U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

**East Building, PHH-23
1200 New Jersey Ave., SE
Washington, D.C. 20590**

JUL 10 2007

Attention: Registered Users of USA/0406/AF-96

Enclosed is the latest revision of IAEA Certificate of Competent Authority No. USA/0406/AF-96 for the 21PF-1 overpack. This certificate, which revalidates Japanese Certificate for Approval J/27/AF-96 (Rev.1), authorizes the transport of the package from the point of entry to final destination within the United States, from point of origin in the United States to point of exit, and through the United States.

In response to information provided to this office regarding degradation of the phenolic foam used in the manufacture of 21PF-1 overpacks in packages exposed to the environment for extended periods of time, we have revised our revalidation of the Japanese package design approval to include special transport conditions and mandatory inspection requirements. These transport conditions and inspection requirements are listed in Section 5 and Appendix A of the attached certificate and are identical to those included in the U.S. package design certificate for the DOT Specification 21PF-1 overpack, USA/4909/AF.

While we have included a 90-day transition period for use of the previous revision to allow for adoption by other competent authorities, we encourage immediate adoption of the new inspection and transport conditions. As before, our certification of these packages expires on August 10, 2009.

If you have any questions on this certificate, please contact me by phone at 202-366-2993 or by e-mail at rick.boyle@dot.gov.

Sincerely,

Richard W. Boyle, Chief
Radioactive Materials Branch
Office of Hazardous Materials
Technology

Enclosure

U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

**East Building, PHH-23
1200 New Jersey Ave., SE
Washington, D.C. 20590**

COMPETENT AUTHORITY CERTIFICATION FOR A TYPE AF FISSILE RADIOACTIVE MATERIALS PACKAGE DESIGN CERTIFICATE USA/0406/AF-96, REVISION 13

REVALIDATION OF JAPANESE COMPETENT AUTHORITY CERTIFICATE J/27/AF-96

This certifies that the radioactive materials package design described is hereby approved for use within the United Sates for import and export shipments only. Shipments must be made in accordance with the applicable regulations of the International Atomic Energy Agency[1] and the United States of America[2].

1. Package Identification - 21PF-1.

2. Packaging Description and Authorized Contents - as described in Japan Certificate of Competent Authority J/27/AF-96, Revision 1 (attached). Overpacks authorized by this certificate are restricted to those serial numbers listed in the two Japanese Certificates of Approval of Packaging issued to Mitsubishi Nuclear Fuels Company on May 17, 2007 and November 9, 2006 (attached).

3. Criticality - The minimum criticality safety index is 5.0. The maximum number of packages per conveyance is determined in accordance with Table X of the IAEA regulations cited in this certificate.

4. General Conditions -

   a. Each user of this certificate must have in his possession a copy of this certificate and all documents necessary to properly prepare the package for transportation. The user shall prepare the package for shipment in accordance with the documentation and applicable regulations.

   b. Each user of this certificate, other than the original petitioner, shall register his identity in writing to the Office of Hazardous Materials Technology, (PHH-23), Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington D.C. 20590-0001.

   c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.

   d. Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations[1] shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.

---

[1] "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

[2] Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

5. Special Conditions

a. Cylinders to be transported within the 21PF-1 overpacks authorized by this certificate must be designed, fabricated, inspected, tested, and marked in accordance with the ANSI N14.1 standard in effect at the time of manufacture.

b. Cylinders to be transported within the 21PF-1 overpacks authorized by this certificate must be periodically inspected, tested, marked cleaned and otherwise conform with ANSI N14.1.

c. The transport index of each package shall be determined by direct measurement.

d. The package is not authorized for transport by air.

e. For shipments entering, exiting or transiting the United States, all international approvals and revalidations, including Approval of Packaging and Confirmation of Packaging Certificates issued by the government of Japan, shall be issued prior to commencement of transport.

f. Packages shall be handled and operated in accordance with the procedures and packaging criteria identified in the American National Standards Institute (ANSI) Standard N14.1-2001 and United States Enrichment Corporation Report No. USEC-651.

g. All packages transported under this certificate shall utilize USEC valve protection device model no. USEC-VPD-1996. This valve protection device was specified by USEC in their certificate application and shall be constructed of ASTM B26 Aluminum Alloy 514. Valve protection device shall be operated and maintained in accordance with the procedures detailed in section 13.2 and 13.3.1 of United States Enrichment Corporation Report No. USEC-651.

h. All packages transported under this certificate shall be stored indoors or under protective covering when not in transport to prevent exposure to precipitation.

i. All packages transported under this certificate must meet the inspection requirements of the attached Appendix A.

6. Marking and Labeling - The package shall bear the marking USA/0406/AF-96 in addition to other required markings and labeling.

7. Expiration Date - This certificate expires on August 10, 2009. On November 1, 2007, this certificate supersedes all previous revisions of USA/0406/AF-96.

This certificate is issued in accordance with paragraph 814 of the IAEA Regulations and Section 173.472 and 173.473 of Title 49 of the Code of Federal Regulations, in response to the June 5, 2007 petition by Transport Logistics International, Burtonsville, MD, and in consideration of other information on file in this Office.

Certified by:

JUL 10 2007

Bob Richard (DATE)
Deputy Associate Administrator for Hazardous Materials Safety

Revision 13 - Issued to update list of approved serial numbers (dated May 17, 2007) and to implement additional special transport conditions and added inspection requirements.

Appendix A - Mandatory Inspection Requirements

Each 21PF-1 overpack shall be inspected prior to each use, with the inspection occurring no more than 6 months prior to the overpack use. This inspection must include at least the following:

(1) Visual inspection to ensure lifting shackles, closure bolts, and tie-down supports are free from damage.

(2) Visual inspection of entire interior and exterior of the overpack to determine:

a. The presence of any through wall corrosion. Through wall corrosion is cause for removal of the overpack from service.

b. Amount of reduction of shell thickness by corrosion or oxidation. If a visual inspection cannot confirm thickness of shell, other non-destructive evaluation techniques shall be used. Reduction of 10% or more from the original nominal wall thickness is cause for removal of the overpack from service. Any repairs needed on the shell to restore thickness shall require authorization by the Competent Authority.

c. Amount of deformation and denting of the shell. Any shell deformation or dent greater than 1.27 cm (0.50 inch) in depth is cause for removal of the overpack from service. Any repairs needed on the shell to remedy deformation or denting shall require authorization by the Competent Authority.

d. All welding repairs shall be made by welders qualified in accordance with Section IX of the ANSI/ASME Boiler and Pressure Vessel Code or Section 5 of the ANSI/AWS D1.1 code. Certification of weld procedures and welder qualifications shall be maintained and provided to the Competent Authority or his designee upon request.

