

December 1, 2000

MEMORANDUM TO: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield

FROM: Janice Dunn Lee, Director */RA/*
Office of International Programs

SUBJECT: VISIT OF EXECUTIVE VICE PRESIDENT NAKAGAMI, JAPAN
NUCLEAR CYCLE DEVELOPMENT INSTITUTE, DECEMBER 6,
2000

Mr. Yasuo Nakagami, Executive Vice President of Japan's Nuclear Cycle Development Institute (JNC), will meet with the Commission on Wednesday, December 6, 2000. Mr. Nakagami will be accompanied by other senior JNC officials and the Director of JNC's Washington Office. Mr. Nakagami is in Washington to celebrate the arrival of the new Director of JNC's Washington Office, Mr. Junichi Kurakami, and the departure of the current Director, Mr. Hironobu Okamoto.

Although the visit by Mr. Nakagami and his colleagues is primarily a courtesy call to introduce Mr. Kurakami, the visitors will be prepared to discuss with the Commission matters of joint interest, particularly JNC's follow-on actions with respect to previous incidents at JNC's Waste Vitrification Facility at Tokai and the Monju reactor.

Attached are the meeting schedule, biographical information, OIP's general country summary for Japan, and specific talking points for use during the visit.

- Attachments: 1. Commission Schedule
2. Biographical Information
3. Country Summary
4. Background Information and Talking Points

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VISIT TO NRC OF
MR. YASUO NAKAGAMI
EXECUTIVE VICE PRESIDENT
JAPAN NUCLEAR CYCLE DEVELOPMENT INSTITUTE
DECEMBER 6, 2000

SCHEDULE

11:30 a.m. Meeting with Chairman Meserve
12:00 noon Chairman-hosted lunch
1:00 p.m. Meeting with Commissioner Diaz

Note: Mr. Nakagami has a scheduled meeting with the Japanese Ambassador in the morning and afternoon appointments at DOE.

BIOGRAPHICAL INFORMATION

Executive Vice President Yasuo Nakagami (see Attachment 2).

PREVIOUS CONTACT WITH THE COMMISSION

JNC's President Dr. Yasumasa Togo, previously a Commissioner and then Chairman of the Nuclear Safety Commission, has met with Commission several times in Tokyo and in Washington. In April, he hosted a dinner in Hiroshima for Commissioner Dicus. Dr. Togo had originally intended to lead the JNC delegation during their current visit, but late schedule conflicts have made it necessary to send Mr. Nakagami instead.

ACCOMPANYING PERSONS

Satoru Sugawara, Deputy Director, Policy Planning Division, JNC
Masayuki Iwanaga, Director, International Cooperation and Nuclear Material Control Division, JNC
Kazuhiro Shigemoto, Secretary to the President
Hironobu Okamoto, Outgoing Director, Washington Office, JNC
Junichi Kurakami, Incoming Director, Washington Office, JNC
Shigeo Okaya, First Secretary, Embassy of Japan
Masako Katahira, Interpreter

DISCUSSION TOPICS TO BE RAISED

Mr. Nakagami would like to brief the Commission on the recent restart of JNC's Tokai Works, following the 1997 fire at the Waste Vitrification Facility, and actions being taken to restart the JNC's Monju reactor, following the accident there in 1996.

BIOGRAPHICAL INFORMATION

Date of birth: December 5, 1938

Place of birth: Tokyo, Japan

Title/Position: Executive Vice President, Japan Nuclear Cycle Development Institute (JNC)

Education: 1961 Bachelor of Technology, University of Tokyo

Career: 1961 Mitsubishi Heavy Industries Reorganized, Ltd
1990 Deputy General Director, Takasago Machinery Works, Mitsubishi Heavy Industries, Ltd (MHI)
1991 General Manager, Takasago Machinery Works
1992 Board Director & General Manager, Takasago Machinery Works
1995 Managing Director & General Manager, Power Systems Headquarters, MHI
1998 Executive Vice President, Power Reactor and Nuclear Fuel Development Corporation (PNC)
1998 Executive Vice President, Japan Nuclear Cycle Development Institute (JNC)

