

Sumitomo Metal Mining Company Limited's

Energy & Environmental Business Division Technology Center (52nd Peer Review)

**NSnet Div. 52nd Peer Review of Sumitomo Metal Mining Company Limited's, Energy & Environmental Business Division Technology Center, conducted over three days period starting May 24, 2006, was completed. A summary of the review is shown below.**

### **1. Reviewed Establishment (Location)**

Sumitomo Metal Mining Company Limited (SMM) located in Tokai-mura, Naka-gun, Ibaraki Prefecture.

### **2. Overview of the establishment and targets of review**

The Technology Center, the subject of this review, was founded in 1980 to conduct experimental research concerning separation and purification technology in the nuclear fuel cycle through the application of SMM's technology for nonferrous metal smelting. The main operations of the Technology Center are the development of technology for separation and purification through solvent extraction of radioactive material, development of technology for processing waste products from metal and other materials that have been contaminated on the surface by radioactive matter along with other research and development.

The Technology Center has come to play a major role in the principal processes, test operations and other activities of the Reprocessing Facility in Rokkasho-mura in Aomori-prefecture.

Recently in its operations related to nuclear power, the Technology Center has mainly undertaken maintenance and administration of the testing facility along with the disposal and management of radioactive waste, but it has also been making progress developing technology in non-nuclear power fields, including technology for preserving the environment et cetera.

### **3. Members of the review team, and the method of review**

Review leader : Japan Nuclear Technology Institute (JANTI)

Group A : Hokkaido Electric Power Co., Ltd.,  
Central Research Institute of Electric Power Industry

(Fields of review: Organization/Operation, Emergency preparedness and Radiation protection)

Group B : Mitsubishi Electric Corporation, JANTI

(Fields of review: Education/Training, Operations/Maintenance, Work control and Specific evaluation items)

Method of review : Field observation, interview with persons involved, examination of

documents in the above areas.

#### **4. Results of this review**

##### **(1) Main Conclusions**

In summing up this review, any item in the nuclear safety field that would lead to a serious accident unless immediate remedies were taken was not found.

At the Technology Center, based upon regret for and reconsideration of past nuclear power-related accidents and incidents, efforts are being made for continuing improvement and "thorough compliance," which are fundamental in achieving nuclear safety. In particular, in consideration the content of operations currently being implemented, which is the processing and management of radioactive material and the development of technology for preserving the environment and other functions, an environmental management system (ISO14001:2004), which has been deployed companywide, is being utilized as a means for effectively undertaking continuous improvement of nuclear safety in accordance with the PDCA cycle. Also, the approach of the entire group is to advance operations in combination with a risk management system as well as labor safety and health management systems.

Additionally, all personnel fill out the "Checklist for Self-Assessment of Safety Culture" in order to discover shortcomings related to nuclear safety and quantitatively conduct self assessments of the progress in creating a safety culture. The results are output on a self-assessment radar chart, and efforts are being undertaken to improve weaknesses. Moreover, steady efforts are continuing to be made in regard to nuclear safety, including the distribution and application of safety notebooks devised to aid in the sound performance of work, continuing utilization of safety and health cards, review of risks associated with the Technology Center, and so on. With regard to suggestions for improvement identified in the first review, the improvements are being appropriately undertaken including making sure that the initial response or other measures in response to the outbreak of a fire at night or on a nonbusiness day be reliably executed by security guards.

In this manner, the current circumstances of the Technology Center may be assessed as having a functioning structure for the realization of nuclear safety as it proceeds to conduct its current operations. However, it is desirable that the ongoing activities be expanded for the reliable performance of actual work in future situations, also.

##### **(2) Good Practices and Suggestion for Improvement**

This Peer Review selects good practices that should be widely introduced to other NSnet members and within the nuclear power industry. Meanwhile, several proposals were made that would be useful in further improving safety culture

A brief look at Good Practices \*1 and Suggestions for improvement \*2 follows below.

**a. Good Practices**

**Fields of review**

**Summary of Good Practices**

Organization/Administration

Group members' assessment and release of "Safety Effort Declaration"  
Preparation of the "Self-Evaluation Radar Chart Concerning the Extent of Safety Culture Creation" and consideration of measures for improving weaknesses  
Distribution of safety notebooks to all employees and their use

**b. Suggestion for Improvement**

**Fields of review**

**Summary of Suggestion for Improvement**

Organization/Administration

Clarification of the connection between company-wide rules and Technology Center's rules  
Application of information concerning management of non-conformities  
Utilization of expert knowledge regarding human factors

Emergency preparedness

Improvement of facsimile functions in the emergency communication and reporting system

Operation & Maintenance, Work Management

Maintenance of a ledger for managing malfunctions to be used during inspections of equipment and machinery

**\*1 : Good Practices**

Information on good practices incorporating appropriate, effective, and unique methods into activities to ensure safety should be widely distributed to the members of the NSnet and the nuclear power industry.

**\*2 : Suggestions for Improvement**

After comparing the practices of Mitsubishi Materials Corporation with the best in the nuclear industry, suggestions to improve and enhance safety activities should be implemented to achieve the highest level of nuclear safety.

Even if current activities are equal to or higher than general standards in the nuclear industry, suggestion is taken up in case there is still room for improvement.