(3) Foam shall be inspected to ensure the rigidity and presence of foam. Each vent hole shall be inspected with a probe to detect voids in the foam. New vent caps shall be installed and properly sealed after completion of foam inspection. A void in the foam greater than 1.27 cm (0.5 inch) in depth or diameter is cause for removal of the overpack from service.

(4) Gaskets and cavity pads shall be in place and free from damage or deterioration.

(5) Visual inspection shall ensure proper lid to body fit.

(6) All closure bolts shall be free of corrosion. Check proper operation of all closure bolts with a torque of 50 foot pounds (tolerance of +/- 5 foot lbs)

(7) Determine the weight of each half (lid and body) to ensure neither is more than 11 kg greater than the weight on the nameplate. If either half exhibits a gain of 11 kg or more or if the overpack as a whole exhibits a weight gain of 20 kg or more, the overpack shall be removed from service. Further drying of the overpack is not permitted. Any overpack that has previously been dried more than once in its entire service life shall be removed from service.

(8) Determine the weight of each half (lid and body) to ensure neither is less than 99% of the weight on the nameplate. If either half exhibits a weight loss of more than 1%, the overpack shall be removed from service.

(9) The exterior nameplate of the overpack shall list the date of the last inspection and the company that performed the inspection.

(10) Records of this inspection shall be maintained and provided to the Competent Authority or his designee upon request.

IDENTIFICATION MARK

J/27/AF-96 (Rev.1)

COMPETENT AUTHORITY

OF

JAPAN

CERTIFICATE FOR APPROVAL OF

PACKAGE DESIGN

FOR THE TRANSPORT OF

RADIOACTIVE MATERIAL

ISSUED BY

MINISTRY OF ECONOMY, TRADE AND INDUSTRY
1-3-1,KASUMIGASEKI, CHIYODA-KU,
TOKYO, JAPAN

CERTIFICATE FOR APPROVAL OF PACKAGE DESIGN FOR THE TRANSPORT OF RADIOACTIVE MATERIAL

This is to certify, in response to the application by MITSUBISHI NUCLEAR FUEL CO., LTD., that the package design described herein complies with the design requirements for a package containing fissile uranium hexafluoride, specified in the 1996 Edition (As Amended 2003) of the Regulations for the Safe Transport of Radioactive Material (International Atomic Energy Agency, Safety Standards Series No.TS-R-1) and the Japanese rules based on the Law for Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.

This certificate doesn't relieve the consignor from compliance with any requirement of the government of any country through or into which the package will be transported.

COMPETENT AUTHORITY
IDENTIFICATION MARK : J/27/AF-96 (Rev.1)

Aug. 23, 2006
Date

天野 雅則

Masanori Amano
Director
Nuclear Fuel Transport and Storage
Regulation Division
Nuclear and Industrial Safety Agency
Ministry of Economy, Trade and Industry
Competent Authority of Japan
for Package Design Approval

1. NAME OF PACKAGE : 21PF-1

(Type A, Fissile Material and Uranium Hexafluoride Package)

2. SPECIFICATION OF PACKAGE

(1) MATERIAL OF PACKAGING : See the attached table-1

(2) TOTAL WEIGHT OF PACKAGE : 3,980 kg or less

(3) OUTER DIMENSION OF PACKAGE

(i) Length : Approximately 2.5 m

(ii) Width : Approximately 1.3 m

(iii) Height : Approximately 1.3 m

(iv) Package Illustration : See the attached figure

(4) TOTAL WEIGHT OF PACKAGING : 1,703 kg or less

3. SPECIFICATION OF CONTENT : See the attached table-2

4. ASSUMED AMBIENT CONDITIONS

(i) Ambient Temperature : 38 ℃

(ii) Insolation Data : Table XI of IAEA Regulation

(Safety Standard Series No TS-R-1, 1996 Edition)

5. RESTRICTIONS ON TRANSPORT

(i) Restriction Number : No Restriction

(ii) Arrangement : No Restriction

(iii) Criticality Safety Index (CSI) : 0

6. SPECIAL FEATURES IN THE CRITICALITY ASSESSMENT

It is surely confirmed in the criticality assessment that no water will leak into or out of any 30B cylinder (i.e. certain void spaces) under any conditions in transport (i.e. not only during routine transport but also under normal and hypothetical accident conditions in transport), even if the protective packaging may be fractured and deformed.

Accordingly, it is required that quality control of any 30B cylinder including its valve and plug must be performed so as to prevent any leakage of water into it (i.e. to keep containment of cylinder) before each shipment.

7. IN CASE THE PACKAGE CERTIFIED IS CATEGORIZED IN TYPE BM PACKAGE, EXPLAIN THE REASON WHY THE PACKAGE DOES NOT CONFORM TO SOME OF ALL TECHNICAL REQUIREMENTS TO BE APPLIED TO TYPE BU PACKAGE.

: Not Applicable

8. INSTRUCTIONS ON USE AND MAINTENANCE OF PACKAGING

(1) INSPECTIONS FOR HANDLING AND MAINTENANCE OF PACKAGINGS

(a) Whenever each package is shipped, it shall be handled carefully in accordance with the schedule and procedures established properly and transported taking all possible safe measures.

(b) Handling of each package shall be conducted using forklift or crane in routine work, or done using appropriate lifting devices, if necessary.

(c) When these packagings are stored outdoors, they should avoid being placed directly on the bare ground, if possible and shall be covered with an appropriate waterproofed sheet to prevent any leakage of rainwater into them.

(d) Each packaging shall be visually checked whether there is no abnormality or defect on it before using.

(e) Each packaging shall be annually inspected more than once a year (in case the packaging is used for transport more than ten (10) times per year, these inspections shall be conducted every ten times) to maintain integrity of each packaging.

