

Safeguards with Small Holders – From Headache to Optimal Safeguards Implementation

H. Niittymäki, T. Ansaranta, M. Hämäläinen, STUK
henri.niittymaki@stuk.fi

ABSTRACT

State Regulatory Authority (SRA)

- regulatory control, including small NM holders safeguards.
- maintains NM accountancy system including the small NM holders.

This is a presentation of Finnish SRA's (STUK) current experiences for a reliable path to implement all the necessary safeguards measures for small NM holders. The number of small NM holders has dropped during the last decades as the SRA has made systematic efforts to clarify requirements and simplify declarations to achieve best practice.

INTRODUCTION

- It is the duty of STUK to control that the operators performing nuclear activities comply with the Nuclear Energy Act and Decree.
- Operators are required to nominate persons to take care of accounting and reporting of the NM.
- The SRA shall review safeguards handbooks and the nominated persons to verify that they fulfil the respective requirements in the national regulations.
- STUK has recognised that promoting knowledge and understanding about safeguards requirements among the small NM holders is essential.
- The experience has shown that active communication about the requirements to the potential and becoming small NM holders makes things easier.

EARLY PHASE SRA RESPONSE

- The SRA measures in early phase to implement safeguards for small NM holders would improve the status and realisation of safeguards.
- Small NM holders usually do not have similar resources for safeguards than nuclear facilities.
- The goal is that the non-proliferation should be understood by all operators, regardless of their size or scale of activity.

COMMUNICATION AS IMPORTANT PART

- It can be a headache to manage and direct the small NM holders to implement the adequate safeguards measures.
- STUK has learnt that early stage communication helps achieving the desired results in implementing safeguards measures.
- For various reasons, there can be erroneous and deficient data in the small NM holder's files and the national and/or international registers.
- The SRA learns about the operator and its activities, which is important in order to be able to perform the adequate oversight activities.
- The operator gains knowledge of the purpose and background of the safeguards requirements.

Small NM holder apply for a licence or the SRA catch via regulatory control of radiation practices.



Usually, a meeting or two will be organised between the parties to open discussion and to clarify situation.



Small NM holder (responsible manager) is now motivated to fulfil the requirements.



In a latter stage of the life cycle of small NM holders, the SRA gives assistance and guidance.



Nuclear material handbook describing the procedures by which the operator shall fulfil the safeguards requirements. STUK's approval required.

One example of the implementation of the communication.

SRA SUPERVISION

- The control of small NM holders is mostly based on document reviewing.
- STUK safeguards section cooperates with the Radiation Practices department Radiation in Industry section, which, in turn, oversee radiation source licence holders within industry.
- The Radiation in Industry section has a mandate to inspect the nuclear material in possession of the radiation licence holders, which in a typical case comprises a depleted uranium radiation shield.
- In cases that NM is no longer used, the SRA advises the operator to arrange for properly disposing of the material, usually by shipping it to the STUK small waste repository.
- The SRA should be proactive and encourage the operators to feel free to contact for any consultation or advice early enough in advance.

STUK's nuclear material register - SAFKA

- STUK is responsible for maintaining a central accountancy system including the register of nuclear material.
- SAFKA can be used for printing various reports such as summaries of balances and inventory changes.
- In SAFKA, each of the facilities and small holders is managed by a designated STUK inspector.
- STUK renewed the register data base last year and since the beginning of 2018, this new SQL based register has been in operation.



Couple examples NM's collected by SRA from Small NM holders.

CONCLUSIONS

- In Finland, the implementation of the small NM holders safeguards measures have evolved during the decades.
- The small NM holders have been considered somewhat of a headache to the SRA, but as a result of the SRA's efforts for clarifying safeguards requirements for these operators, the headache has been eased.
- The most important actions by STUK that can be seen as key factors leading to success in the small NM holders safeguards are the following:
 - designated facility responsible officer (inspector) for the small NM holders;
 - the requirements to prepare a nuclear material handbook and to provide contact information of the nuclear material safeguards responsible persons;
 - encouraging to dispose of nuclear material that is no longer in use;
 - close cooperation inside the SRA between the Nuclear Material Safeguards section and the Radiation in Industry section.
- As a future development point, information sharing and reporting can also be done through Internet from the SRA's official web pages.