

May 15, 2008

MEMORANDUM TO: Chairman Klein
Commissioner Jaczko
Commissioner Lyons
Commissioner Svinicki

FROM: Margaret Doane, Director */RA Scott W. Moore for/*
Office of International Programs

SUBJECT: VISIT OF DR. ANDREJ STRITAR, DIRECTOR OF THE SLOVENIA
NUCLEAR SAFETY ADMINISTRATION, MAY 19 & 20, 2008

Dr. Andrej Stritar, Director of the Slovenia Nuclear Safety Administration, will visit the Commission on Monday, May 19, 2008. He will be accompanied by Mr. Bozidar Krajnc, Director of Engineering for the Krško NPP, a state owned company.

The purpose of this visit is to discuss current nuclear safety issues that are of concern to Slovenia and the U.S., and to receive the NRC security assessment briefings. The visit schedule, biographical information, background and suggested talking points, and country profile are in Enclosures 1-4.

By copy of this memorandum, SECY, OGC, EDO, OPA, NRR, NRO, RES, FSME, NMSS, and NSIR are also being advised of Director Stritar's meeting schedule.

Enclosures:

1. Visit Schedule
2. Biographical Information
3. Background and Suggested Talking Points
4. Country Profile

cc: SECY
OGC
EDO
OPA
NRR
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RES
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CONTACT: Brian Wittick, OIP
301-415-2496

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DATE	5/14/08	5/14/08	5/14/08	5/15/08

OFFICIAL RECORD COPY

NRC Visit of
Director Andrej Stritar (STRIH-TAR)
Slovenia Nuclear Safety Administration

Schedule

Monday May 19, 2008

09:00 – 09:30	Commissioner Lyons
09:30 – 10:00	Commissioner Jaczko
10:00 – 10:30	Commissioner Svinicki
10:45 – 11:15	James Wiggins, Deputy Director NRR
11:30 – 12:45	Lunch (hosted by Commissioner Jaczko at the Marriott)

Note: Chairman Klein is on travel during this time.

Mr. Stritar and Mr. Krajnc will attend the NRC Security Assessment Briefing on PWR technology on Monday afternoon and Tuesday morning.

Accompanied by

Mr. Bozidar Krajnc (BO-J-DAR KRAINTZ), Director of Engineering for the Krško NPP, a Slovenian state owned company.

Purpose of visit

The Slovenian Nuclear Safety Administration was invited to attend the NRC Security Assessment Briefings. Mr. Stritar and Krajnc have elected to attend these briefs personally and will meet with the Commission to discuss current nuclear safety and security issues of concern to Slovenia and the U.S.

Personal Profile

Dr. Andrej Stritar Biography

Dr. Andrej Stritar finished his BSc in Electrical Engineering in 1977. After his BSc he was working as a researcher in the Reactor Engineering Department of the Jožef Stefan Institute until 1993. From 1993 until 2002 he was the Head of the Nuclear Technology Training Center. In 2002 he took over the post of Director of the Slovenian Nuclear Safety Administration.

A PhD in Reactor Engineering was awarded to him in 1986. In 1984 he had a one year fellowship with the Brookhaven National Laboratories, working on plant analyzer development. Before he took over the role of chief regulator, he was the President of the Slovenian Nuclear Society and he was also elected as the President of the European Nuclear Society. Currently he is the President of the High Level Group (HLG), the body which comprises all the top representatives in the areas of nuclear safety, radioactive waste management and decommissioning from all the EU Member States, with the mandate to find a way to better harmonization of the EU legislation in the before-mentioned areas.

Background and Talking Points

OPERATION OF KRSKO NPP

Slovenia inherited a single Westinghouse 660 MWe PWR (Krško NPP) when the central Yugoslav government collapsed in 1991. Located on the Sava River in south-central Slovenia, Krško was built as a joint effort of Croatia and Slovenia, with about half its electricity output each year sent to Croatia. It is operated by Nuklearna Elektrarna Krško (NEK), and provides more than one-quarter of Slovenia's power. The plant has been operational since 1981; it was updated to 727 MWe in 2006; the planned retirement date is 2023.

- Indicate that NRC understands that Krško is expected to operate until at least 2023. Inquire about whether there are any plans to build additional reactor(s) on this site.
- Inquire about efforts either underway or planned to prepare for decommissioning Krško. Specifically, inquire as to whether Slovenia, since they are now part of the European Union (EU), will receive any assistance with the decommissioning from the EU.