Each protective overpack shall be visually inspected in the periodic inspection and each 30B cylinder shall be visually inspected and subcriticality-inspected as well, and any defect of each packaging shall be repaired, if any. Further, each 30B cylinder shall be periodically inspected and tested at intervals not to exceed five (5) years. The periodic inspection and test of each cylinder shall consist of hydrostatic strength test, air leak tightness test.

(2) ACTIONS PRIOR TO SHIPMENT

Each package shall be checked for the following items before shipment.

(i) Visual Inspection

(ii) Lifting Inspection

(iii) Weight Measurement

(iv) Surface Contamination Measurement

(v) Radiation Dose Rate Measurement

(vi) Subcriticality Inspection

(vii) Inspection of Contents

(3) PRECAUTION FOR LOADING OF PACKAGE FOR TRANSPORT

Loading of each package shall be performed securely at the designated tie-down (e.g. each leg portion of the packaging) so as not to move, roll down or fall down from the loading position during transport.

9. THE EXPIRY DATE OF CERTIFICATE

August 10, 2009

10. NOTE

It is required by Japanese regulations to acquire Confirmation of Package for each shipment.

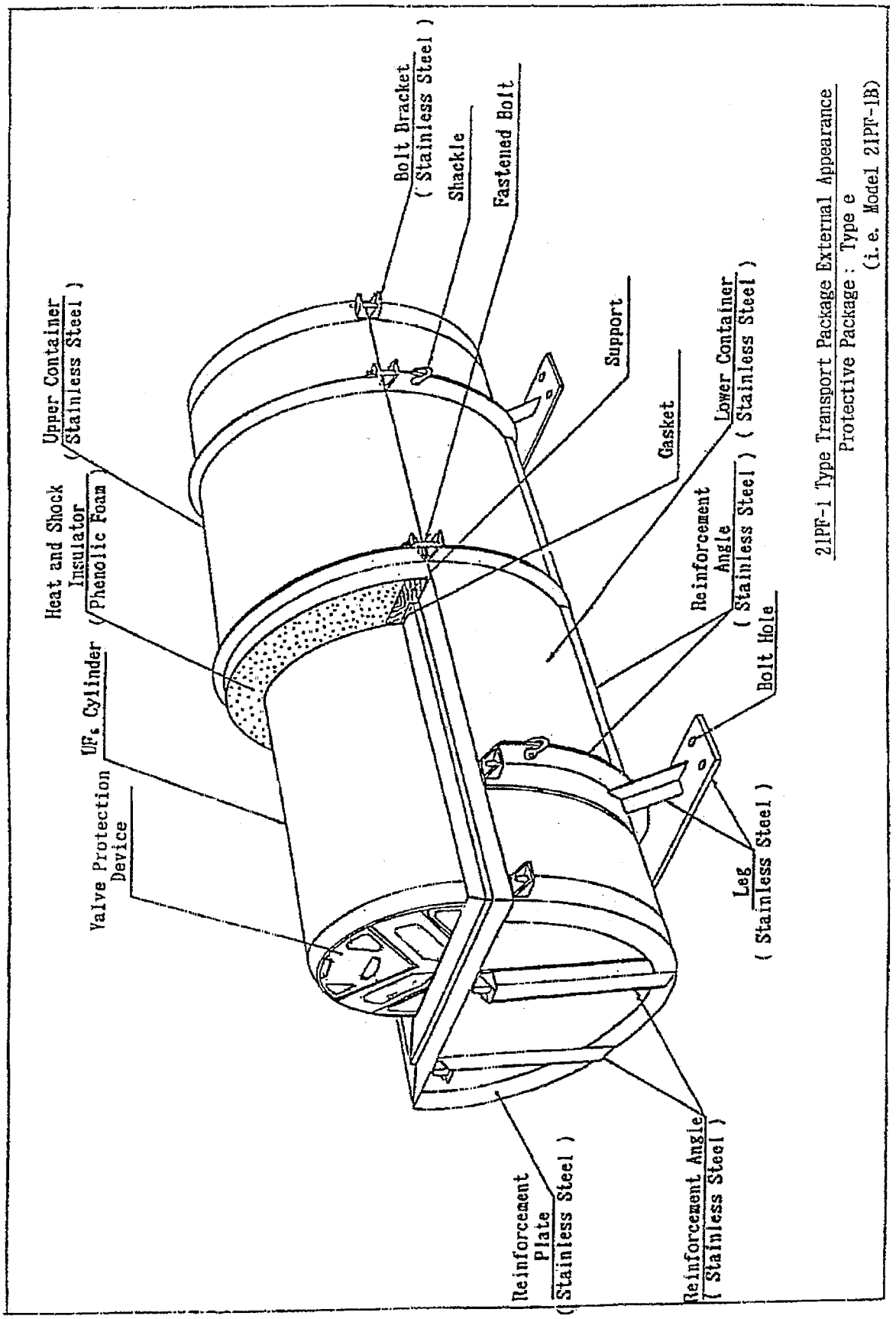
Licensees could get Approval of Packaging for individual packaging beforehand.

Table— 1 MATERIAL OF PACKAGING

Construction	Material
1. Protective Overpack	Type e
(Model DOT Specification)	(21PF-1B)
Outer Shell	Stainless Steel (SUS304, or 304L)
Inner Shell	ditto
Reinforcement Members	ditto
Heat Insulator	Phenolic Foam (USAEC SP-9)
Support	Oak Wood or Maple Wood
Pad	Sponge Rubber, Neoprene and Viton
2. Cylinder	
Shell	Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service (ASTM A516)
Heads	Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service (ASTM A516)
Skirt	Structural Steel (ASTM A36) or Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service (ASTM A516)
Valve	Aluminum Bronze (ALLOY-636)
Plug	Aluminum Bronze (ASTM B150) or Forged Steel (ASTM A105)
3. Valve Protection Device	
Primary Aluminum Insert	Aluminum-Alloy Sand Castings (ASTM B26 ALLOY514)
Secondary Aluminum Insert	Aluminum-Alloy Sand Castings (ASTM B26 ALLOY514)
Spider and Spacer	Structural Steel (ASTM A36)

