October 18, 2000

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

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

SUBJECT: NRC VISIT OF DR. AGUSTIN ALONSO, COMMISSIONER OF THE SPANISH CONSEJO DE SEGURIDAD NUCLEAR (OCTOBER 24, 2000)

Attached please find a schedule of appointments, biographical and background information, and talking points for the visit of Dr. Augustin Alonso, Commissioner of the Spanish Consejo de Seguridad Nuclear (CSN) to the NRC on October 24, 2000.

Attachments: As stated

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NRC VISIT OF
COMMISSIONER AGUSTIN ALONSO
SPANISH CONSEJO DE SEGURIDAD NUCLEAR (CSN)
OCTOBER 24, 2000

Schedule

Tuesday, October 24:

1:15-1:45 Meeting with Commissioner Merrifield in his office
2:00-2:30 Meeting with Chairman Meserve in his office
3:00-3:30 Meeting with Commissioner Diaz in his office

Accompanied by

Commissioner Alonso will be accompanied to the above noted appointments by OIP staff.

Purpose of the Visit

Dr. Agustin Alonso, Commissioner, Spanish Nuclear Safety Council (the Consejo de Seguridad Nuclear or CSN), will be in the U.S. October 23-25, 2000 to attend the Water Reactor Safety meeting, and would like to pay a courtesy call on the Chairman and Commissioners. He has not identified any particular topics for discussion, but is expected to discuss current CSN activities that may be of interest to the NRC, including the 20th anniversary celebration of the creation of the CSN scheduled this coming November to be attended by NRC Commissioner Diaz. Commissioner Alonso will also attend a Nuclear Energy Agency Committee on the Safety of Nuclear Installations (CNSI) meeting to be chaired by Ashok Thadani, RES, on Thursday, October 26.

Biographical Information

Dr. Agustin Alonso
Spanish Consejo de Seguridad Nuclear (CSN)

--Began six-year term as Commissioner, Consejo de Seguridad Nuclear, November 1994

--Previously Professor, Nuclear Technology, Escuela Tecnica de Ingenieros Industriales of Barcelona, in Madrid

--Some years ago was Director, Department of Nuclear Safety of the former Junta de Energia Nuclear (the predecessor of the CSN)

--International work: Former Spanish representative to, and Vice President of, the OECD/NEA/Committee on the Safety of Nuclear Installations; consultant to the IAEA on assistance to Central/Eastern Europe and the Newly Independent States and to the European Community PHEBUS project

--Education: PhD, Physical Sciences; Masters, Chemical Sciences and Industrial Engineering; Diploma, Nuclear Safety, School of Technology and Reactors, Oak Ridge National Laboratory and Massachusetts Institute of Technology

BACKGROUND INFORMATION

On March 13, 2000, for the first time since democratic government was restored in Spain after General Francisco Franco's death in November 1975, a majority of voters backed conservative parties, led by Prime Minister Jose Maria Aznar. The Popular Party won a clear majority in Congress and will govern with no need to accommodate coalition partners who have been part of the government for the past four years. The runaway election victory was hailed by Spanish newspapers as a historic shift in Spanish politics benefitting from a new public mood stemming from the economic growth of the past four years.

Spain has a Commission system similar to the NRC. The CSN is also a fee recovery agency. Unlike the NRC, CSN Commissioners can keep on serving after their six-year terms expire as long as their terms are not revoked or they are not replaced.

Nuclear Power Program

Spain has seven nuclear power plants comprising nine units (seven PWRs and two BWRs). The last two nuclear units to be completed were Trillo and Vandellos II in 1988. The nuclear share of electricity generation in Spain is 32%. Plants are well managed, and the Government is taking over the problem of waste disposal. However, due to public resistance and the possibility of building gas combined-cycle plants after 2000, there is pressure for nuclear power to be abandoned, increasing Spanish dependence on gas imports.

CSN is affected by the deregulation of the electrical sector and the corresponding need for increased efficiency by both the utilities and the CSN. The CSN is analyzing how PSA can be used in the movement towards greater efficiency. There have been several technical exchange meetings between CSN and NRC staff on these topics within the last nine months and they are scheduled to continue next year.

Vandellos I Nuclear Power Plant Incident

On October 19, 1989, the No. 2 turbine at Vandellos Unit 1 failed while the unit was operating at full power. The turbine failure resulted in a significant fire which extensively damaged safety and non-safety-related equipment and cabling (power and instrumentation cables). The fire also resulted in the failure of the flexible joints of the corresponding condenser. This resulted in significant flooding and damage to additional equipment and cabling.

No reactor core damage or significant release of radioactivity to the environment was reported to have occurred. However, repair of the damage from this incident and needed safety upgrades were estimated to cost in excess of $100 million. The plant operator elected to permanently shutdown and decommission the facility at an estimated cost of some $300 million.

A 1990 IAEA report found management by Hifrensa, the consortium of French and Spanish firms that owned the plant, to have been inadequate, noting that problems had previously been found in the turbine, and that no inspections had been carried out from 1986-1989 when the accident happened.

The issue was brought before a Tarragona (Catalonia) Court. In March 2000, after six weeks of proceedings the three directors of the plant and two officials of the Nuclear Safety Board (CSN) were absolved of responsibility. The Court found that the defendants were not responsible, their management was not deficient, and the failure to implement modifications was not directly

related to the fire. The Court did rule that Plant Director had not proceeded correctly on the night of the fire as far as informing the civil authorities was concerned; but this, the Court said, was an administrative failure and should be the subject of an administrative penalty.

