



# PÖYRY



ATOMEX-EUROPE

Forum of Nuclear Industry Suppliers

Prague, 25-26 October, 2011

Tamás Takács

## Key Products

- Decision supporting and feasibility studies
- Site selection and characterisation, evaluation of environmental characteristics, impact assessments, preparation of environmental impact studies
- Independent expert reports
- Safety analyses
- General design
- Conceptual, basic, licensing, detailed design, as-built plans for handling, pretreatment, treatment, conditioning, transport, storage and disposal of radioactive waste

# NUCLEAR FACILITIES IN HUNGARY

- BME NTI
  - Nuclear Technical Institute of Budapest Technical University  
0,1 MWth; atmospheric; open surface; teaching aid; fresh water cooled
- KFKI AEKI
  - Nuclear Energy Research Institute (Budapest)  
20 MWth; atmospheric; open surface; research projects and industrial radiation; dry cooling tower
- PURAM
  - Interim Spent Fuel Storage (ISFS) (next to Paks NPP)
  - Low and Intermediate Radioactive Waste Repository in Bábaapáti
  - Radioactive Waste Repository in Püspökszilágy (medical and other industrial wastes)
- PAKS NPP
  - Paks Nuclear Power Plant  
VVER-440; 4 x 440 MWe increased to 4 x 500 MWe; fresh water cooled



# Nuclear Facility Radioactive Waste Management Reference Projects



Site/Plant

Paks NPP

Country

Hungary

Client(s)

Paks NPP

Services

- Development of complex waste management strategy
- Conceptual, technical and detailed design of different waste management systems:
  - Evaporator
  - Volume reduction of compactable waste by use of compactor of medium pressing force
  - Extension of liquid radioactive waste storage tank park
  - Liquid radioactive waste treatment technology



# Waste Disposal Facility Reference Project



Site/Plant

Bátaapáti, National Radioactive Waste Repository

Country

Hungary

Client(s)

Public Agency for RW Management

Services

- Environmental licence
- Water usage licence
- Civil engineering licence of surface facilities
- Licence for the deposition of excavated rock
- Waste transport vehicle licence
- Construction licence
- Waste acceptance criteria
- Commissioning licence of surface facilities

Execution period

2006 - 2009

# Institutional Waste Treatment Reference Project



Site/Plant

Püspökszilágy, Radioactive Waste Treatment and Disposal Facility, Cementation Equipment

Country

Hungary

Client(s)

Public Agency for RW Management

Services

- Licensing Design
- Detailed Design according to the licence conditions
- Procurement of main parts on the commercial basis
- Construction, fabrication and mounting activities
- Commissioning

Execution period

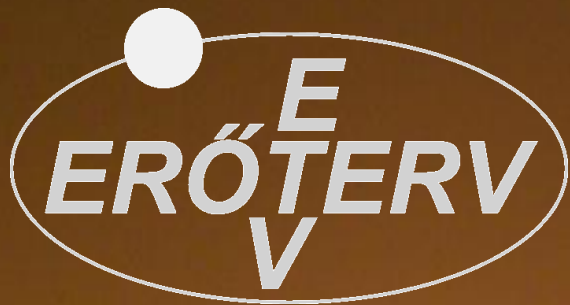
2009

# Environmental Protection Reference Projects



Site/Plant	Environmental licensing of lifetime extension of Paks NPP
Country	Hungary
Client(s)	Paks NPP
Reactor type	VVER
Services	<ul style="list-style-type: none"><li>• Environmental monitoring activities, covering:<ul style="list-style-type: none"><li>• Surface and subsurface waters</li><li>• Meteorology</li><li>• Hydrogeology</li><li>• Consideration of human and non-human biota as receptor species</li><li>• Investigation of mixing of cooling water in Danube river</li></ul></li><li>• Preliminary and Detailed Environmental Impact Statements</li></ul>
Execution period	2004 - 2007





**Thank you for your  
attention!**

**PÖYRY ERŐTERV ZRt.**  
1094 Budapest Angyal u. 1-3  
Hungary  
[www.eroterv.hu](http://www.eroterv.hu)  
[eroterv@poyry.com](mailto:eroterv@poyry.com)

**Tamás Takács**  
M.Sc. Nuclear Engineer  
Head of Department

[tamas.takacs@poyry.com](mailto:tamas.takacs@poyry.com)  
Phone: + 36 (1) 455 3600  
Budapest, Hungary