



United States Department of State

Washington, D.C. 20520

December 30, 1996

Ronald D. Hauber
Division of Nonproliferation
Exports and Multilateral Relations
Office of International Programs

Dear Mr. Hauber:

I refer to your letter of December 11, 1996 enclosing a letter from ABB Combustion Engineering regarding the following pending export license applications for the Republic of Korea (ROK): XR162, XR163 and XSNM02642.

These applications were first reviewed in 1991 and then again in 1995 when ABB Combustion Engineering had applied for amendments to raise the power of the nuclear steam supply systems to be exported, increase the amount of fuel for these facilities and change the name of the unit names of the project. Executive Branch agencies are prepared to recommend approval of these exports subject to receipt of appropriate letters of assurance from the ROK confirming that the intended transfers will be subject to the terms and conditions of the the U.S.-ROK Agreement for Cooperation. The Department of Energy has followed up the assurance letter requests.

Sincerely,

Robin DeLaBarre
Office of Nuclear Energy Affairs

9701220239 961230
PDR XPORT
XR-0162 PDR

220025

Rec 12/30/96

XPORT

up to PDR, DCF/~~DFD~~
NMSS, NAC/AMMSS
DOE/OR

XR162
XR163
XSNM02642
So Korea

DF03/1

IA-1-1
EXPX IA-1-4
Korea

**UNCLASSIFIED**

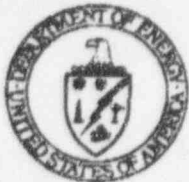
**U.S. DEPARTMENT OF ENERGY
OFFICE OF ARMS CONTROL AND NONPROLIFERATION
NUCLEAR TRANSFER AND SUPPLIER POLICY DIVISION, NN-43**

TO: <i>Betty Wright</i>	FROM: <i>C. Rendeau</i>
FAX NO.: <i>301 415 2395</i>	NUMBER OF PAGES INCLUDING COVER: <i>12</i>
DATE: <i>12/23</i> TIME: <i>1:50 p</i>	VERIFICATION NUMBER: (202) 586- 2331 <i>7612</i>
SUBJECT:	NN-43 FAX NUMBER: (202) 586-1348

REMARKS:

*Please replace this copy for the letter
sent earlier. This copy has been
dated, and contains no reference to
EURATOM. Thanks you.*

Christine

**Department of Energy**

Washington, DC 20585

December 23, 1996

Mr. You-Hyun Moon
Science Attache
Embassy of Korea
2600 Virginia Ave., N.W., Suite 200
Washington, D.C. 20037

Dear Mr. Chin:

The U.S. Department of Energy (DOE) received from the U.S. Nuclear Regulatory Commission and the U.S. Department of State the enclosed letter, dated December 11, 1996, regarding pending export license applications XR162, XR163, and XSNM02642, as follows:

- XR-162, dated August 2, 1991, amended May 15, 1995, for two 1000 MWe PWRs for nuclear utilization facilities, Yonggwang 5 & 6,
- XR-163, dated August 30, 1995, for two 1000 MWe PWRs for nuclear utilization facilities, Ulchin 5 & 6,
- XSNM-2642, dated August 2, 1991, amended August 7, 1995, for reload fuel and special nuclear and byproduct materials for use in the Yonggwang 5 & 6 nuclear utilization plants in the Republic of Korea.

This notification amends earlier requests from the Department for assurances from the Republic of Korea for the pending licenses listed above. In order to continue to process these applications, DOE will need written confirmation of the following from the appropriate government agency:

- a. the transfer of the material, as identified on the license application, will be subject to all the terms and conditions of the Agreement for Cooperation Concerning the Civil Uses of Atomic Energy between the Government of the United States and the Government of the Republic of Korea, as amended, which entered into force on March 19, 1973;
- b. the ultimate consignees, as identified on the application, are authorized by your Government to receive and possess the material.

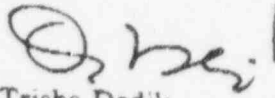
To facilitate the processing of this application within sixty days, as required by Section 126.a of the Atomic Energy Act, we would appreciate receiving your response as soon as possible



2

following the receipt of this letter. This request for written confirmation of the particulars noted above is a normal requirement of the licensing process and is not to be construed as indicating favorable action on the license application.

