NRC FORM 7 (3-94) 10 CFR 110 — U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT

(See Instructions on Reverse)

APPROVED BY OMB: NO 3150-0027 EXPIRES: 3-31-97

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 1.7 HOURS. THIS MANDATORY SUBMITTAL IS REVIEWED TO ENSURE THAT THE APPLICABLE STATUTORY, REGULATORY, AND POLICY CONSIDERATIONS ARE SATISFIED. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0027), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

1. APPLICANT'S USE --------->	a. DATE OF APPLICATION 2/7/01 ~~12/22/00~~	b. APPLICANT'S REFERENCE	2. NRC USE ------->	a. DOCKET NUMBER 11005254	b. LICENSE NUMBER XCOM1142

3. APPLICANT'S NAME AND ADDRESS (RIS)

a. NAME: Westinghouse Savannah River Company

b. STREET ADDRESS (Facility Site): Bldg. 703-45A, Savannah River Site

c. CITY: Aiken — d. STATE: SC — e. ZIP CODE: 29808

f. TELEPHONE NUMBER (Area Code - Number - Extension): (803) 725-~~7011~~ 3505 - Bob Shankle

4. SUPPLIER'S NAME AND ADDRESS (RIS) (Complete if applicant is not supplier of material)

a. NAME

b. STREET ADDRESS

c. CITY — d. STATE — e. ZIP CODE

5. FIRST SHIPMENT SCHEDULED	6. FINAL SHIPMENT SCHEDULED	7. APPLICANT'S CONTRACTUAL DELIVERY DATE	8. PROPOSED LICENSE EXPIRATION DATE	9. U.S. DEPARTMENT OF ENERGY CONTRACT NO. (If known)
9/01	5/02	9/01	12/31/05	none

10. ULTIMATE FOREIGN CONSIGNEE (RIS)

a. NAME: Japan Nuclear Fuel Limited

b. STREET ADDRESS (Facility Site): Rokkasho Reprocessing Plant 4-91 Aza Okitsuke, Oaza Obuchi

c. CITY: Rokkasho-mura Kamikita-gun — d. COUNTRY: Aomori Prefecture Japan

11. ULTIMATE END USE (Include plant or facility name) — USE CODE

For accurate measurement of plutonium content for the purpose of nuclear material accountancy at JNFL's Rokkasho Reprocessing Plant

11a. DATE REQUIRED: 5/02

12. INTERMEDIATE FOREIGN CONSIGNEE (RIS)

a. NAME: Mitsubishi Heavy Industries, Construction Office

b. STREET ADDRESS: 4-91 Aza-Okitsuke Oaza-Obuchi, Rokkasho-Mura

c. CITY: Kamikita-Gun, Aomori-Pref. 039-3212 — d. COUNTRY: Japan

13. INTERMEDIATE END USE — USE CODE

For final installation by MHI in JNFL's Rokkasho Reprocessing Plant.

13a. DATE REQUIRED: 5/02

14. INTERMEDIATE FOREIGN CONSIGNEE (RIS)

a. NAME: Mitsubishi Heavy Industries, Takasago Research & Development Center

b. STREET ADDRESS (Facility Site): 2-1-1 Shinhama Arai-Cho, Takasago-City,

c. CITY: Hyogo-Pref., 676-8686 — d. COUNTRY: Japan

15. INTERMEDIATE END USE — USE CODE

For initial assembly and testing at MHI's Nuclear Fuel Reprocessing Plant Engineering Section, Kobe Shipyard & Machinery Works, prior to transfer and final installation at Rokkashō.

15a. DATE REQUIRED: 9/01

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
	Three (3) controlled-potential coulometers, including cell assemblies (valued at $350,000 total); plus spare and replacement parts as required, valued at $150,000. $500,000-total				

22. COUNTRY OF ORIGIN -- SOURCE MATERIAL	23. COUNTRY OF ORIGIN -- SNM WHERE ENRICHED OR PRODUCED	24. COUNTRIES WHICH ATTACH SAFEGUARDS (If known)
		N/A

25. ADDITIONAL INFORMATION ON CONSIGNEES, END USES, AND PRODUCT DESCRIPTION (Use separate sheet if necessary)

See attached.

2001 FEB -8 AM 11:17 RECEIVED OIP

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.

