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WORKSHOP ON THE PAKS II SITE CHARACTERISTICS

Key comments on the presentations and discussions during the Hungarian-Austrian professional workshop on the Paks II site characteristics in Budapest, Feb 15, 2022

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SUMMARY – ACCESSIBLE FORMAT
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SUMMARY

The information gained during the first workshop on the site conditions of the Paks II site lead the EAA experts to the following conclusions:

- The EAA experts regard the presented data on seismicity insufficient to allow a reliable assessment of capable faults (*"7.3.1.0800. The potential occurrence of a permanent surface displacement on the site shall be analyzed and evaluated. The examination must be sufficiently detailed to enable a substantive decision to be taken on the question of the possibility of discarding the site by the occurrence of permanent surface displacement."*)[1]
- To reliably assess fault capability, it will be important to expand the observation periods of possible seismic surface faulting beyond the coverage of historical and instrumental earthquake data. In line with international scientific practice and WENRA requirements the expansion of the timescale towards centennial and millennial timescales requires that a paleoseismological approach is adopted, especially in an intraplate setting like Hungary.
- The available paleoseismological (trenching) data are not sufficient to exclude fault capability. For a comprehensive assessment, other fault strands with inferred near-surface faults need to be trenched.
- The EAA experts state their concerns about the validity of the maximum earthquake magnitude inferred for the area under consideration. The stated value of M=6 is challenged by the assessment provided in the European SHARE project and the paleoseismological results obtained from the near-region of the Paks II site.
- In their study, Decker & Hintersberger (2021) concluded that *« the paleoseismological data derived from the trench Pa-21-II next to the site confirm the existence of capable faults in the site vicinity of Paks II. These capable faults are part of the Dunaszentgyörgy-Harta fault zone, their strike continues into the site, and they reveal evidence of repeated, significant surface displacements during the last ca. 20,000 years. »* The information provided during the bilateral workshop does not suffice to revise these conclusions.
- The latter conclusion is particularly important with regards to the Hungarian Governmental Decree No. 118 of 2011, requirement 7.3.1.1100:. *"If the potential of occurrence of a permanent surface displacement on the site cannot be reliably excluded by scientific evidences, and the displacement may affect the nuclear facility, the site shall be qualified as unsuitable."*[2].

Although the workshop provided a valuable opportunity to exchange opinions on the Paks II site conditions, it was not possible to reach a technically satisfac-

[1] http://www.oah.hu/web/v3/haeaportal.nsf/8EE55B54901CDD60C1257CDD004367CB/$FILE/118%202011%20Korm.%20Rendelet%20_7.%20k%C3%B6tet_EN_2018_04_10.pdf

[2] http://www.oah.hu/web/v3/haeaportal.nsf/8EE55B54901CDD60C1257CDD004367CB/$FILE/118%202011%20Korm.%20Rendelet%20_7.%20k%C3%B6tet_EN_2018_04_10.pdf

tory clarification of the mutual positions. Due to this, and due to the high relevance of the issue for nuclear safety, the EAA experts suggest continuing the dialogue on the expert level with the continuous involvement of additional international experts.

To continue dialogue, the Austrian delegates suggested to the Hungarian side to grant permission to the EAA experts to visit open construction pits on the Paks II site. This should enable gathering first-hand observation of the geological site conditions. The Hungarian delegates responded positively to the Austrian suggestion. This courtesy is highly appreciated and underscores the open spirit of the meeting.

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