Table-2 Specification of Content

Material of Nuclear Fuel	Uranium Hexafluoride (UF_6)	
Physical State	Solid (Block and Powder)	
Total Weight of Nuclear Fuel	2,277 kg-UF_6 or less	
Total Activity	245 GBq or less	
Initial Enrichment	5% or less	
Total Heat Generation Rate	Not Applicable	
Burn Up Rate		
Cooling Time		
Moderation Control, i.e. H/U Atomic Ratio	Less than 0.088 (As Purity of UF_6 is more than or equivalent to 99.5 %)	
Radio-nuclides	^{232}U	$\leqq 2\times10^{-9}$ g/g ^{235}U
	^{234}U	$\leqq 1\times10^{-2}$ g/g ^{235}U
	^{236}U	$\leqq 5\times10^{-3}$ g/g ^{235}U
	^{99}Tc	$\leqq 2\times10^{-7}$ g/g ^{235}U



21PF-1 Type Transport Package External Appearance
Protective Package : Type e
(i.e. Model 21PF-1B)

MINISTRY OF ECONOMY, TRADE AND INDUSTRY

CERTIFICATE OF APPROVAL OF PACKAGING FOR THE TRANSPORT OF RADIOACTIVE MATERIAL

Heisei19・04・26Gen No.54
May 11, 2007

To:
Hideo Suzuki, Executive President
Mitsubishi Nuclear Fuel Co., Ltd.

COMPETENT AUTHORITY IDENTIFICATION MARK

From:
Akira Amari, Minister
Ministry of Economy, Trade and Industry

This is to certify in accordance with Section No.3 of Paragraph No.24[*1] of the Regulation "The Ordinance for the Regulations of Transport of Nuclear Fuel Material or Material Contaminated by Nuclear Fuel Material to a Place Outside of the Factory or a Place of Business", in response to the application MITSUBISHI NUCLEAR FUEL CO., LTD. ("MNF" for short) Gyou No.37-0062 on April 26, 2007 that the packagings listed on the attached sheet can be continually allowed to be used until August 10, 2009.

Because MNF has notified me of changing the description of certificate for packaging approval from No.36-0612 dated October 26, 2006 to No. 37-0062 dated April 26, 2007 according to the above-mentioned paragraph of the Regulation (i.e. Para. No.24), though the MNF owned packagings were once certified by "Heisei 18・10・26Gen No.11 " on November 9, 2006 in accordance with Section No.3 of Paragraph No.59 of the Law for Regulation of Nuclear Raw Material, Nuclear Fuel Material and Operation of Nuclear Reactor, in response to the application MNF Gyou No.36-0612 on October 26, 2006.

Therefore, the certificate by " Heisei 18・10・26Gen No.11" dated November 9, 2006 automatically loses effect on May 11, 2007.

([*1]) This paragraph specifies "the Report of Change of certificate for packaging approval and Disuse of packaging(s) in service".

CONTENTS

3. OUTER DIMENSION OF PACKAGING AND WEIGHT OF PACKAGING

(1) OUTER DIMENSION OF PACKAGING

Length : Approximately 2.5 m

Width : Approximately 1.3 m

Height : Approximately 1.3 m

Package Illustration : As shown in Figures-1, Figures-2 and Table-1 attached hereto

(2) WEIGHT OF PACKAGING : Approximately 1.7 ton

4. TYPE OF PACKAGE : Type A, Fissile Material and Uranium Hexafluoride Package

(1) Allowable Number of Packages to be transported together : Infinite

(2) Arrangement of Packages to be transported together : Unlimited

(3) Criticality safety index : 0

5. SPECIFICATION, PHYSICAL STATE, WEIGHT AND TOTAL ACTIVITY OF CONTENT :

As shown in Table-2 attached hereto

6. REGISTERED SERIAL NUMBERS OF APPROVED PACKAGINGS :

As shown in Table-3 attached hereto

7. EXPRIRATION DATE

This Certificate expires on August 10, 2009

8. INSPECTIONS FOR HANDLING AND MAINTENANCE OF PACKAGINGS

(a) Whenever each package is shipped, it shall be handled carefully in accordance with the schedule and procedures established properly and transported taking all possible safe measures.

(b) Loading or shifting operation of each package shall be conducted using forklift or crane in routine work, or done using appropriate lifting devices, if necessary.

(c) When these packagings are stored outdoors, they should avoid being placed directly on the bare ground, if possible and shall be covered with an appropriate waterproofed sheet to prevent any leakage of rainwater into them.

(d) Each packaging shall be visually checked whether there is no abnormality or defect on it before using.

(e) Each packaging shall be annually inspected more than once a year (in case the packaging is used for transport more than ten (10) times per year, these inspections shall be conducted every ten times) to maintain integrity of each packaging.

Each protective overpack and each valve protection device shall be visually inspected in the periodic inspection and each 30B cylinder shall be visually inspected and subcriticality-inspected as well, and any defect of each packaging shall be repaired, if any. Further, each 30B cylinder shall be periodically inspected and tested at intervals not to exceed five (5) years.

The periodic inspection and test of each cylinder shall consist of hydrostatic strength test, air leak tightness test.