27. AUTHORIZED OFFICIAL	a. SIGNATURE	b. TITLE
	Donna E. Nichols	WSRC Technology Control Officer

NRC FORM 7 (3-94) — PRINTED ON RECYCLED PAPER

* See 3/5/01 e-mail to C Coates for D Nichols

Item #	Additional Information
10-13.	Mitsubishi Heavy Industries (MHI) is the design/construction contractor for the Rokkasho Reprocessing Plant (RRP), which is owned and will be operated by Japan Nuclear Fuel Limited. The purpose of the RRP facility is to reprocess fuel from civilian nuclear power reactors in Japan. JNFL activities are under full-scope International Atomic Energy Agency (IAEA) safeguards. The coulometers will be shipped initially to the MHI corporate facility in Kobe, Japan, where the coulometers will be assembled by WSRC personnel. The WSRC personnel will also train MHI employees on the installation and operation of the coulometers at the Kobe location. MHI will then transfer the coulometers for installation at the RRP.
25.	Additional Information on applicant, consignees, end uses, and product description - WSRC has been requested by MHI to build, calibrate, and install three (3) automated controlled-potential coulometer systems including cell assembly, for use in the Rokkasho Reprocessing Plant (RRP). Each coulometer system includes: two potentiostats (one for oxidation and one for reduction), one integrator, one Ortec 3 channel counter, one automation module, one instrument rack, one NIM Bin, one Digital Voltmeter/Data Acquisition unit, and Analog Isolation circuit. The coulometers will be used for determination of plutonium content for the purposes of material accountancy at the RRP. The coulometer system also can be used to verify preparation of plutonium standards since its automated electronic calibration is directly traceable to fundamental units (i.e. voltage, resistance, current and time). The standards can then be used to calibrate other plutonium measurement systems routinely applied to nuclear safety and other accountability applications. The coulometer features include: a patented current integration system; continuous electrical calibration versus Faraday's Constants and Ohm's Law; the control-potential adjustment technique for enhanced application of the Nernst Equation; a wide operating room temperature range; and a fully automated instrument control and data acquisition capability. The coulometer and instrument controller have been periodically upgraded to remain current with available high-precision potential control and current integration components. The coulometers being provided by WSRC have a demonstrated measurement reliability of ~0.04% for 10-mg. A stability of ± 0.0015% RSD for the electronic calibration factor has been demonstrated. Precision of ± 0.005% RSD for the electronic calibration has been demonstrated. The IAEA and the Japan Nuclear Cycle Development Institute (JNC) have determined that the coulometer technology developed by WSRC is the only technology available which meets the accuracy and traceability criteria required for both non-proliferation and material accountancy purposes. Under DOE contract, WSRC has previously provided coulometer systems to the IAEA under the United States Program of Technical Assistance to International Atomic Energy Safeguards (POTAS); and also to the Power reactor and Nuclear Fuel Development Corporation (JNC) of Japan, under a DOE/JNC agency-to-agency agreement. WSRC is a wholly-owned subsidiary of Washington Group International (WGI), Incorporated, and is the integrating contractor for the Department of Energy at the Savannah River Site. WGI is wholly-owned by Morrison-Knudsen Corporation, a Delaware corporation with no foreign ownership. Because BNFL Nuclear Services, Inc. (BNSI) holds a passive 40% economic right in WGI, WGI and WSRC operate under a DOE-approved Security Control Agreement and Technology Control Plan to ensure compliance with the National Industrial Security Program (NISP) and to effectively insulate classified and sensitive unclassified interests from foreign ownership, control, or influence. Questions concerning this license application should be addressed to Donna Nichols, WSRC Technology Control Officer, (803) 725-7011; or, for technical specifications and other coulmeter, Joe Cordaro, WSRC Principal Investigator, (803) 725-5020.

2001 FEB -8 AM 11:12
RECEIVED OIP

WESTINGHOUSE SAVANNAH RIVER COMPANY

FEB 07 2001

TSD-CIS-2000-00237

Ms. Betty Wright
Export/Import Licensing Officer
Office of International Programs
US Nuclear Regulatory Commission
Washington, DC 20555

Dear Ms. Wright:

Export License Application for Transfer of Coulometers to Japan

Please find enclosed an NRC Form 7 export license application, including an application fee of $9300, for export of three (3) controlled-potential coulometer systems to Mitsubishi Heavy Industries (MHI) in Japan, for assembly, testing, and ultimate installation in the Rokkasho Reprocessing Plant. The Rokkasho Reprocessing Plant is owned by Japan Nuclear Fuel Limited (ultimate consignee), and is under full-scope International Atomic Energy Agency (IAEA) safeguards. The coulometers will be utilized at the Rokkasho Reprocessing Plant for performing accurate measurement of plutonium content for the purpose of nuclear material accountancy.

Westinghouse Savannah River Company (WSRC) is the integrating contractor for the Department of Energy (DOE) at the Savannah River Site. WSRC has previously built coulometer systems under DOE-sponsored agency-to-agency programs for the IAEA and the Japan Nuclear Cycle Development Institute (JNC). Mr. William C. O'Connor, DOE Office of International Safeguards (NN-44), is available to answer any questions at an agency level. Mr. O'Connor may be contacted at (202) 586-4867. In addition, activities in regard to this license application have been coordinated with Janet Goldman, Nuclear Transfer and Supplier Policy Division (NN-43), DOE Headquarters.

Due to the contractual delivery date of September, 2001, expedited processing of this license application would be appreciated. Please do not hesitate to contact me at (803) 725-7011 if there are any questions.

Donna E. Nichols

Donna E. Nichols
WSRC Technology Control Officer

Attachments:
1) NRC Form 7 license application
2) License application fee

cc w/att 1: J. Goldman, NN-43
B. S. Drouin, DOE-SR, 703-42A
M. B. Baxter, 730-B
S. R. Formby, 703-A
J. V. Cordaro, 723-A

BNFL

RECEIVED OIP
2001 FEB -8 AM 11:17