

investigations will be reported in further bulletins."

From the Bulletin of the HAEA on April 14: "Evaluation of the measurements (of the escaped noble gases) showed that the amount of radioactivity release do(es) not endanger either the staff nor the population. The incident - classified to level 2 on the INES - was reported to officer-on-duty inspector of HAEA Nuclear Safety Directorate (NSD is the regulatory body amenable to nuclear safety). In the morning of April 11th, the safety director of Paks NPP Ltd. communicated detailed information to HAEA about the proceedings of the incident and countermeasures taken. It was followed by consultation between part(ie)s, and representatives of the regulatory side agreed that there is no need for onsite and offsite emergency measures. HAEA NSD appointed continuous reporting from the management of Paks NPP about ongoing management of the incident. Accordingly, regular consultations proceeded on Saturday, Sunday and Monday (April 12-14). The further information gained affirmed that the incident did not have any adverse effect to the public and not expected in the future. Management of HAEA NSD - by information from the NPP, data and documentation available - decided to withdraw the operating license of the incident-making fuel-cleaning device. At the same time, it established a case investigation committee whose duty comprises also the control of the further maintenance work of unit 2. The Committee reviewed the data and information available and defined its objectives and methods of activity. The case inspections and assessments shall be done and will have important lessons for the licensing and operating conditions of components put into operation for temporary tasks in Paks NPP."

On April 16, the maintenance crew succeeded in lifting the lid off the tank, and at 8PM, following a predefined program, the crew performed a visual inspection in the cleaning tank using a video camera.

From IAEA reports: "The Emergency Response organization of the NPP began to operate at 8:30PM on April 16," as visual inspection of the fuel assemblies got underway, and the organization "declared an alert at 9:45 PM". At this point, "the event was then reclassified to INES Level 3, and co-ordinated environment monitoring was initiated. The safety of heavily damaged fuel (sub-criticality and cooling) has been closely monitored. Additional monitoring equipment and standby reserve cooling system were installed for this purpose. There was no reason to introduce any protective action offsite." This situation continued through 3:15 PM on April 17:

The Hungarian Atomic Energy Authority (HAEA) reported, on April 17, "The safe handling of these damaged assemblies may cause concerns. New detection systems and cooling circles (circuits) are being introduced"... "in order to maintain safe cooling of the fuel assemblies." Continuing, HAEC said "There is no increase in the atmospheric emissions and a co-ordinated programme for environmental measurements has started. There is no detectable increase in population doses. At this moment (April 17) there is no need for the introduction of any countermeasure." Again, on April 20, HAEA reported: "The power plant continues elaborating measures for decreasing the radioactivity release as well as for reinforcing the safety of the

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EX 5

EX 4

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damaged fuel assemblies in the cleaning tank.

EX 4

Further, according to the HAEA: "In view of the stabilized and safe condition of the system the power plant has declared the end of the emergency state and terminated the activity of the emergency preparedness organization on April 20 at 9 AM"

The IAEA reported: "At 1PM on April 18, the HAEA Emergency Response Organization was deactivated." The IAEA also reported that as of 1 AM on April 22: "In the last hours, the radioactive releases did not rise; in 10 minutes it constituted 2×10^5 MBq for noble gases and 3.4×10^6 Bq for radio-iodine; rise of population doses remained below detection limit."

"As part of its investigation of the incident the HAEA carried out an inspection at the site of the Paks NPP on April 24."

EX 4

The investigation focused on the following:

- event sequence of the incident, activities after the incident and measures for mitigating the consequences
- cleaning technology applied, condition of the equipment and devices, processes
- decisions, persons making the decisions and their competencies

Evaluating the preliminary result of the investigation further information was requested by the HAEA. The investigation will continue on April 29 and only after that the HAEA will prepare a report summarizing the results and conclusions of the investigation.

EX 4

Table 1

EX 4

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The monitoring network in the 3 km (stated as 1.5 km on April 24) vicinity of the plant (consisting of 9 stations measuring gamma-dose-rates) has not shown any increase above the daily fluctuations related to the cca. 100 nSv/h average value, except for one station showing a marked increase up to 260 nSv/h for a short time on April 11th. (Apr 24) *"However, the value remained much lower than the warning limit of 500 nSv/h. Such values often occur in the environment after a heavy rain because of natural radioactivity. As a matter of fact, this is negligible from the point of view of possible human exposure."* (April 28)

Field measurements in the plant and in the surrounding area yield as typical values of I-131 surface contamination between a few Bq/m² and a few hundred Bq/m². The highest level detected in the close vicinity of the plant is less than one thousandth of the average contamination in Hungary following the Chernobyl accident. No activity due to the event has been found in milk samples." (24Apr)

Correspondingly no countermeasures whatsoever have been introduced or are foreseen on-site, neither out of the site.

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Note: *Items in italics are updates as of April 29, based on an HAEA report dated 28 April 2003 and a private communication from HAEA.*