

CPJ Seminar on the Environment for LUKOIL

A Customized Program-Japan on environmental issues was held for a group of experts from various departments of Russia's leading oil company, LUKOIL (Nizhegorodnefteorgsintes Group). The program ran from October 23 to November 6, 2012.

1. Background

A CPJ seminar themed on environmental management technologies was designed in response to a request from LUKOIL for a broad-scoped training program that includes visits to refineries, lectures on environmental countermeasure technologies, TPM activities, energy conservation and Japanese-style human resource management, and a visit to an engineering company.

2. Training Content

2.1 Training at JCCP

(1) Japan's Oil Industry

This lecture introduced the characteristics of Japan's oil industry and provided an understanding of the importance of the Japanese market to Russia. The participants showed strong interest in Japan, through the existing Sakhalin Project.

(2) TPM Activities

The first part of the lecture introduced the history and actual status of TPM activities, and discussed the approach to changing corporate culture by enhancing the quality of its people and facilities. The latter part introduced the 5S activity, the "8-irazu (8 unnecessary things to do)" activity, visualization measures, and practical case examples of the 5Ss in the office. TPM requires people to change the way they think based on an understanding that "facilities will change if people change, and if facilities change, the company can change." This lecture allowed the participants to gain a good grasp of this basic concept of TPM.

(3) Energy Conservation in the Refinery

Energy conservation is an important issue and crucial challenge to Japan as an energy importer. Thus, this lecture provided a broad understanding of energy

conservation by introducing the principles of Japan's energy-saving law, voluntary initiatives of Japan's oil industry, the top-runner method of improving energy efficiency in individual products, awareness-raising activities based on an awards system, and case examples of energy conservation in refineries.

(4) Wastewater Treatment

(Lecturer: Mr. Muramatsu, Swing Corporation)

Mr. Muramatsu from Swing Corporation gave a systematic lecture on wastewater regulations and various wastewater treatment technologies that are actually used in refineries. He captured the participants' strong interest by introducing new treatment technologies such as the membrane bioreactor and denitrification technologies for treatment of associated water and eutrophication prevention. In Japan, refinery wastewater is fundamentally discharged into the sea, but in Russia, it is discharged into rivers, so stricter wastewater management is required.

(5) Japanese-style Human Resource Management

This lecture covered a broad range of topics related to Japanese-style human resource management, including the historical background of the Japanese system, the Japanese people's values centered on harmony and teamwork, and the transition from a seniority-based system to a merit-based system, as well as the contradictions of those systems.

2.2 Offsite Training

(1) Shimadzu Corporation, Head Office and Sanjo Works

(Lecturers: Mr. Nishikawa, Ms. Tanaka)

At Shimadzu Corporation, the participants were introduced to analysis equipment that forms the basis of environmental management, and learned about the company's environmental activities and initiatives to reduce environmental loads in relation to ISO 14001. They also visited the assembly line of actual analyzers, and learned first-hand about the meticulous manufacturing processes that are unique to Japan and about policies and training systems that enhance employee motivation.



At Shimadzu Corporation's Head Office and Sanjo Works

(2) *Chugai Technos Corporation*

(Lecturers: Mr. Kougezoe, Ms. Matsubara, Mr. Fukuma)

At Chugai Technos Corporation, the participants received lectures on environmental analysis and monitoring, environmental risk assessment, and soil remediation using microorganisms. They also experienced the analysis of odors while touring an actual laboratory, and gained an understanding of Japan's high level of environmental awareness by witnessing the large amount of water analysis being performed on a daily basis. The two human resource managers among the participants received a specially organized lecture from Mr. Fukuma on human resource systems in environmental analysis businesses.

(3) *TLV Co., Ltd., Kakogawa Works*

(Lecturers: Mr. Martinez, Ms. Fujiwara)

At TLV's Kakogawa Works, the participants received comprehensive training on steam trap management and energy conservation, from the basics to practical demonstrations using an actual machine. Among the participants, the two human resource managers received a specially organized lecture from Mr. Fujiwara on personnel management in the manufacturing industry.

(4) *Cosmo Oil Co., Ltd., Yokkaichi Refinery*

(Lecturers: Mr. Suzuki, Mr. Kumagai, Mr. Kamishiro)

At Cosmo Oil's Yokkaichi Refinery, the participants learned about personnel development and labor management in the refinery, the company's energy

conservation initiatives, environmental management practices, and quality control. They expressed great surprise at the close proximity of refineries and residential areas in Japan, and deepened their understanding that refineries cannot co-exist with neighboring residents without proper environmental countermeasures.

(5) *JGC Corporation, Yokohama Head Office*

(Lecturers: Mr. Arai, Mr. Tanaka, Ms. Morishita)

The participants received lectures on air pollution countermeasures (desulfurization, denitrification) and the carbon dioxide capture and storage technology. As expected from LUKOIL's request to visit an engineering company, the participants expressed strong interest in JGC's broad-ranging initiatives being implemented in foreign countries. Additionally, the two human resource managers among the group received a special lecture from Ms. Morishita on training systems in an engineering company.

(6) *Green Consultant Co., Ltd.*

(Lecturer: Mr. Hayama)

The participants visited the company's contaminated soil treatment plant and learned how treated soil is reused. They also visited an industrial waste treatment facility and learned about the treatment methods of each relevant substance. Since lubricating oil will soon be required to be recycled in Russia (more than 20% of production will be required to contain recycled oil), the participants showed strong interest in the waste oil recycling plant.

3. Summary

In Russia, there seem to be large expectations of Japan's cooperation in exchanging information on various technologies and introducing new facilities, as the automation of production facilities and environmental countermeasures have only begun to be addressed in recent years. Since the participants were a group of diverse members from the finance, environment, fuel oil, personnel, lubricating oil, and management departments and an oil storage/tank facility, serious consideration to future environmental countermeasures is expected to be made hereafter from various angles.

<by Bunsuke Kariya, Training Dept.>