JAPAN

Nuclear Program

Nuclear Power

Ten utilities operate 51 nuclear power reactors (48,278MWe) that generates 33.8% of the electricity in Japan. The government's target for 2010 is to increase this amount to 42%

Nuclear Fuel Cycle

Japan operates a complete fuel cycle that includes 2 enrichment facilities, 6 fuel fabrication facilities and 1 reprocessing facility (1 full-scale reprocessing facility under construction)

Waste

There is one LLW facility. Japan plans to vitrify HLW and store it in surface facilities for 30-50 years before its final deep underground disposal. The Japanese Cabinet has formally declared that a spent fuel facility will be built by 2010.

Research and Development

The nuclear research organizations of JNC and the Japan Atomic Energy Research Institute (JAERI), formerly under the regulatory control of the Science and Technology Agency (STA), are being placed under the Ministry of International Trade and Industry (MITI), soon to become the Ministry of Economy and Industry, as discussed below.

Nuclear Regulatory Structure (From the OIP Memo to the Commission dated 7/31/00.)

In response to the JCO Company criticality accident and other recent nuclear events in Japan, the government of Japan has begun to take measures to strengthen their nuclear regulation. The government and nuclear industry would prefer to continue a "double-check system" of two regulatory organizations to police the industry and maintain safety. However, some Japanese Diet Members believe the "double-check system" is flawed and might even have been a contributing factor to the recent events and the JCO accident.

The regulatory and related changes that have taken place, and those scheduled to take place in January 2001, are in three areas: new legislation; changes at the Ministry of International Trade and Industry (MITI), the Nuclear Safety Commission (NSC) and the Science and Technology Agency (STA); and establishment of a Nuclear Safety Network (NSnet).

NEW LEGISLATION: Two new laws were put into place shortly after the JCO accident. These are (1) a partial revision of the law on nuclear source material, nuclear fuel material, and reactors, and (2) a special law on emergency preparedness for a nuclear disaster. The latter places more responsibility on the central government and on the nuclear operator and clarifies responsibilities and actions to be taken in the case of a crisis. Other key features of the laws include:

- Authorizing the Prime Minister to declare a state of emergency and dispatch Japan's Self-Defense Forces.
- Designating the central government, not the local governments, as the authority for making decisions on whether to evacuate residents or advise them to stay.

- Establishing Off-Site Centers near nuclear plants and related facilities to serve as information hubs which could be used jointly by the central government, prefectural government, and local municipalities in the case of a nuclear emergency.
- Expanding the central government's regular inspection authority over nuclear facilities to cover fuel processing plants. Experts for nuclear disaster prevention will be designated by NSC and MITI to serve as inspectors at these sites.

REORGANIZATION OF THE MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY (MITI): Beginning in January 2001, MITI will assume a much larger regulatory role. It will be responsible for the primary safety examinations of nuclear power plants, fuel facilities and waste management. To staff up for its new regulatory inspection responsibilities at fuel facilities, MITI is hiring 100 additional inspectors. In January 2001, MITI's name will be changed to the Ministry of Economy and Industry (MEI). Within MEI, the Agency of Nuclear Safety and Industrial Safety (ANSIS) will replace the current Agency of Natural Resources and Energy.

EXPANSION OF THE NUCLEAR SAFETY COMMISSION (NSC): The Nuclear Safety Commission (NSC) and its Secretariat have been removed from the Science and Technology Agency (STA), and placed temporarily in the Prime Minister's Office. Following a special transfer of responsibility, they will then be shifted to the Cabinet Office in January 2001. Since the JCO accident, the NSC Secretariat staff has been expanded from 20 to 100 people. Many of the new staff experts are coming from academia and the private sector. The Japanese regulatory process uses a "double check system", and the NSC will be involved in the secondary examination stage. The NSC will also be responsible for the planning and review of safety research in Japan.

CHANGES AT THE SCIENCE AND TECHNOLOGY AGENCY (STA): The STA (which will be combined with the Ministry of Education in January 2001 to form the Ministry of Education, Science and Technology (MEST)) will no longer be responsible for nuclear fuel fabrication facilities, spent fuel reprocessing and nuclear waste disposal. MEST will continue to regulate research reactors, non-commercial reactor development, and the use of nuclear materials. MEST may also continue to be responsible for safeguards and physical protection issues.