Sincerely,



Trisha Dedik

Director

Nuclear Transfer and Supplier Policy Division
Office of Arms Control and Nonproliferation

Enclosures

cc: Ms. Betty Wright, NRC



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

Mr. Robin DeLaBarre
Office of Export and Import Control
Bureau of Political-Military Affairs
U.S. Department of State
Washington, DC 20520

DEC 11 1996

Dear Mr. DeLaBarre:

Enclosed is a letter dated November 26, 1996 from ABB Combustion Engineering regarding pending export license applications XR162, XR163 and XSNM02642 for South Korea.

ABB-CE advises that a contract for supply of two nuclear utilization facilities, Ulchin Units 5 and 6, was signed on November 15, 1996, and requests that NRC take action to expedite approval of the pending export license applications. Please advise us of the status of the subject applications.

If you require additional information, please call me or Betty Wright on (301) 415-2342.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ronald D. Hauber".

Ronald D. Hauber, Director
Division of Nonproliferation,
Exports and Multilateral Relations
Office of International Programs

Enclosure: Ltr. dtd. 11/26/96

cc w/enclosure:
C. Kincaid, DOE
R. Goorevich, DOE
M. Johnson, DOD
J. Chuchla, DOC
M. Rosenthal, ACDA

9612130077 1p.

ABBNovember 26, 1996
LD-96-056

XR162

XR163

XSNM02642

So Korea

Mr. Ronald D. Hauber, Director
Division of Nonproliferation, Exports
and Multilateral Relations
Office of International Programs
US Nuclear Regulatory Commission
Washington, DC 20555

Subject: Export License for Ulchin 5 & 6.

Reference: ABB-CE Letter to R.D.Hauber, "License Application for Export of Ulchin 5 & 6 Nuclear Utilization Facilities," LD-95-038, 8/10/95.

Dear Mr. Hauber:

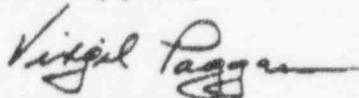
This letter is to advise that ABB-CE has entered into contracts with KEPCO and allied Korean entities to supply two nuclear utilization facilities, Units 5 and 6, to be constructed at the Ulchin site in South Korea. The contract for these units, Ulchin 5 & 6, was signed on Friday, November 15, 1996.

An application for a license to export NSSS components to Ulchin 5 & 6 was submitted to the NRC on August 10, 1995, reference above. In addition, an earlier export license application for two other South Korean nuclear utilization facilities, Yonggwang 5 & 6, was submitted on May 4, 1995, reference LD-95-019. We request that the NRC confirm the status of these pending applications, and take whatever actions you can to expedite their approval. These license applications include:

- XR-162, two 1000 MWe PWRs for Yonggwang 5 & 6,
- XR-163, two 1000 MWe PWRs for Ulchin 5 & 6,
- XSNM-2642, reload fuel, source and byproduct material for YGN-5&6.

Please feel free to call me at 860-285-4700 if I can be of further service.

Sincerely yours,



Virgil Paggen
Export Control Administrator

cc: Betty L. Wright (NRC)

60 4 14 2-230 966

ABB Combustion Engineering Nuclear Systems

Combustion Engineering, Inc.

2000 Day Hill Road
P.O. Box 500
Windsor CT 06095-0500

Telephone (860) 688-1911
Fax (860) 285-5203

9612130099 1p.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 30, 1995

Mr. Robin DeLaBarre
Office of Export and Import Control
Bureau of Political-Military Affairs
U.S. Department of State
Washington, DC 20520

Dear Mr. DeLaBarre:

Enclosed is an application from ABB Combustion Engineering Nuclear Power for an export license (XR163), recently received by the Nuclear Regulatory Commission for the export of two (2) utilization facilities to South Korea. The facilities, Ulchin Units 5 and 6, have a design power level of 1000MWe.

Before taking action on this request, we would appreciate your views, in accordance with established procedures and from the overall perspective of the Executive Branch, as to whether the requested export meets the applicable criteria in the Atomic Energy Act of 1954, as amended.

Sincerely,

A handwritten signature in cursive script that reads "Ronald D. Hauber".