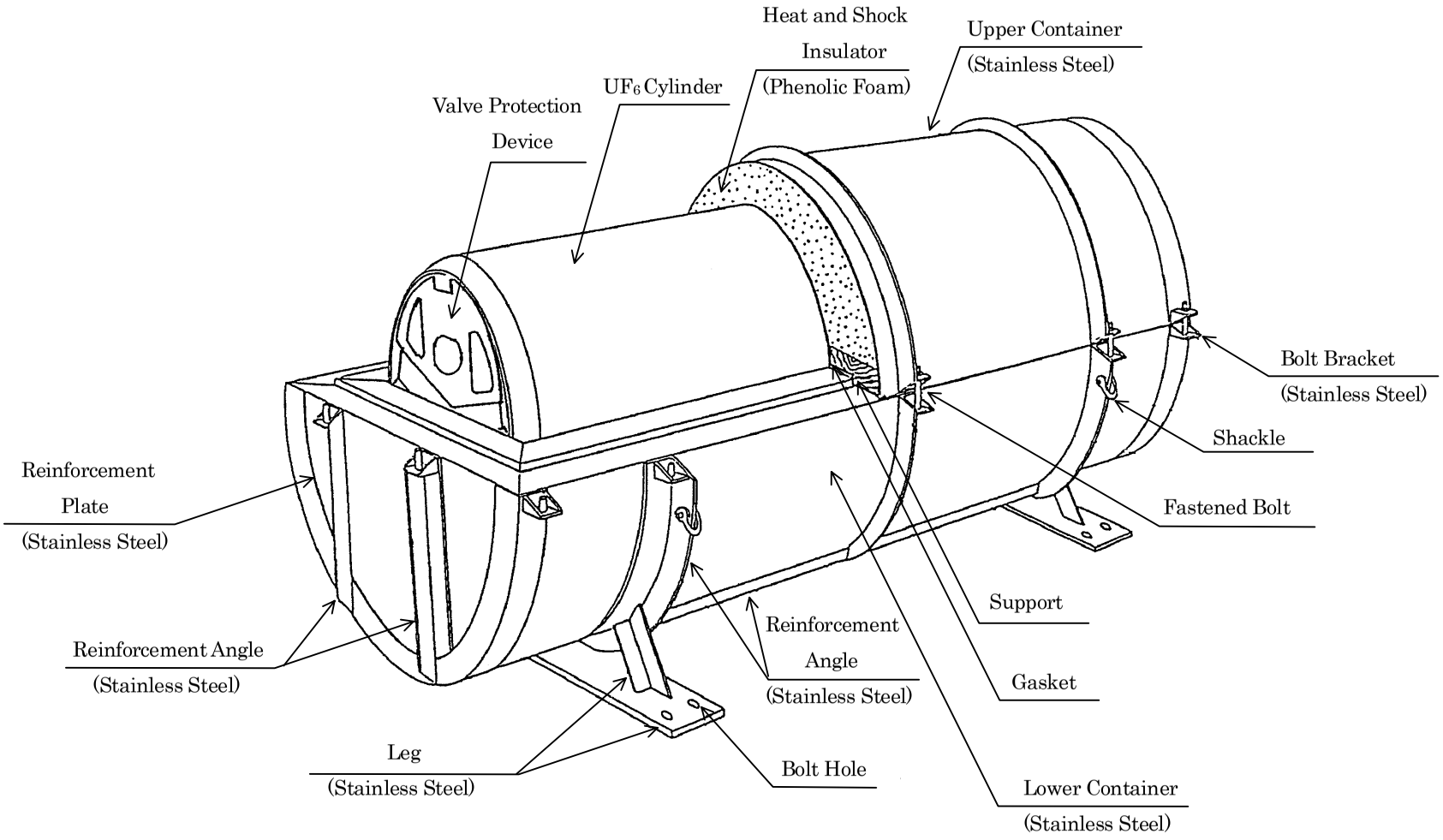
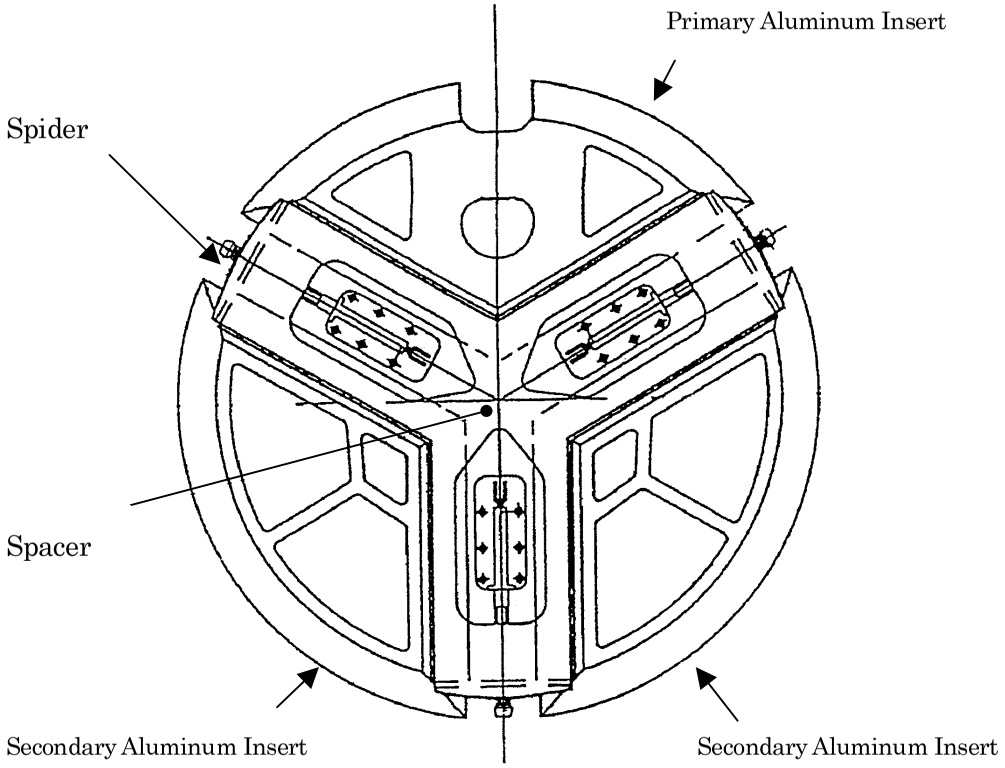


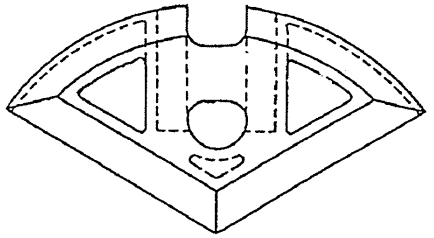
FIGURE-1 21PF-1 Type Transport Package External Appearance

Protective Package : Type e

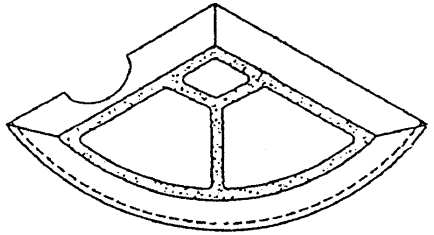
(i.e. Model 21PF-1B)



Valve Protection Device



Primary Aluminum Insert (one (1) piece, valve position)



Secondary Aluminum Insert (two (2) pieces)

