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Enhancement of Safeguards Effectiveness by International SSAC Advisory Service

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1. Introduction

State Systems of Accounting for and Control of Nuclear Material (SSACs) are fundamental to effective and efficient safeguards implementation. In that regard, legislative and regulatory systems to implement the pertinent accounting and control are required. SSACs also need the technical and analytical ability to perform essential safeguards-related measurements and to operate administrative systems to meet their safeguards reporting obligations. The IAEA prepared so called ISSAS(International SSAC Advisory Service) to provide member states with advice and recommendation for the effectiveness and efficiency of SSACs.

The ROK government officially requested the ISSAS mission on Jan. 28, 2005 for the purpose of enhancing nuclear transparency as a countermeasure to solve the nuclear experiment crisis in 2004. The main mission was performed in July and the initial findings with recommendations were presented, and the final draft report with some recommendations will be issued by IAEA in the near future. In this stage, it is important to review the ISSAS procedures and mission activities for the safeguards implementation in the future according to the results and action plans of the final report.

2. ISSAS Objectives

The objectives of the ISSAS mission are :

- To evaluate the legal framework and regulatory, administrative and technical systems of the SSAC at both the State and facility level;
- To evaluate the performance of those systems in meeting the State's safeguards obligations;
- To identify areas where further cooperation with the IAEA could increase the effectiveness or efficiency of safeguards; and
- To make recommendations on how any shortcomings identified could be rectified or further cooperation could be implemented, whilst recognizing good practices identified in the course of the mission.

3. ISSAS Mission

3.1 Mission Scope

The scope and duration of an ISSAS mission will be determined largely by the size and nature of the State's nuclear fuel cycle. The mission deals with issues relating to nuclear material and safeguards, including other areas, such as physical protection, trafficking or radiation safety if there are specific reasons.

3.2 Mission Team Composition

The size of team depends on the scope of the mission, which is primarily a function of the size and nature of the fuel cycle. The ISSAS team members including safeguards inspectors and a legal expert are selected so as to ensure that a variety of national approaches to regulation and implementation is represented.

3.3 Preparation of Main Mission

Advance Reference Material

To obtain a good understanding of the organization, procedures, authorities, and legal basis of the SSAC, the Advance Reference Material should be prepared at least two months prior to the team's visit to the host country.

(a) National Legislation
(b) SSAC Authorities Organization and Procedures
(c) Facility Plans, Information and Procedures, DIV and Complementary Access

Preparatory Visit

Before the main mission, a preparatory visit should be held in the host country, with the team leader and technical officer meeting senior management of the SSAC and other relevant State organization. The meeting will considers :

- Agreement of a schedule and the main features of the proposed ISSAS mission;
- Preparation for the mission, including a list of the documents required before or during the mission;
- The identification and scheduling of meetings with relevant persons and representatives from organizations to be interviewed;
- Preparation, review and confidentiality of the ISSAS mission report; and
- Follow-up procedures.

3.4 Main Mission

During the main mission, the ISSAS team reviews in detail the laws, regulations and other measures that govern the establishment and operations of the SSAC, including such provisions related to the implementation of the additional protocol, and will assess how effectively they operate in practice.

The means used by the ISSAS team to acquire the information needed to develop their conclusions and recommendations include:

- A review of written material;
- Interviews with personnel; and
- Direct observation of organization, practices and systems in place at the State level, at a facility handling nuclear material and location related to the additional protocol, if applicable.

3.5 Mission Report & Follow-up

During the course of the mission, individual team members prepare detailed findings on the areas assigned to them. The reviewed findings will form the basis of presentations at the exit meeting, where the SSAC Authority has the opportunity to comment to them. The draft report will be submitted to the IAEA within one month of the completion of the mission, and reviewed by appropriate IAEA staff prior to submission to the SSAC Authority of the host country. The final report will be submitted through official channels to the host country concerned within three months of the completion of the mission.

A detailed follow-up action plan, with targets and due dates agreed with the State, forms part of the ISSAS mission report.

3.6 ISSAS Mission to the ROK

The ROK invited the ISSAS mission for the first time among the countries with large scale nuclear power industry. For the mission service, IAEA dispatched 7 member team including safeguards inspection experts and a legal expert. The mission was performed according to the agreed schedule in the preparatory meeting for 7 days from July 25 to Aug. 1. As the SSAC Authorities, MOST and NNCA participated the mission, and MOCIE and MOFAT attended as a relevant governmental organization. KAERI, KHNP and KNFC took part in the mission and provide the ISSA team with the direct observation to their facilities. Legislation basis of safeguards implementation, independence of the SSAC, export control and other safeguards related issues are discussed and reviewed.

4. Conclusion

The safeguards practices with regulations and procedures can be reviewed intensively through the ISSAS main mission, and the strong and weak points of SSACs can be identified. In this stage, it is not easy to evaluate the effectiveness of the ISSAS program because only two examples exist, in Indonesia and the ROK. Nevertheless, it is concluded that the systematic approaches to find facts about SSACs and to draw recommendations could be the best way for the safeguards implementation. Its effectiveness can be evaluated with more examples of the ISSAS programs and the action plan results.

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