Ronald D. Hauber, Director
Division of Nonproliferation, Exports
and Multilateral Relations
Office of International Programs

Enclosure:
Appl. dtd. 8/10/95
(XR163 - South Korea)

cc w/enclosure:
C. Kincaid, DOE
R. Gourevich, DOE
J. Chuchla, DOC
G. Brubaker, DOD
M. Rosenthal, ACDA

ABBBLW AKVAugust 7, 1995
LD-95-035XSNM02642
Amendment to
Pending application

Mr. Ronald D. Hauber O-3H5
Director for Nonproliferation, Exports and Multilateral Relations
Office of International Programs
US Nuclear Regulatory Commission
Washington, DC 20555

Subject: Export License for Yonggwang 5 & 6 Special Nuclear Material

Reference: License Application; CE Letter LD-91-043, E. H. Kennedy to R. D. Hauber,
dated August 2, 1991 (XSNM-2642)

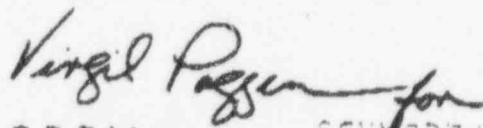
Dear Mr. Hauber:

Combustion Engineering, Inc. (CE), a Delaware corporation, requests that the Reference application be approved to permit export of reload fuel and special nuclear and byproduct materials for use in the Yonggwang 5 & 6 nuclear utilization plants in the Republic of Korea. Detailed information for this application is provided below and on the attached Form 7. Korea Electric Power Corporation awarded contracts for construction of YGN 5 & 6 in March, 1995.

The export license should allow shipment of natural uranium and low-enrichment uranium as powder or pellets in the form of fabricated fuel assemblies or constituent parts for two reload cores. In addition, export of gram quantities of special nuclear material and byproduct material contained in instruments, detectors and sources is requested, including ten neutron detectors, each less than 150 μ -curie contained in 2 grams of U-235 enriched to less than 95% by weight maximum; two sets of instrumentation check sources, each containing less than 10 μ -curies of Cesium-137 and less than 6 μ -curies of Radium-226; two sets of calibration sources, each containing less than 1 μ -curie of Cesium 137, 2.0 μ -curie of Barium-133, and 1.1 μ -curie of Cobalt-60; four neutron sources, each less than 2000 μ -curie contained in 25 μ grams of Californium-252; and two boron concentration measuring instruments, each less than 1 curie contained in 1.0 gram of Americium-Beryllium.

Please feel free to call me or Virgil Paggen of my staff at 203-285-4700 if there are any questions.

Very truly yours,



C. B. Brinkman
Director, Nuclear Licensing

COMMUNICATIONS SECTION

CBB:vap

cc: B.L. Wright [NRC]

AUG 14 11:37 56

ABB Combustion Engineering Nuclear Systems

Combustion Engineering, Inc.

1000 Prospect Hill Road
P.O. Box 500
Windsor, CT 06095-0500

Telephone (203) 888-1911
Fax (203) 285-5203

4508310373 1p

AUG 7 1991
Mr. Carlton E. Thorne, Director
Office of Nuclear Export Control
Bureau of Oceans and International
Environmental and Scientific Affairs
U.S. Department of State
Washington, D.C. 20520

Dear Mr. Thorne:

Enclosed is an application from ABB Combustion Engineering Nuclear Power for an export license (XR162), recently received by the Nuclear Regulatory Commission, for the export of two (2) utilization facilities to South Korea. The facilities, Nuclear Units 15 and 16, have a design power level of 1000MWe. The applicant is submitting a separate request for the initial core loading for these reactors.

Before taking action on this request, we would appreciate your views, in accordance with established procedures and from the overall perspective of the Executive Branch, as to whether the requested export meets the applicable criteria in the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978.

Sincerely,

Betty L. Wright for
Ronald D. Hauber, Assistant Director
for Exports, Security, and Safety Cooperation
International Programs
Office of Governmental and Public Affairs

Enclosure:
Ltr. dtd. 08/02/91
(XR162 - South Korea)

cc w/Enclosure:
T. Hart, DOE
R. DeLaBarre, DOS
N. Martin, DOE
M. Rosenthal, ACDA
L. Burdick, DOD
J. Tripp, DOC
-

Distribution:
IP r/f
NMSS
DCS/DF02
GSanslow, OROO
BStout, MM
JBecker, OGC
Desk Officer