OWNERSHIP OF KRSKO NPP

Croatia and Slovenia jointly funded the construction of the Krško NPP in the 1980s while they were federal units in the former Yugoslavia. The plant is physically located in Slovenia. The dissolution of Yugoslavia in 1991 resulted in both the Croatians and Slovenians declaring themselves as independent countries. Over the next 10 years, the Croatians and Slovenians argued over who had legal ownership of Krško. In December 2001, Croatia and Slovenia signed an agreement regarding the ownership, under which the two countries are equal co-owners of the plant, draw an equal share of energy, and assume responsibility for nuclear waste management.

- Indicate that NRC understands that the agreement between Croatia and Slovenia covering Krško indicates that Croatia and Slovenia share responsibility for nuclear waste generated at Krško. Inquire about Slovenia's plans for meeting this commitment.

Dr. Stritar also expressed an interest in the following topics, background for which is provided below:

License Renewal

The Atomic Energy Act and NRC regulations limit commercial power reactor licenses to an initial 40 years, but also permit such licenses to be renewed. The original 40-year term for reactor licenses was selected based on economic and antitrust considerations, not on limitations of nuclear technology. However, once established, the designs of some systems, structures and components within the plant were subsequently based on a 40-year operating life.

NRC has established clear requirements that are needed to assure safe plant operation for extended plant life (codified in 10 CFR Part 51 and Part 54) and a timely license renewal review process.

Over one-half of the licensed reactors in the U.S. have now either received or are being reviewed for license renewal. The decision to seek license renewal is strictly voluntary and nuclear power plant owners must decide whether they are likely to satisfy NRC requirements and whether license renewal is a cost-effective venture.

License renewal decisions rest on the determination that currently operating plants continue to maintain adequate levels of safety and over the plant's life, this level has been enhanced through maintenance of the licensing bases, with appropriate adjustments to address new information from industry operating experience. Additionally, NRC activities have provided ongoing assurance that the licensing bases will continue to provide an acceptable level of safety.

Status (as of May 12, 2008)

Renewed Licenses: 48 units (at 26 sites)

Ongoing Reviews: 17 units (at 12 sites)

Announced Applications: 22 through fiscal year 2013 (it is expected that all currently operating reactors will apply for renewal)

Training for NRO employees on new and advanced reactors

- Established a detailed Qualification Program for new staff (NRO-PER-105). The purpose of the program is to ensure that staff meet knowledge and qualification standards established by the office, and to provide a standardized method for determining that the staff have met the established qualification requirements. In addition to general qualification requirements, position-specific requirements are in place for:
 1. Reactor Technical Reviewers
 2. New Reactor Environmental Reviewers
 3. New Reactor Project Managers
 4. Vendor Inspectors
 5. Construction Inspectors (under the Inspection manual)
 6. Nuclear Safety Professional Development Program (NSPDP training track)

- Developed several training courses for new reactors:
 1. AP1000 (2-day overview)
 2. EPR (2-day overview)
 3. ABWR (2-day overview)
 4. ESBWR (2-day overview)
 5. AP1000 (2-week Westinghouse course)
 6. ABWR (2-week course in development)
 7. ESBWR (2-week course in development)
 8. Part 52 (1-day overview)
 9. New Reactor Inspector Training (1-day overview)
 10. Hearing Training (1-day overview)

In addition to the training requirements listed above, the following actions have been taken to ensure that NRO has a comprehensive and cohesive approach to staff, train, and carryout its regulatory responsibilities.

- Created a Regulatory Fundamentals Training Branch in HR to provide reactor technology training to headquarters staff. Two of the Reactor Technology Instructors focus specifically on NRO technical training at the Professional Development Center.
- Hired several highly qualified reemployed annuitants focused on knowledge management and technical training needs. An assessment of NRO's technical training initiatives has just been completed.
- Utilized the agency's communities of practice program to ensure consistency of practice with the Office of Nuclear Reactor Regulation (NRR). NRO/NRR communities have been formed in the areas of containment thermal hydraulics, containment isolation, and HVAC.
- Established an Advanced Reactor Program. The Director of this program manages all advanced reactor licensing and oversight activities, including close coordination with the staff in the Office of Nuclear Regulatory Research (RES), and reports directly to the NRO Director and Deputy Director.
- Identified changes to the Strategic Workforce Planning System to distinguish the skill level and training needs of existing NRC staff in "Light-water Reactor", "High-temperature Gas Reactor", and "Liquid-metal Cooled Reactor" technologies.



