

Challenge to use MACCS

short information

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Highlights

- Introduction - **NRA SR** – responsibilities
- Emergency Response Centre
- Evaluation tool - **RTARC**
- Challenge - **MACCS**

Introduction

NRA SR – responsibilities (1)

The Nuclear Regulatory Authority of the Slovak Republic (NRA SR) is a central government authority of the Slovak Republic for nuclear regulation

Main responsibilities:

- State supervision over nuclear safety of nuclear installations, including radioactive waste and spent fuel management, over nuclear materials, including their inspection and registration, as well as over physical protection of nuclear installations and nuclear materials
- State supervision in the field of nuclear energy use, in physical protection and in emergency planning
- Licensing

NRA SR – responsibilities (2)

- Review and assessment
- Inspection and law enforcement
- Maintaining the national system of accounting and control of nuclear materials
- Emergency preparedness
- International co-operation and monitoring a compliance with obligations arising from international agreements
- Public information and communication

Radiation protection -

- under the authority of the Ministry of Health and its Public Health Authority of the Slovak Republic

Emergency Response Centre

NRA SR in the field of emergency preparedness has established the Emergency Response Center (ERC).

The ERC as one of the technical support resources of the Central Crisis Staff of Slovakia

in the case of incident or an accident

ensures the assessment of its progression and its consequences, seriousness in terms of potential impact on the environment, and prepare draft recommended actions to protect the population.

Evaluation tools: RTARC, RODOS

RTARC (1)

RTARC DSS – **R**ead **T**ime **A**ccident **R**elease **C**onsequences Decision Support System

is a computer code developed at the VÚJE Trnava, Inc.
for use by the ERC of NRA and of nuclear facilities.

The system comprises of several assessments and modelling elements and includes calculations:

- Atmospheric transport and diffusion
- Dose assessment
- Evaluation and display of the affected zones
- Evaluation of the early health effects, concentration and dose rate time dependence in the selected sites, etc.
- The independent simulation of protective measures (sheltering, iodine administration and evacuation)

RTARC (2)

The RTARC system is used also

- for assessment of radiological consequences in Safety Analysis Reports of NPPs or nuclear installations,
- for supportive safety analysis to approve the size of emergency planning zones for the purposes of emergency planning

(done mostly by VÚJE, Inc. - being the technical support organisation)

MACCS (1)

Challenge:

MACCS code will be used

for regulatory purposes

as verification calculations within a regulatory review
process (independent regulatory review)

MACCS (2)

- Access to MACCS code under the terms of CSARP agreement between NRC US and NRA SR
- MACCS was download and installed in november 2016
- Calculations – excercises from workshop 2016

Foreseen activity:

- prepare input data for nuclear facilities in the SR for using in MACCS code
- use MACCS code for prediction off site consequences
- use MACCS code within a regulatory review process

THANK YOU FOR YOUR ATTENTION!