XR162

IP/ESSC *BL*
BKolostyak
8/7/91

BLWright
IP/ESSC
BLWright
8/7/91

BLW for
AD:IP-ESSC
RDHauber
8/7/91



August 2, 1991
LD-91-042

XR162
11004507

Mr. Ronald D. Hauber
Assistant Director, MS 3-H-5
International Security, Exports, and
Material Safety
Office of International Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: License Application, Export of
Nuclear Utilization Facility to South Korea

Dear Mr. Hauber:

Combustion Engineering, Inc. requests a license to export two nuclear utilization facilities to South Korea (Republic of Korea). As required in 10 CFR 110.31, the following information is provided:

- | | |
|--|---|
| (a) Name and Address of Applicant | Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, CT 06095-0500 |
| (b) Country of Origin | United States |
| (c) Intermediate Consignees | Korea Heavy Industries and Construction Company
555 Guygok-Dong,
Changwon, Republic of Korea 641-420 |
| Ultimate Consignees | Korea Electric Power Company
87 Samsung-Dong, Kangnam Gu
Seoul, Republic of Korea |
| (d) Date of Proposed First Shipment | December 1992 |
| Date of Proposed Last Shipment | March 18, 2014 (See Note 1) |
| (f) (1) Maximum Quantity of Material, Maximum Weight Percent of Enriched U-235 | Combustion Engineering is submitting an Export License Application for the initial core under separate cover (NSC Form 7) |

XSUMC8X42

ABB Combustion Engineering Nuclear Power

Mr. Ronald D. Tiber
August 2, 1991

LD-91-042
Page 2

XR162
11004520

- (2) Total Dollar Value Not yet fixed; approximately \$300 million (U.S.)
- (3) Name of Facilities and Design Power Level Nuclear Units 15 & 16 Approximately 1000 MWe
- (4) Description of end use:
Korea Electric Power Company Commercial Generation of Electricity expected by the early 2000's; replacement spare parts.

(Note 1: It is requested that the license extend until the expiration of the Agreement for Cooperation with the Republic of Korea in order to cover the export of replacement and spare parts for these units. The current Agreement expires on March 18, 2014.)

The license should allow shipment of nuclear steam supply systems, including Reactor Vessels, Reactor Internals, Pressurizers, Steam Generators, Reactor Coolant Pumps, Reactor Instrumentation, Monitoring and Control Equipment, Reactor Auxiliary Equipment, Emergency Core Cooling Systems, Fuel Handling Equipment, and various equipment and technical support services. Some of this equipment may be manufactured in whole or in part in South Korea.

We understand that, because this export license application is being submitted before the August 9, 1991, effective date of revisions to 10CFR170, fees will not be assessed for processing this application.

If you have any questions, please call me or Mr. G. D. Hess of my staff at (203) 285-5218.

Very truly yours,

COMBUSTION ENGINEERING, INC.

Ed Kennedy

Ed Kennedy

Manager

Nuclear Systems Licensing

202 586 1348

202 586 1348

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202 586 1348

202 586 1348

EHK:lw

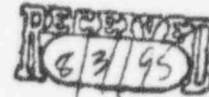
cc: B. Wright (NRC)

202 586 1348



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 30, 1995



DUE 10/30/95

Mr. Robin DeLaBarre
Office of Export and Import Control
Bureau of Political-Military Affairs
U.S. Department of State
Washington, DC 20520

Dear Mr. DeLaBarre:

Enclosed is a letter from ABB Combustion Engineering requesting an amendment to pending export license application XSNM2642 to: 1) change the quantity of material authorized for export; 2) change end use from initial core loadings for Nuclear Units 15 and 16 to reload fuel for Yonggwang Units 5 and 6; and 3) authorize the export of gram quantities of special nuclear material and byproduct material contained in instruments, detectors and sources.

Please consider this in conjunction with the original application which was forwarded to you August 7, 1991.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ronald D. Hauber".

Ronald D. Hauber, Director
Division of Nonproliferation, Exports
and Multilateral Relations
Office of International Programs

Enclosure:
Ltr. dtd. 8/7/95
(XSNM02642 - South Korea)

cc w/enclosure:
C. Kincaid, DOE
R. Goorevich, DOE
J. Chuchla, DOC
G. Brubaker, DOD
M. Rosenthal, ACDA

9508310364 1P.

