

JCO Company Limited's Tokai Plant (53rd Peer Review)

NSnet Div. 53rd Peer Review of JCO Company Limited's, Tokai Plant, conducted over three days period starting July 12, 2006, was completed. A summary of the review is shown below.

1. Reviewed Establishment (Location)

JCO Company Limited located in Tokai-mura, Naka-gun, Ibaraki Prefecture.

2. Overview of the establishment and targets of review

The major facilities of the Plant can roughly be divided into “Management Buildings 1 through 4” and “Solid Waste Storage Buildings 1 through 5.” At present, most of the equipment within the Management Buildings is not in operation. As of July 2006 when the Review was conducted, a total of 33 personnel, including the President, were mainly engaged in the maintenance and management of these facilities.

After the critically accident in September 1999, the Plant faced the revocation of their Processing License in March 2000 and announced that it would give up the resumption of the reconversion business in April 2003. At present, therefore, the Plant is not engaged in any production activities, and its business is the maintenance of facilities and the management of radioactive waste.

Changes in the conditions surrounding the Plant and its operation that have occurred since September 1999 are as outlined below.

- (1) Due to the criticality accident that occurred on September 30, 1999, the Processing License granted under the Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors (“Reactor Regulation Law”) was revoked on March 28, 2000. Subsequently, approximately 260 tons of uranium stored within the Plant was carried out.
- (2) On November 22, 2000 after carrying out the uranium, approval was given to changing the amount of nuclear fuel material to be used. The maximum amount of nuclear fuel material that can be handled at the Plant is less than critical mass⁽¹⁾. At present, the Plant is excluded from the application of “Facilities Inspection” and “Authorization of the Safety Regulations” under Article 41⁽²⁾ of the “Enforcement Ordinance of the Reactor Regulation Law” and the “Law on the Special Measures Concerning Emergency Preparedness for Nuclear Disasters.” Currently, only approximately 4 kg of uranium is left as a standard sample for analysis.
- (3) On April 18, 2003, an announcement was made to give up the resumption of the reconversion business. The removal of equipment from Management Building 3, where the criticality

accident occurred, was completed in March 2006.

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

Review leader : Japan Nuclear Technology Institute (JANTI)

Group A : JGC Corporation, Kobe Steel Ltd.

(Fields of review: Organization/Operation, Emergency preparedness and Specific evaluation items (fire protection and explosion prevention))

Group B : Ishikawajima-Harima Heavy Industries Co., Ltd, JANTI

(Fields of review: Education/Training, Operations/Maintenance, Work control, Radiation protection and Specific evaluation items (human error prevention))

Method of review : Field observation, interview with persons involved, examination of documents in the above areas.

4. Results of this review

(1) Main Conclusions

Under these operating circumstances, this Review confirmed that the plant was earnestly endeavoring to establish a safety culture and regain the trust of local residents and communities under the strong leadership of the top management.

It is worth special mention that two good practices were identified as a result of improvements made in the areas for improvement needed, which were pointed out in the previous review. It is reasonable to consider that this indicates that the Plant is seriously committed to ensuring safety. During the peer review of JCO, interviews were conducted actively with plant personnel ranging from executives to frontline employees to learn lessons from their experience in various activities relating to the criticality accident. This made it clear that the Plant as a whole has been endeavoring to carry out post-accident activities.

(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	The top management's commitment to safety

	Promoting safety culture steadily
Education and Training	Improving education and training Conducting compliance training (compliance study meetings) and informing all the employees of the results thereof
Operation, Maintenance, and Work Management	Ensuring the safety of each job
Human Errors	Consistent human error prevention activities

b. Suggestion for Improvement

Fields of review

Summary of Suggestion for Improvement

Operation, Maintenance, and Work Management

Stipulating the measures to be taken when inspecting and coping with malfunctions of the radioactive gaseous waste release control monitors

***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.