

August 13, 1997

SECY-97-184

FOR: The Commissioners

FROM: Carlton R. Stoiber, Director \s\
Office of International Program

SUBJECT: PROPOSED REACTOR EXPORT LICENSES TO COMBUSTION
ENGINEERING, INC. TO SUPPLY MAJOR COMPONENTS AND
EQUIPMENT FOR FOUR NUCLEAR REACTOR UNITS IN THE REPUBLIC
OF KOREA -- APPLICATIONS XR162 AND XR163

PURPOSE:

To request Commission review of the proposed issuance of two export licenses to Combustion Engineering, Inc. for the supply of nuclear reactors to South Korea. The applications are being referred to the Commission in accordance with 10 CFR §110.40(b)(1).

DISCUSSION:

This paper addresses two pending license applications by Combustion Engineering, Inc. (CE) for nuclear power reactor equipment exports to South Korea: XR162, filed in 1991 and amended in 1995, for supply of major components and equipment for two 1000 MWe pressurized water reactors (PWRs) for Yonggwang Units 5 and 6 (Attachment 1); and XR163, filed in 1995, for supply of similar components and equipment for Ulchin Units 5 and 6 (Attachment 2). The applications have been pending, awaiting action by the government of South Korea to award the contracts and provide formal assurances to the United States that the prospective exports will be received under the terms of the U.S.-Republic of Korea (ROK) Agreement for the Peaceful Uses of Nuclear Energy.

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Yonggwang Units 5 and 6 will be located in Chollanam province on the southwestern coast of the Korean peninsula. Ulchin Units 5 and 6 will be located in Kyungsang Buk-Do province on the east coast.

CE will supply reactor internals, reactor coolant pumps, reactor instrumentation, monitoring and control equipment, reactor auxiliary equipment, some emergency core cooling system (ECCS) components, and various related equipment, software, and technical support services. Reactor vessels, steam generators and some ECCS equipment will be manufactured in South Korea or supplied from other sources.

CE has requested that export licenses XR162 and XR163 be made valid until March 18, 2014 to correspond to the expiration date of the U.S./ROK Agreement for Cooperation and permit continued exports of replacement and spare parts.

In response to our request for views on XR162 and XR163, the Executive Branch (Executive Branch), in a letter dated March 18, 1997 (Attachment 3), recommends that the licenses be issued. The letter notes that the proposed exports would take place pursuant to the Agreement for Cooperation Between the U.S. and the Republic of Korea (ROK), as amended, and as confirmed to the Department of State in a letter dated February 12, 1997 from the Ministry of Science and Technology. The Executive Branch response also notes that the ROK has adhered to the provisions of its Agreement for Cooperation with the U.S.

The Executive Branch concludes that the requirements of the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978, have been met and that the proposed exports would not be inimical to the common defense and security of the United States.

The Executive Branch submitted a detailed analysis for the ROK on May 6, 1980 for export license XR133 (SECY-80-336, dated July 21, 1980). Since that time, the ROK has taken significant steps to strengthen its commitment to non-proliferation, including undertakings not to engage in enrichment or reprocessing, and its membership in the Nuclear Suppliers Group and the Non-Proliferation Treaty exporters committee. The Executive Branch concludes that there has been no other material change in circumstances since the May 1980 submission.

The Executive Branch also notes that the nuclear steam supply systems proposed for export under these applications are similar in design and power level to the units authorized for export to the ROK under NRC license XR133. The units under this application are expected to be collocated with previously exported nuclear power reactors covered by existing concise Executive Branch environmental reviews, the most recent of which was prepared in 1986 (Attachment 4) for NRC export license XR150 (SECY-87-87, dated March 30, 1987). The Executive Branch view is that E.O. 12114 does not require a new review, given no material change in circumstances.

Prior to issuing the export license for Korea Nuclear Units 7 and 8 in 1980, NRC staff prepared an evaluation (Attachment 5) of the potential radiological impact of the two units on the global commons.¹ The evaluation concluded that there would be no significant increase in the risk to the public health and safety. NRC staff also reviewed the proposed export of Korea Units 11 and 12 in 1987 and found no material change in circumstances. Recently, the staff reassessed its 1980 evaluation to determine whether there were changes to the environmental impacts on the global commons. The staff concluded, as a result of the reassessment (Attachment 6) that it is not aware of new and significant information regarding the proposed facilities' designs or proposed operation, or new requirements or technical insights, that would change the conclusions previously found. Consequently, NRC staff reviewed the current proposed export licenses in light of the earlier evaluations.

The staff believes the Executive Branch analysis and views provide an adequate basis for finding that the proposed exports meet the applicable export licensing criteria of the Atomic Energy Act.

The ROK is a party to the Non-Proliferation Treaty and, as such, accepts IAEA safeguards on all source and special nuclear material in its nuclear activities. Since construction has not started, there is no need yet for IAEA Facility Attachments for these reactors. The ROK has historically negotiated Facility Attachments in a timely manner, and we expect that such negotiations for these new reactors will occur in a like manner.

With regard to physical protection, an evaluation was performed during a visit to Korea in May 1997. The conclusion of this review was that the physical protection program was consistent with the recommendations of IAEA INFCIRC/225/Rev.3 for this export.

CONCLUSION:

The staff concurs with the Executive Branch judgment that the proposed exports would not be inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety in the United States, and concludes that all criteria required for the issuance of licenses XR162 and XR163 are met. The Office of the Executive Director for Operations concurs. The Office of General Counsel has no legal objections.

The staff notes that favorable Executive Branch views also have been received on export license application XSNM02642 for fuel for Yonggwang Units 5 and 6. The staff will defer final action on that license until the Commission's review of the Yonggwang 5/6 reactor export license application (XR162) has been completed.

¹In the Philippine reactor export case, the Commission decided as a matter of discretion that NRC would review generally available literature to assess the impacts on the global commons of NRC authorized reactor exports.

RECOMMENDATION:

That the Commission authorize the issuance to CE of export licenses XR162 and XR163, with expiration dates of March 18, 2014.

Carlton R. Stoiber, Director
Office of International Programs

- Attachments: 1. 08/02/91 CE License Application (XR162)
 05/04/95 CE License Application Amendment
2. 08/10/95 CE License Application (XR163)
3. 03/18/97 Executive Branch views FMcGoldrick to CStoiber
4. 08/28/86 A Concise Environmental Review
5. 07/01/80 HRDenton, NRR, to JRShea, OIP
6. 07/21/97 NRR's Review and Update of 1980 Concise Environmental
 Review

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