# Summary WG3

**Information Exchange Platform (IEP) for SNETP and IGDTP**

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Outline of the meeting:

* Information from IGD-TP to SNE-TP: How are changed waste forms considered by WMO?
* Information from SNE-TP to IGD-TP : What are the expected developments in waste forms?
* Other information Exchange and topics for discussions
  - Fact Sheet
  - Outlook: the next steps

# What is this IEP?

- At the moment, a loosely defined group with representatives from both platforms
- Defined as Information Exchange Platform by the IGD-TP  Executive Group
- Communication and Information Exchange
- Main focus: Waste forms
- Current and near future: Gen II/III
- Far future: Gen IV

# Main messages

- We have successfully established a link between the platforms
- We have started information exchange!
- Change in fuel is happening right now.
- We a working on a common task: The Fact Sheet
- For continued work, it is desirable to formalise and structure this group further.
- Continued work could involve another couple of publications: position papers or discussion papers

# Presentations

1 - The IGD-TP/SNE-TP Information Exchange Platform – an introduction: *Lena Z. Evins, SKB*,
2 - The SKB requirements of the HLW waste intended for the KBS-3 repository : *Lena Morén, SKB*
3 - Fuel data needs in Posiva's safety case : *Barbara Pastina, Posiva*
4 - Evolution of the waste forms in the future : an overview of the French approach :*Christelle Martin, Andra*
5 - Progress and R&D needs for radioactive waste conditioning and disposal for future fuel cycles: a UK perspective : *Neil Hyatt, University of Sheffield*
6 - The Sustainable Nuclear Energy Technology Platform (SNETP), Fuel Cycles and Interfaces with Geological Disposal: *Richard Stainsby, NNL*
7 - Nugenia Research Topics in Spent Fuel Management (TA 5) and Potential Implications for Disposal: *David Hambley, NNL*
8 - SNETP-ESNII Gen IV reactors, related fuel cycle and disposal issues: *Massimo Sepielli, ENEA*
9 - Conditioning radioactive waste that can not be accepted in surface facilities : *Gregory Nicaise, IRSN*

# Some points from presentations (I)

- SKB & Posiva: requirements for waste (spent fuel) acceptance. Low solubility & knowledge of inventory in various parts. Fuel data needed for SA.
- Andra: a wider spectrum of long-lived waste types: HLW & ILW. Currently an iterative approach between Andra and the waste producers, takes evolution into account
- Discussion points: what is the optimum Burn-Up, due to the changes in minor actinides? Important to have the regulator involved in the iterative approach.

# Some points from presentations (II)

- IRSN: How the producer has to design the waste package in absence of waste acceptance criteria? Basic principles, criticality,radioactivity, reactivity, mechanics... Example: plastic waste. Recommendation: development of dedicated thermal process to have an inert form

# Some points from presentations (III)

- University of Sheffield: Two examples of ”non-standard waste”:Ion exchange resins & High fission product glass. How to optimise the waste form throughout the life cycle (off gas)
- SNE-TP: three pillars: Nugenia (Gen II/III), ESNII (Gen IV), NC2I (cogeneration).
  New Fuel Cycle Group.
- Nugenia: Change is happening! Burnup, improving fuel, advanced fuel types to existing reactors (pellet & cladding)

# Some points frompresentations (IV)

- ESNII: Various types of fast reactors (SFR, LFR, GFR) and thermal (MSR, SCWR, VHTR). Reprocessing methods: hydrochemical/pyrochemical. Chloride salt wastes from pyroprocesses with different matrices
- Point of discussion: secondary waste, operational waste, activation waste? Current projects are now focusing on technology, so no project yet but relevant : for example exchange resins

# Common Fact Sheet

- Purpose: To communicate that **we are working together** and have identified common ground. To establish the link.
- *Nuclear energy gives rise to radioactive waste that will need disposal
  *Good progress is being made in some countries on geological disposal
  *New reactor systems might simplify repository systems but will not eliminate needs for deep disposal.
  *Work on deep disposal should not be delayed waiting for new reactor systems
  *R&D concerning new reactor systems should include waste disposal from the start
- Second version now: Aim for final version in the spring, decison to publish by the Executive groups of both platforms.
- Dissemination being discussed. How to reach further than the platform web sites? ENEF (European Nuclear Energy Forum)?

# Outlook: next steps

- More than a regular information exchange? How do we deepen the collaboration?
- Not ready for a common project proposal
- Suggestion: another ~2 common publications.
- Position papers/discussion papers
- Topics: 1) Advanced fuels, 2) Non-fuel waste /non-standard waste, 3) Utilities and fuel data, 4) Flexibility of repositories?
- Suggestions to be brought to the Executive groups of the platforms