FIGURE-2 VALVE PROTECTION DEVICE 【J/27/AF-96 (Rev.1)】

Table－1 MATERIAL OF PACKAGING

Construction	Material
1. Protective Overpack	Type e
(Model DOT Specification)	(21PF-1B)
Outer Shell	Stainless Steel（SUS304, or 304L）
Inner Shell	ditto
Reinforcement Members	ditto
Heat Insulator	Phenolic Foam（USAEC SP-9）
Support	Oak Wood or Maple Wood
Pad	Sponge Rubber, Neoprene and Viton
2. Cylinder	
Shell	Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service（ASTM A516）
Heads	Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service（ASTM A516）
Skirt	Structural Steel (ASTM A36) or Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service (ASTM A516)
Valve	Aluminum Bronze（ALLOY-636）
Plug	Aluminum Bronze (ASTM B150) or Forged Steel (ASTM A105)
3. Valve Protection Device	
Primary Aluminum Insert	Aluminum-Alloy Sand Castings （ASTM B26 ALLOY514）
Secondary Aluminum Insert	Aluminum-Alloy Sand Castings （ASTM B26 ALLOY514）
Spider and Spacer	Structural Steel （ASTM A36）

Table－2 SPECIFICATION, PHYSICAL STATE, WEIGHT AND TOTAL ACTIVITY OF CONTENT

Material of Nuclear Fuel	UF_6	
Physical State	Solid (Block and Powder)	
Total Weight of Nuclear Fuel	2,277 kg / cylinder in maximum	
Total Activity	245 GBq / cylinder in maximum	
Initial Enrichment	5 % in maximum	
Burn-Up Rate	Not Applicable	
Total Heat Generation Rate		
Cooling Time		
Moderation control	Purity of UF_6 is 99.5 % or more H/U Atomic Ratio is 0.088 or less	
Radio-nuclides	^{232}U	$\leqq 2\times10^{-9}$ g/g ^{235}U
	^{234}U	$\leqq 1\times10^{-2}$ g/g ^{235}U
	^{236}U	$\leqq 5\times10^{-3}$ g/g ^{235}U
	^{99}U	$\leqq 2\times10^{-7}$ g/g ^{235}U

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】(1/3)

Different models of Protective Overpacks are shown with the last letter of each number of the Overpack (For example: 'e').

Each packaging to be used for each shipment of UF_6 can consist of any protective overpack, any cylinder and any set of valve protection device

No.1 OVERPACK

No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks
1	S585A27	MNF-OPP-585 e	13	S628A27	MNF-OPP-628 e	25	S651A27	MNF-OPP-651 e	37	S714A27	MNF-OPP-714 e
2	S589A27	MNF-OPP-589 e	14	S629A27	MNF-OPP-629 e	26	S652A27	MNF-OPP-652 e	38	S715A27	MNF-OPP-715 e
3	S591A27	MNF-OPP-591 e	15	S631A27	MNF-OPP-631 e	27	S653A27	MNF-OPP-653 e	39	S719A27	MNF-OPP-719 e
4	S593A27	MNF-OPP-593 e	16	S632A27	MNF-OPP-632 e	28	S655A27	MNF-OPP-655 e	40	S722A27	MNF-OPP-722 e
5	S594A27	MNF-OPP-594 e	17	S635A27	MNF-OPP-635 e	29	S657A27	MNF-OPP-657 e	41	S724A27	MNF-OPP-724 e
6	S597A27	MNF-OPP-597 e	18	S638A27	MNF-OPP-638 e	30	S658A27	MNF-OPP-658 e	42	S730A27	MNF-OPP-730 e
7	S598A27	MNF-OPP-598 e	19	S642A27	MNF-OPP-642 e	31	S659A27	MNF-OPP-659 e			
8	S600A27	MNF-OPP-600 e	20	S643A27	MNF-OPP-643 e	32	S683A27	MNF-OPP-683 e			
9	S622A27	MNF-OPP-622 e	21	S644A27	MNF-OPP-644 e	33	S685A27	MNF-OPP-685 e			
10	S625A27	MNF-OPP-625 e	22	S645A27	MNF-OPP-645 e	34	S686A27	MNF-OPP-686 e			
11	S626A27	MNF-OPP-626 e	23	S648A27	MNF-OPP-648 e	35	S687A27	MNF-OPP-687 e			
12	S627A27	MNF-OPP-627 e	24	S649A27	MNF-OPP-649 e	36	S688A27	MNF-OPP-688 e			

No.2 CYLINDER

No.	Reg. Nos.	Numbers of Cylinder	No.	Reg. Nos.	Numbers of Cylinder
1	S86A27C	MNFC-086	5	S250A27C	MNFC-250
2	S90A27C	MNFC-090	6	S257A27C	MNFC-257
3	S92A27C	MNFC-092	7	S265A27C	MNFC-265
4	S249A27C	MNFC-249	8	S398A27C	MNFC-398

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】 (2/3)

No.3 PRIMARY ALUMINUM INSERT

No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert
1	S 1A27D	MNFD-001	14	S28A27D	MNFD-028	27	S41A27D	MNFD-041	40	S86A27D	MNFD-086
2	S 3A27D	MNFD-003	15	S29A27D	MNFD-029	28	S42A27D	MNFD-042	41	S87A27D	MNFD-087
3	S 4A27D	MNFD-004	16	S30A27D	MNFD-030	29	S50A27D	MNFD-050	42	S88A27D	MNFD-088
4	S 5A27D	MNFD-005	17	S31A27D	MNFD-031	30	S76A27D	MNFD-076	43	S90A27D	MNFD-090
5	S 6A27D	MNFD-006	18	S32A27D	MNFD-032	31	S77A27D	MNFD-077	44	S91A27D	MNFD-091
6	S 8A27D	MNFD-008	19	S33A27D	MNFD-033	32	S78A27D	MNFD-078	45	S92A27D	MNFD-092
7	S21A27D	MNFD-021	20	S34A27D	MNFD-034	33	S79A27D	MNFD-079	46	S93A27D	MNFD-093
8	S22A27D	MNFD-022	21	S35A27D	MNFD-035	34	S80A27D	MNFD-080	47	S94A27D	MNFD-094
9	S23A27D	MNFD-023	22	S36A27D	MNFD-036	35	S81A27D	MNFD-081	48	S96A27D	MNFD-096
10	S24A27D	MNFD-024	23	S37A27D	MNFD-037	36	S82A27D	MNFD-082	49	S98A27D	MNFD-098
11	S25A27D	MNFD-025	24	S38A27D	MNFD-038	37	S83A27D	MNFD-083	50	S100A27D	MNFD-100
12	S26A27D	MNFD-026	25	S39A27D	MNFD-039	38	S84A27D	MNFD-084			
13	S27A27D	MNFD-027	26	S40A27D	MNFD-040	39	S85A27D	MNFD-085			

