

# Training of monitoring teams



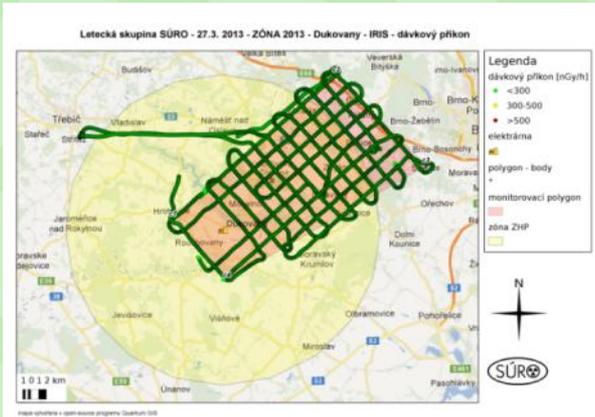
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# Emergency exercise ZONA 2017 - simulated NPP accident



# Tisa 2017 exercise with Czech Army



# Airborne exercises (with Czech Army, or Czech Police)



# Check our poster for more information



Within the Radiation Monitoring Network of the Czech Republic one airborne group and 27 mobile (ground) groups operate in the following departments now: the State Office for Nuclear Safety (SÚJB), the Ministries of the Interior, Defence and Finance. The training of these groups (theoretical part and practical exercises of individual activities) takes place within individual ministries separately or on the basis of bilateral agreements among them. The ministries are responsible for the training of their mobile groups.

Every two years the emergency exercise of the crisis management "ZONA" in the emergency planning zone of NPP Dukovany or Temelin organized by the General Directorate of the Fire Rescue Service in cooperation with SÚJB takes place. The exercise also includes a monitoring of radiation situation by airborne and ground mobile groups.

The poster shows the activities of mobile groups during the "ZONA 2017" exercise and the training of individual activities of the SÚJB mobile teams and the Czech Army "Tisa 2017".

| Who                             | Task   | Devices/aids  | How often    |
|---------------------------------|--|---|--------------|
| Ground mobile group             | 1 Dose-rate  | GR135, FH40   | 1x month     |
|                                 | 2 Mapping of dose-rate   | System MobDose (Nuvia)  | 1x month     |
|                                 | 3 Scintillation spectrometry   | GR135 Exploranium   | 1x year      |
|                                 | 4 Surface contamination (persons, cars, devices)   | Contam, Berhold   | 1x year      |
|                                 | 5 Searching for "orphans"  | GR135 Exploranium   | 1x year      |
|                                 | 6 Usage of protective equipment  | Personal electronic dosimeters  | 1x year      |
|                                 | 7 Sampling   | Collection kit  | 1x year      |
|                                 | 8 Change of TL-detectors   | TL detectors  | 4x year      |
| Specialized ground mobile group | 9 HPGe spectrometry  | Falcon, HPGe Ortec (15%)  | 4x year      |
|                                 | 10 Aerosols sampling   | Dwarf Serya   | 1x year      |
| Airborne group                  | 11 Scintillation spectrometry (dose-rate on board/1m above ground mapping, activity of manmade radionuclide mapping) | IRIS (Integrated Radiation Information System); NaI(Tl) detector (16 l), GPS, Altimeter | 2 - 4 x year |
|                                 | 12 Dose-rate on board  | Plastic detector (4.SI)   |              |
|                                 | 13 HPGe spectrometry (activity of manmade radionuclide mapping)  | HPGe Ortec (50%) + GPS  |              |

### Tisa 2017:

- goal: to train particular activities
- location: Czech Army training area
- organized by: SÚJB + SÚRO
- yearly, 2-3 days



### Emergency exercise ZONA 2017:

- topic: activities of selected central/regional authorities etc. during a simulated NPP accident. Includes monitoring of the radiation situation using ground and airborne mobile groups.
- organized by: SÚJB and Fire Rescue Service (HZS); once per every 2 years
- monitoring teams: SÚJB, HZS, Czech Army (AČR)
- goal: training and verification of particular activities in early and intermediate phase of the accident including personal protection, cooperation of all teams and crisis management, tests and practice of monitoring routes in NPP emergency planning zone, work in stress (simulated road accident -- need to choose a new monitoring route), sampling of the environment, handover of samples and measured data, surface contamination checks

### Airborne exercises:

- goal: exercise / device functionality check, airborne vs. ground data comparison, testing new devices
- who: SÚRO + Czech Army / Czech Police
- where: areas with radiation anomalies
- artificial radionuclides (Šumava, Jeseníky) vs. natural radionuclides (Píbram, uranium mining regions)



### Conclusion:

At the end of each exercise, the exercise was evaluated by both organizers and participants. Errors were reported to members of mobile groups and problems regarding the tasks were discussed.

Integral part of each exercise is a calibration and comparison of instruments compatibility.

- Several conclusions were drawn from the exercise:
- measurement of surface contamination is the biggest problem
  - need to practice work in a contaminated environment
  - mobile group equipment is sufficient for all the needed tasks, but it is necessary to think about replacing the old GR 135 devices
  - airborne monitoring group equipment is sufficient, it is necessary to develop a new software for the evaluation of the measured data