
- Research reactor LR-0 (VVER type research reactor, 5kW thermal power) - Concept of decommissioning and cost estimation.
- Remediation of old environmental liabilities (obsolete facilities) in ÚJV Řež, a. s. – characterization of environmental liabilities, preparation of the decommissioning project and cost estimation.
- Safety Assessment for decommissioning of China heavy water research reactor (HWRR, 15 MW thermal power).
- Methodology of Safety Assessment and evaluation of selected risks during decommissioning NPPs Temelín and Dukovany.