No.4 SECONDARY ALUMINUM INSERT

No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert
1	S 1A27E	MNFE-001	26	S54A27E	MNFE-054	51	S79A27E	MNFE-079	76	S168A27E	MNFE-168
2	S 2A27E	MNFE-002	27	S55A27E	MNFE-055	52	S80A27E	MNFE-080	77	S169A27E	MNFE-169
3	S 5A27E	MNFE-005	28	S56A27E	MNFE-056	53	S81A27E	MNFE-081	78	S170A27E	MNFE-170
4	S 6A27E	MNFE-006	29	S57A27E	MNFE-057	54	S82A27E	MNFE-082	79	S171A27E	MNFE-171
5	S 7A27E	MNFE-007	30	S58A27E	MNFE-058	55	S83A27E	MNFE-083	80	S172A27E	MNFE-172
6	S 8A27E	MNFE-008	31	S59A27E	MNFE-059	56	S84A27E	MNFE-084	81	S173A27E	MNFE-173
7	S 9A27E	MNFE-009	32	S60A27E	MNFE-060	57	S99A27E	MNFE-099	82	S174A27E	MNFE-174
8	S10A27E	MNFE-010	33	S61A27E	MNFE-061	58	S100A27E	MNFE-100	83	S175A27E	MNFE-175
9	S11A27E	MNFE-011	34	S62A27E	MNFE-062	59	S151A27E	MNFE-151	84	S176A27E	MNFE-176
10	S12A27E	MNFE-012	35	S63A27E	MNFE-063	60	S152A27E	MNFE-152	85	S179A27E	MNFE-179
11	S15A27E	MNFE-015	36	S64A27E	MNFE-064	61	S153A27E	MNFE-153	86	S180A27E	MNFE-180
12	S16A27E	MNFE-016	37	S65A27E	MNFE-065	62	S154A27E	MNFE-154	87	S181A27E	MNFE-181
13	S41A27E	MNFE-041	38	S66A27E	MNFE-066	63	S155A27E	MNFE-155	88	S182A27E	MNFE-182
14	S42A27E	MNFE-042	39	S67A27E	MNFE-067	64	S156A27E	MNFE-156	89	S183A27E	MNFE-183
15	S43A27E	MNFE-043	40	S68A27E	MNFE-068	65	S157A27E	MNFE-157	90	S184A27E	MNFE-184
16	S44A27E	MNFE-044	41	S69A27E	MNFE-069	66	S158A27E	MNFE-158	91	S185A27E	MNFE-185
17	S45A27E	MNFE-045	42	S70A27E	MNFE-070	67	S159A27E	MNFE-159	92	S186A27E	MNFE-186
18	S46A27E	MNFE-046	43	S71A27E	MNFE-071	68	S160A27E	MNFE-160	93	S187A27E	MNFE-187
19	S47A27E	MNFE-047	44	S72A27E	MNFE-072	69	S161A27E	MNFE-161	94	S188A27E	MNFE-188
20	S48A27E	MNFE-048	45	S73A27E	MNFE-073	70	S162A27E	MNFE-162	95	S191A27E	MNFE-191
21	S49A27E	MNFE-049	46	S74A27E	MNFE-074	71	S163A27E	MNFE-163	96	S192A27E	MNFE-192
22	S50A27E	MNFE-050	47	S75A27E	MNFE-075	72	S164A27E	MNFE-164	97	S195A27E	MNFE-195
23	S51A27E	MNFE-051	48	S76A27E	MNFE-076	73	S165A27E	MNFE-165	98	S196A27E	MNFE-196
24	S52A27E	MNFE-052	49	S77A27E	MNFE-077	74	S166A27E	MNFE-166	99	S199A27E	MNFE-199
25	S53A27E	MNFE-053	50	S78A27E	MNFE-078	75	S167A27E	MNFE-167	100	S200A27E	MNFE-200

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】(3/3)

No.5 SPIDER

No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider
1	S 1A27F	MNFF-001	14	S28A27F	MNFF-028	27	S41A27F	MNFF-041	40	S86A27F	MNFF-086
2	S 3A27F	MNFF-003	15	S29A27F	MNFF-029	28	S42A27F	MNFF-042	41	S87A27F	MNFF-087
3	S 4A27F	MNFF-004	16	S30A27F	MNFF-030	29	S50A27F	MNFF-050	42	S88A27F	MNFF-088
4	S 5A27F	MNFF-005	17	S31A27F	MNFF-031	30	S76A27F	MNFF-076	43	S90A27F	MNFF-090
5	S 6A27F	MNFF-006	18	S32A27F	MNFF-032	31	S77A27F	MNFF-077	44	S91A27F	MNFF-091
6	S 8A27F	MNFF-008	19	S33A27F	MNFF-033	32	S78A27F	MNFF-078	45	S92A27F	MNFF-092
7	S21A27F	MNFF-021	20	S34A27F	MNFF-034	33	S79A27F	MNFF-079	46	S93A27F	MNFF-093
8	S22A27F	MNFF-022	21	S35A27F	MNFF-035	34	S80A27F	MNFF-080	47	S94A27F	MNFF-094
9	S23A27F	MNFF-023	22	S36A27F	MNFF-036	35	S81A27F	MNFF-081	48	S96A27F	MNFF-096
10	S24A27F	MNFF-024	23	S37A27F	MNFF-037	36	S82A27F	MNFF-082	49	S98A27F	MNFF-098
11	S25A27F	MNFF-025	24	S38A27F	MNFF-038	37	S83A27F	MNFF-083	50	S100A27F	MNFF-100
12	S26A27F	MNFF-026	25	S39A27F	MNFF-039	38	S84A27F	MNFF-084			
13	S27A27F	MNFF-027	26	S40A27F	MNFF-040	39	S85A27F	MNFF-085			

