

§7. Safety Strategy and Optimization on Radioactive Discharges

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The purpose of this study is to list up discussion items for optimization on radioactive discharges from facilities using radioactive materials in order to establish safety strategy.

Revision task on WS-G-2.3 Safety Series “REGULATORY CONTROL OF RADIOACTIVE DISCHARGES TO THE ENVIRONMENT (2000)” of IAEA is one of the most important international movements on the related discussion. After the publication of WS-G-2.3, several international documents have been open to public, ideas and description in these documents would be the basis of future safety strategy. For example, IAEA SF-1 “BASIC SAFETY STANDARDS (2006)”, ICRP Publication 101 “Assessing Dose of the Representative Person for the Purpose of Radiation Protection of the Public and the Optimization of Radiological Protection(2006)”, ICRP Publication 103 “The 2007 Recommendations of the International Commission on Radiological Protection (2007)”, IAEA International Basic Safety Standards - Radiation Protection and Safety of Radiation Source (2012), etc. would be the core documents.

In BY of 2013 as the second year of this research, latest movement and discussion items of IAEA on regulation on discharge of radioactive materials from facilities have been investigated, especially focusing on the activities of RASSC.

The latest meeting of IAEA-RASSC held in November of 2013 concluded to stop the discussion on the DS427 “Assessment of Facilities and Activities for Protection of the Public and Protection of the Environment” because related technical subjects had not fully been discussed in the task group yet. The draft of DS427 was sent back to the task group in this meeting. Main discussion points are; difference of framework between radiation environment assessment and safety judge on facility, potential exposure, technical method on assessment for animals and plant, etc. Based on

the above policy, the draft of DS427 will be further more revised and discussed in the next meeting of IAEA-RASSC held in May of 2014. Draft documents of DS432 “Radiation Protection of Public and Environment” and DS442 “Regulatory Control of Radioactive Discharges to the Environment” will be also opened and discussed in the next meeting. This means that international policy of radioactive discharges would be discussed together with the environmental assessment and the environmental protection. Related discussion would be more and more complicated under this situation.

In Japan, the Environment Basic Law was revised after the accident of the Fukushima Dai-ichi nuclear power reactor. Exclusion of application on measures for prevention of environmental contamination of radioactive materials was deleted by this revision. In addition, the Atmospheric Pollution Prevention Act and the Water Pollution Prevention Act were also revised in June of 2013. Environmental assessment on radiation was also requested by the related act and discussion on concrete measure on the assessment has just been started. These movement is directly related to the international discussion on radioactive discharges. Continuous survey on the related international movement and information from multilateral viewpoints is important.

Two examples of related important discussion points are (1) problem on approval of discharges on diffusion of radioactive materials over the national border line, and (2) confusion between environment protection and environment preservation. The former item has not been generally discussed in Japan. On the other hand in EU countries, for example, these measures are comparatively well discussed and they have related acts and guidelines. IAEA would refer their acts and guidelines. The latter problem is mainly based on the difference of standing point of the measure purpose of regulatory control of discharges. The purpose of regulatory control of radioactive discharges should be more clearly defined.