APPLICATION FOR LICENSE TO EXPORT NUCLEAR
MATERIAL AND EQUIPMENT

(See Instructions on Reverse)

ESTIMATE BURDEN PER RESPONSE TO COMPLY WITH THIS
INFORMATION COLLECTION REQUEST: 1 HOUR. FORWARD
COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION
AND RECORDS MANAGEMENT BRANCH (RMBS 7714), U.S.
NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555.
AND TO THE PAPERWORK REDUCTION PROJECT (P150-0027),
OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

1. APPLICANT'S USE	4. DATE OF APPLICATION 8/07/95	5. APPLICANT'S REFERENCE LD-95-035	2. NRC USE	6. LICENSE NO. XSNM-2642		
3. APPLICANT'S NAME AND ADDRESS a. NAME Combustion Engineering, Inc. b. STREET ADDRESS 1000 Prospect Hill Road c. CITY Windsor, Connecticut STATE CT ZIP CODE 06095			4. SUPPLIER'S NAME AND ADDRESS (Complete if applicant is not supplier of material) a. NAME b. STREET ADDRESS Same as Applicant c. CITY STATE ZIP CODE			
5. FIRST SHIPMENT SCHEDULED Dec 1997	6. FINAL SHIPMENT SCHEDULED TBD	7. APPLICANT'S CONTRACTUAL DELIVERY DATE TBD	8. PROPOSED LICENSE EXPIRATION DATE March 2014	9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. (If Known) None		
10. ULTIMATE FOREIGN CONSIGNEE a. NAME Korea Electric Power Corporation b. STREET ADDRESS (Facility Site) 167-1 Samsung-Dong GangNum-Ku c. CITY Seoul d. COUNTRY Korea			11. ULTIMATE END USE (Include plant or facility name) USE CODE Reload fuel for YGN-5&6. Startup sources, calibration equipment and process instrumentation for YGN-5&6. 11a. DATE REQUIRED December 1999			
12. INTERMEDIATE FOREIGN CONSIGNEE a. NAME Korea Nuclear Fuel Company, Ltd. b. STREET ADDRESS (Facility Site) 150 Dukjin-Dong Yusung-Ku c. CITY Taejon City, Choongnam d. COUNTRY Korea			13. INTERMEDIATE END USE USE CODE Assembly of new or reconstitution of existing fuel bundles for YGN-5&6. 13a. DATE REQUIRED December 1999			
14. INTERMEDIATE FOREIGN CONSIGNEE a. NAME Combustion Engineering, Int'l Inc. b. STREET ADDRESS (Facility Site) 5th Floor, Oksan Bldg, 157-33 Samsung- c. CITY Dong, Kangnam-Ku d. COUNTRY Korea			15. INTERMEDIATE END USE USE CODE Startup, testing and calibration instrumentation, and process instrumentation for YGN-5&6. 15a. DATE REQUIRED December 1999			
16. COM CODE	17. DESCRIPTION (Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)		18. MAX ELEMENT WEIGHT	19. MAX WT. %	20. MAX ISOTOPE WEIGHT	21. UNIT
	Natural uranium and low-enrichment uranium as powder or pellets in the form of fabricated fuel assemblies or constituent parts. Source, calibration and instrumentation equip- ment utilizing less than 2 gms of enriched uranium source or SNM, and less than 2 gms of byproduct material per component. Value of \$20 million USD or less, excluding SNM.		55,000 kg; uranium content for two reloads.	Up to 5%	2750 kg U-235	kg
22. COUNTRY OF ORIGIN - SOURCE MATERIAL Unknown		23. COUNTRY OF ORIGIN - SNM WHERE ENRICHED OR PRODUCED Unknown		24. COUNTRIES WHICH ATTACH SAFEGUARDS (If Known) Republic of Korea		
25. ADDITIONAL INFORMATION ON CONSIGNEES, END USES, AND PRODUCT DESCRIPTION (Use separate sheet if necessary) Enrichment may be DOE or foreign source. UG 1d 71 09V 56. UF ₆ will be supplied by the ultimate consignee.						
26. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information in this application is correct to the best of his/her knowledge. Amended XSNM-2642						
27. AUTHORIZED OFFICIAL		a. SIGNATURE C.B. Brinkman		b. TITLE Director, Nuclear Licensing		