ESTABLISHMENT OF A NUCLEAR SAFETY NETWORK (NSnet): In December, the Japanese Federation of Electric Power Companies (FEPCO) established a Japanese version of the World Association of Nuclear Operators (WANO) to improve information exchange and enhance nuclear safety. It was created along the same policy lines as WANO, and incorporates some of its methodologies. NSnet will make available a common database to its members — some 35 Japanese nuclear-related companies — and it will encourage the timely reporting of safety events, as well as good practices. NSnet will also have a peer review system modeled after WANO's Peer Review, consisting of specialists from member organizations.

Non-Proliferation

Japan is a member of the International Atomic Energy Agency (IAEA) and became a party to the Treaty on the Non-Proliferation of Nuclear Weapons (referred to as the Non-Proliferation Treaty or NPT) on June 8, 1976. Japan has signed a full-scope safeguards agreement with the IAEA, as required by the NPT. The agreement entered into force December 2, 1977.

An Agreement for Peaceful Nuclear Cooperation exists between the USA and Japan. The Agreement entered into force June 17, 1988 with a termination date of June 2018. The Agreement meets the requirements of the Nuclear Non-proliferation Act of 1978.

Japan is a member of the Nuclear Suppliers Group and the NPT Suppliers (Zangger) Committee, and adheres to their export control guidelines.

Relations with the NRC

Bilateral Arrangements and Agreements

Japan was NRC's first foreign partner, having signed an regulatory exchange agreement with the AEC Office of Regulation in May 1974, and has continued as an active and strong partner in the sharing of safety information and confirmatory safety research.

Commission Visits

Commissioner Dicus	May 2000
Chairman Meserve	April 2000
Commissioner Diaz	April 2000
Chairman Jackson	April 1997
Chairman Jackson	October 1996
Chairman Jackson	April 1996

Recent Staff Visits

RES Director Ashok Thadani led a high level staff visit to Japan in October 2000.

Foreign Assignees

Japan's regulatory and research institutions have participated actively in the Commission's Foreign Assignee program. Each year at least one and usually two assignee's work at NRC for up to 12 months.

BACKGROUND AND TALKING POINTS

BACKGROUND

Accidents and Events

Japan's nuclear program has suffered a series of serious safety accidents and events in the last several years.

December 1995: The Monju proto-type FBR, owned and operated by the Power Reactor and Nuclear Fuel Development Corporation (PNC), leaked about one ton of sodium into containment when the tip of a thermo-couple failed due to vibration. Although there were no injuries or radiation leaks, PNC attempted to coverup the event with falsified records and edited video tape. The reactor, now under the control of PNC's successor, JNC, has been shutdown since the event.

March 1997: The Bituminization Waste Demonstration Facility at the PNC (now JNC) Tokai Works Reprocessing Plant experienced a fire and later an explosion that exposed 37 workers to low levels of radiation. The plant has remained shutdown. The Reprocessing Plant was just reopened.

September 1999: A criticality accident occurred at the JCO Co. Conversion Test Building in Tokaimura. The accident killed two workers, exposed 67 other people to radiation and forced over 320,000 people to take shelter in their homes for a day.

PNC Becomes JNC

Following the two events at PNC facilities (1995 and 1997), the government restructured the corporation, moving its headquarters from Tokyo to Tokai, and changing the corporation's name to Japan Nuclear Cycle Development Institute. Dr. Togo, Chairman of the STA Nuclear Safety Commission, was appointed President of PNC, and then President of JNC after the restructuring. At the same time, PNC Executive Vice President Nakagami continued his similar duties as the new Executive Vice President of JNC.

TALKING POINTS:

- How will JNC be affected by the restructuring of regulation in Japan? Will your responsibilities and organizational culture be changed?
- What are the highest priority JNC programs?
- What is the current status of the Monju Fast Breeder Reactor?
- What actions has JNC taken to rebuild public confidence in the Monju program?
- What is the status of operations at the Bituminization Waste Demonstration Facility?