SLOVENIA COUNTRY PROFILE

NUCLEAR PROGRAM

Nuclear Power

Slovenia inherited a single Westinghouse 660MWe PWR (Krsko NPP) when the central Yugoslav government collapsed in 1991. Krsko was built as a joint effort of Croatia and Slovenia, with about half its electricity output each year sent to Croatia. It is operated by Nuklearna Elektrarna Krško (NEK), and provides more than one-quarter of Slovenia's power. The plant has been operational since 1981; it was upgraded to 727 MWe in 2006; the planned retirement date is 2023.

Slovenia was one of the first of Central and East European countries to join the European Union in May, 2004. It is therefore required to comply with EU nuclear safety standards.

Nuclear Fuel Cycle

The čirovski Vrh Uranium Mine and Mill were in operation in the period from 1985 to 1990. Its lifetime production was 607,700 tons of ore corresponding to 452.5 tons (U₃O₈ equivalent) of yellow cake. Both the mine and the mill are undergoing decommissioning and remediation of surface disposal of 1,548,000 tons of mine waste and red mud, and 593,000 tons of mill tailings respectively.

Waste Management

The Central Radioactive Waste Storage at the Jožef Stefan Institute in Brinje is used for interim storage of low and intermediate level solid radioactive waste from the reactor center and other small waste producers, such as medical, research, and industrial applications of ionizing radiation. The responsibility for operation of the interim storage was in 1999 transferred from the Jožef Stefan Institute to the Agency for Radioactive Waste Management. The storage facility is a near-surface concrete building covered with earth.

The Agency for Radwaste Management (RAO Agency) is one of the organizations in Slovenia that is in charge of dealing with sources of ionizing radiation. It was established in February 1991 by the Slovenian Government. The activities of the Agency include management of Republic Radioactive Waste Storage at Brinje near Ljubljana, and to remediation activities in case of radiological accidents in facilities where radioactive waste has been stored.

Research and Development

The Jozef Stefan Institute, named after the distinguished 19th century physicist Jozef Stefan, is the leading Slovenian research organization, responsible for a broad spectrum of basic and applied research in the fields of natural sciences and technology. The staff of roughly 700 specialize in research in physics, chemistry and biochemistry, electronics and information

science, nuclear technology, energy utilization and environmental science. Within the Jozef Stefan Institute is the Reactor Center Podgorica and the Nuclear Training Centre (ICJT) which operates Slovenia's only research reactor, a TRIGA Mark II 250 kWth General Atomic pool reactor. The TRIGA was initially licensed in 1966 as an IAEA project and was re-licensed for steady state and pulse operation after refurbishment and reconstruction in 1992.

Nuclear Regulatory Structure

The Slovenian Nuclear Safety Administration (SNSA) inherited all laws from the former Yugoslavia. SNSA is consequently in the process of drafting laws for Parliamentary approval that more specifically correspond to the existing government organization and ensure compliance with relevant European Union standards. While SNSA does not follow all of the NRC's regulations, the SNSA does closely follow all changes introduced by the NRC and is moving from a deterministic to a more risk-informed regulatory process.

NON-PROLIFERATION

Slovenia is a party to the Treaty on the Non-Proliferation of Nuclear Weapons. Nuclear-related activities are conducted under IAEA safeguards.

RELATIONS WITH THE NRC

Provision of Safety Assistance:

The NRC does not provide safety assistance to Slovenia.

Bilateral Arrangements and Agreements:

Commissioner Remick signed the original arrangement in 1993. The arrangement was renewed for additional 5-year periods in April 1999 and September 2005. As such, it currently expires in September 2010.

Foreign Assignees:

NRC hosted Djordje Vojnovic, the head of the SNRA Nuclear Safety Division, in early 2006.

Commission Visits:

In April 1999 Commissioner Merrifield visited Slovenia.

Slovenian Nuclear Safety Administration List of Principals:

Director: Andrej Stritar, Director General
Website: <http://www.gov.si/ursjv/>