



The ion-exchange resins and sludges from the Caorso NPP

A long journey to incineration and public backlash in Slovakia

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OVERVIEW

- RW type: ion-exchange spent resins in **urea-formaldehyde** and radioactive sludges (low level RW)
- Origin: operation of the Caorso NPP, Italy, shut down in 1986 (30+ years old)
- mixing resins and sludge with urea-formaldehyde was the original treatment in the past, but **new conditioning needed** due to, e.g., significant amount of free (corrosive) liquids
- **incinerated in** Seibersdorf, **Austria** (1990-1997) and Jaslovské Bohunice, **Slovakia** (2015-2023)
- **common** features:
 - **“identical” incinerator** with shaft furnace (NUKEM)
 - **severe technical difficulties** delaying regular incineration for years
 - **no consultation** with the public before treatment
 - **strong public opposition** to **foreign** RW incineration after the public found out
- **differences:**
 - **Austria** - government intervention; treatment discontinuation; leftover RW returned back to Italy without treatment (approx. 800 tons incinerated)
 - **Slovakia** - preconditioning line and additional incinerator had to be built; prohibition of new contracts for foreign RW incineration by law (repealed after government change); all contracted RW from Caorso incinerated due to financial sanctions in case of contract cancellation

INCINERATION IN SLOVAKIA

- 800 tons of ion exchange spent resins and 65 tons of radioactive sludges (5881 barrels).
- Contract signed in June 2015. First incineration tests only after a preconditioning line was commissioned (January 2019)
- During EIA in 2018 JAVYS **justified an additional incinerator** by expected approx. **50% increase** in production of the **Slovak combustible RW** (no mention about foreign RW).
- Municipalities approved the 2nd incinerator on condition that **no foreign RW will be incinerated** at the 2nd incinerator. JAVYS agreed.
- **documents and data obtained much later proved that the preconditioning line and the 2nd incinerator** with a rotary kiln (instead of shaft furnace) **had been built specifically for the RW from Caorso**
- **legal loophole:** in May 2022 (after commissioning the 2nd incinerator) the **restrictions were removed** (expired) after another EIA was carried out, since JAVYS no longer agreed with the restrictions. The incineration limit doubled to 480t/y.
- the **incineration of Slovak RW dropped** by 50% in 2021-2022. More Slovak RW only after incineration of all contracted Italian RW finished in mid 2023.

MAIN ISSUES

- **nontransparency in nuclear industry and decision-making processes**
 - during EIA the second incinerator justified by the Slovak needs, not by foreign RW treatment
 - **the regulator did not correct the narrative** during EIA
 - only later it was revealed that the incinerator was built with emphasis on ability to incinerate the RW from Caorso
- **deadlines** in EIA and other proceedings **do not reflect the size of documentation** of large projects (incl. nuclear)
- **not enough time to investigate and verify data** presented by the project proposer
- **physical inspection of printed files** with thousands of pages often **necessary**. Time-consuming and can be expensive.



Thank you for your attention

For more details see the **EURAD deliverable 9.16:**
*Implementation of the ROUTES ICS action plan first phase -
CS discussion and input focused on the first topic identified in the ICS
action plan (task 7.2)*