Waste Program

Spain has an intermediate-level waste (ILW) facility, located at Sierra Albarrana in El Cabril, was licensed to begin taking commercial nuclear waste in October 1992. Prior to this date the facility had only been authorized to accept waste from CIEMAT (the government Energy Research Center). The site was enlarged by the operator (ENRESA, the Waste Management Company) to hold all Low Level Waste (LLW) and ILW, with sufficient capacity through the year 2000. The CSN has used licensing standards from international organizations, the U.S., and France, because it is a French-designed facility.

High-level waste (HLW) is to be stored in dual purpose metal casks. These casks are designed to store light water reactor fuel on site and to transport the fuel assemblies from storage facility to repository or to a reprocessing facility. A dual purpose cask, known as the NAC-STC cask, was designed by the U.S. Nuclear Assurance Corporation and promoted by ENRESA, with support from the Electric Power Research Institute, Virginia Power and some Spanish companies. It was licensed in 1994 by the NRC, and licensing is underway in Spain. A European-designed cask (known as the Trillo Dual Purpose Cask) is also being developed specifically for the German-designed Trillo plants in Spain. While spent fuel is stored in pools at each reactor site, the casks will permit additional storage capacity for spent fuel until its final disposal.

HLW will ultimately be disposed in a deep geological rock repository, with granite, salt, and clay being considered as host rock. The Spanish have solicited conceptual designs for an HLW repository from SKB (Swedish Waste Management Company) and DBE (German Company for Construction and Operation of Waste Disposal Facilities).

International Activities

Spain was a major supporter of the indefinite extension of the Nuclear Non-Proliferation Treaty (NPT) and worked with the U.S. in soliciting support from Latin American countries. The country has signed the Convention on Nuclear Safety (November 15, 1994) and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (June 30, 1998). Both instruments have been ratified by the Spanish Parliament. Spain hosted the IAEA International Conference on the Safety of Radioactive Waste in Cordoba March 13-17, 2000. The Conference addressed Waste Convention topics.

Spain was at the forefront of creating a Forum of Iberian-American Regulators. The preparatory meeting was held in Madrid in January 1997, and included Spain, Argentina, Mexico and Brazil. Its first meeting (which also included Cuba) was held in July 1997 in Veracruz, Mexico, where an agreement was signed by all parties. The purpose of the group is to promote the exchange of information and experiences on topics of nuclear safety and radiological protection. The ultimate objective is to integrate all of the Latin American countries interested in these topics. The initial group is composed of those countries which have nuclear power stations under construction or in operation. Other countries that have expressed an interest in joining include Chile, Columbia, Peru, Portugal and Venezuela.

Spain has maintained its special identification with Latin America. Spain emphasizes the concept of "Hispanidad," a mixture of linguistic, religious, ethnic, cultural, and historical ties binding Spanish speaking America to Spain. Spain maintains economic and technical cooperation programs and cultural exchanges in Latin America and is a good example of a country making a smooth transition from authoritarianism to democracy.

NRC-CNS Agreements

The first five year NRC information exchange Arrangement with Spain was signed in 1974. It was last renewed in September 2000 signed by Chairman Meserve and CSN President Kindelán. Relations have been cordial and extensive. Most of the Spanish nuclear power plants are U.S.-designed and the CSN regulations are modeled on those of the NRC. The exchange has included Commission and staff visits, collaboration on safety problems and on-the-job training assignments.

A nuclear reactor safety research agreement was also signed with Spain in 1985, with the latest renewal in 1996. Cooperation under the research agreement has included the areas of thermal-hydraulic computer code development and assessment studies, technical information exchange in the area of reliability risk, accident management and human factors and participation by the CSN in severe accident and materials research.

The NRC has had two recent Spanish assignees, Dr. Miguel Sanchez Perea and Francisco Gallardo. Francisco Gallardo worked for a year which ended June 30, 2000 in NRR on reactor instrumentation and control. Dr. Miguel Sanchez Perea worked from May-December 1999 in RES on thermal-hydraulic research.

TALKING POINTS

- The NRC values its close, cooperative relationship with Spain. We appreciate CSN responsiveness to NRC requests for information on several issues over the past few years and remain committed to continuing our bilateral relationship.

- We appreciate the excellent quality of the CSN assignees placed with the NRC for on-the-job assignments under the NRC-CSN Arrangement and look forward to having future CSN staff at the NRC.

    - Dr. Miguel Sanchez Perea and Francisco Gallardo made useful contributions to NRC's regulatory program during their recent assignments here.

Radioactive Waste:

- We are pleased that Spain's Parliament has ratified both the CNS (deposited instrument with IAEA July 4, 1995) and the Waste Convention (deposited instrument with IAEA May 11, 1999). These are important international instruments for contributing to improving worldwide nuclear safety.

    - Although the U.S. has ratified the CNS, we have not yet ratified the Waste Convention.

- Spain recently hosted the IAEA International Conference on the Safety of Radioactive Waste Management (March 13-17, 2000) addressing Waste Convention topics. Do you have any thoughts on the round table discussions?

- What are the Spanish views with regard to the challenge ahead for nations on the safe management of radioactive waste?

Nuclear Energy:

- I understand that nuclear power is controversial in some parts of the country. What is the current public opinion on nuclear power in Spain?

- For the past four years Spanish economic growth has been on an upward trend. What is the projected energy growth for Spain and what role will nuclear power play in meeting energy demands?

- What challenges do you see for Spain resulting from deregulation of the electricity market?