No.6 SPACER

No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer
1	S 1A27G	MNFG-001	14	S28A27G	MNFG-028	27	S41A27G	MNFG-041	40	S86A27G	MNFG-086
2	S 3A27G	MNFG-003	15	S29A27G	MNFG-029	28	S42A27G	MNFG-042	41	S87A27G	MNFG-087
3	S 4A27G	MNFG-004	16	S30A27G	MNFG-030	29	S50A27G	MNFG-050	42	S88A27G	MNFG-088
4	S 5A27G	MNFG-005	17	S31A27G	MNFG-031	30	S76A27G	MNFG-076	43	S90A27G	MNFG-090
5	S 6A27G	MNFG-006	18	S32A27G	MNFG-032	31	S77A27G	MNFG-077	44	S91A27G	MNFG-091
6	S 8A27G	MNFG-008	19	S33A27G	MNFG-033	32	S78A27G	MNFG-078	45	S92A27G	MNFG-092
7	S21A27G	MNFG-021	20	S34A27G	MNFG-034	33	S79A27G	MNFG-079	46	S93A27G	MNFG-093
8	S22A27G	MNFG-022	21	S35A27G	MNFG-035	34	S80A27G	MNFG-080	47	S94A27G	MNFG-094
9	S23A27G	MNFG-023	22	S36A27G	MNFG-036	35	S81A27G	MNFG-081	48	S96A27G	MNFG-096
10	S24A27G	MNFG-024	23	S37A27G	MNFG-037	36	S82A27G	MNFG-082	49	S98A27G	MNFG-098
11	S25A27G	MNFG-025	24	S38A27G	MNFG-038	37	S83A27G	MNFG-083	50	S100A27G	MNFG-100
12	S26A27G	MNFG-026	25	S39A27G	MNFG-039	38	S84A27G	MNFG-084			
13	S27A27G	MNFG-027	26	S40A27G	MNFG-040	39	S85A27G	MNFG-085			

[Packaging of The Type 21PF－1]

Revision Record for Certificate of Approval of Packaging

times	Certificate / Report Grand of Law / Regulation	Application No. Application Date	Certification No. Certification Date
1 (First)	First certify Sec. No.3 Paragraph No.59	Gyou No.36-0612 December 26, 2006	Heisei18･10･26gen No.11 November 9, 2006
2 (this time)	The Report of Change of Certificate Sec. No.5 Paragraph No.24	Gyou No.37-0062 April 26, 2007	Heisei19･04･26gen No.54 May 11, 2007

(Note) Law, and Regulation is following

Law : Regulation of Nuclear Raw Material, Nuclear Fuel Material and Operation of Nuclear Reactor

Regulation : The Ordinance for the Regulations of Transport of Nuclear Fuel Material or Material Contaminated by Nuclear Fuel Material to a Place Outside of the Factory or a Place of Business

MINISTRY OF ECONOMY, TRADE AND INDUSTRY

CERTIFICATE OF APPROVAL OF PACKAGING FOR THE TRANSPORT OF RADIOACTIVE MATERIAL

Heisei18・10・26Gen No.12
November 9, 2006

To:
Hideo Suzuki, Executive President
Mitsubishi Nuclear Fuel Co., Ltd.

COMPETENT AUTHORITY IDENTIFICATION MARK

From:
Akira Amari, Minister
Ministry of Economy, Trade and Industry

This is to certify in accordance with Section No.3 of Paragraph No.59 of the Law for Regulation of Nuclear Raw Material, Nuclear Fuel Material and Operation of Nuclear Reactor, in response to the application MITSUBISHI NUCLEAR FUEL CO., LTD. Gyou No.36-0613 on October 26, 2006 that all packagings satisfy technical requirements specified in "The Ordinance for the Regulations of Transport of Nuclear Fuel Material or Material Contaminated by Nuclear Fuel Material to a Place Outside of the Factory or a Place of Business" .

CONTENTS

3. OUTER DIMENSION OF PACKAGING AND WEIGHT OF PACKAGING

(1) OUTER DIMENSION OF PACKAGING

Length : Approximately 2.5 m

Width : Approximately 1.3 m

Height : Approximately 1.3 m

Package Illustration : As shown in Figures-1, Figures-2 and Table-1 attached hereto

(2) WEIGHT OF PACKAGING : Approximately 1.7 ton

4. TYPE OF PACKAGE : Type A, Fissile Material and Uranium Hexafluoride Package

(1) Allowable Number of Packages to be transported together : Infinite

(2) Arrangement of Packages to be transported together : Unlimited

(3) Criticality safety index : 0

5. SPECIFICATION, PHYSICAL STATE, WEIGHT AND TOTAL ACTIVITY OF CONTENT :

As shown in Table-2 attached hereto

6. REGISTERED SERIAL NUMBERS OF APPROVED PACKAGINGS :

As shown in Table-3 attached hereto

7. EXPRIRATION DATE

This Certificate expires on August 10, 2009

8. INSPECTIONS FOR HANDLING AND MAINTENANCE OF PACKAGINGS

(a) Whenever each package is shipped, it shall be handled carefully in accordance with the schedule and procedures established properly and transported taking all possible safe measures.

(b) Loading or shifting operation of each package shall be conducted using forklift or crane in routine work, or done using appropriate lifting devices, if necessary.

(c) When these packagings are stored outdoors, they should avoid being placed directly on the bare ground, if possible and shall be covered with an appropriate waterproofed sheet to prevent any leakage of rainwater into them.

(d) Each packaging shall be visually checked whether there is no abnormality or defect on it before using.

(e) Each packaging shall be annually inspected more than once a year (in case the packaging is used for transport more than ten (10) times per year, these inspections shall be conducted every ten times) to maintain integrity of each packaging.

Each protective overpack and each valve protection device shall be visually inspected in the periodic inspection and each 30B cylinder shall be visually inspected and subcriticality-inspected as well, and any defect of each packaging shall be repaired, if any. Further, each 30B cylinder shall be periodically inspected and tested at intervals not to exceed five (5) years.

The periodic inspection and test of each cylinder shall consist of hydrostatic strength test, air leak tightness test.

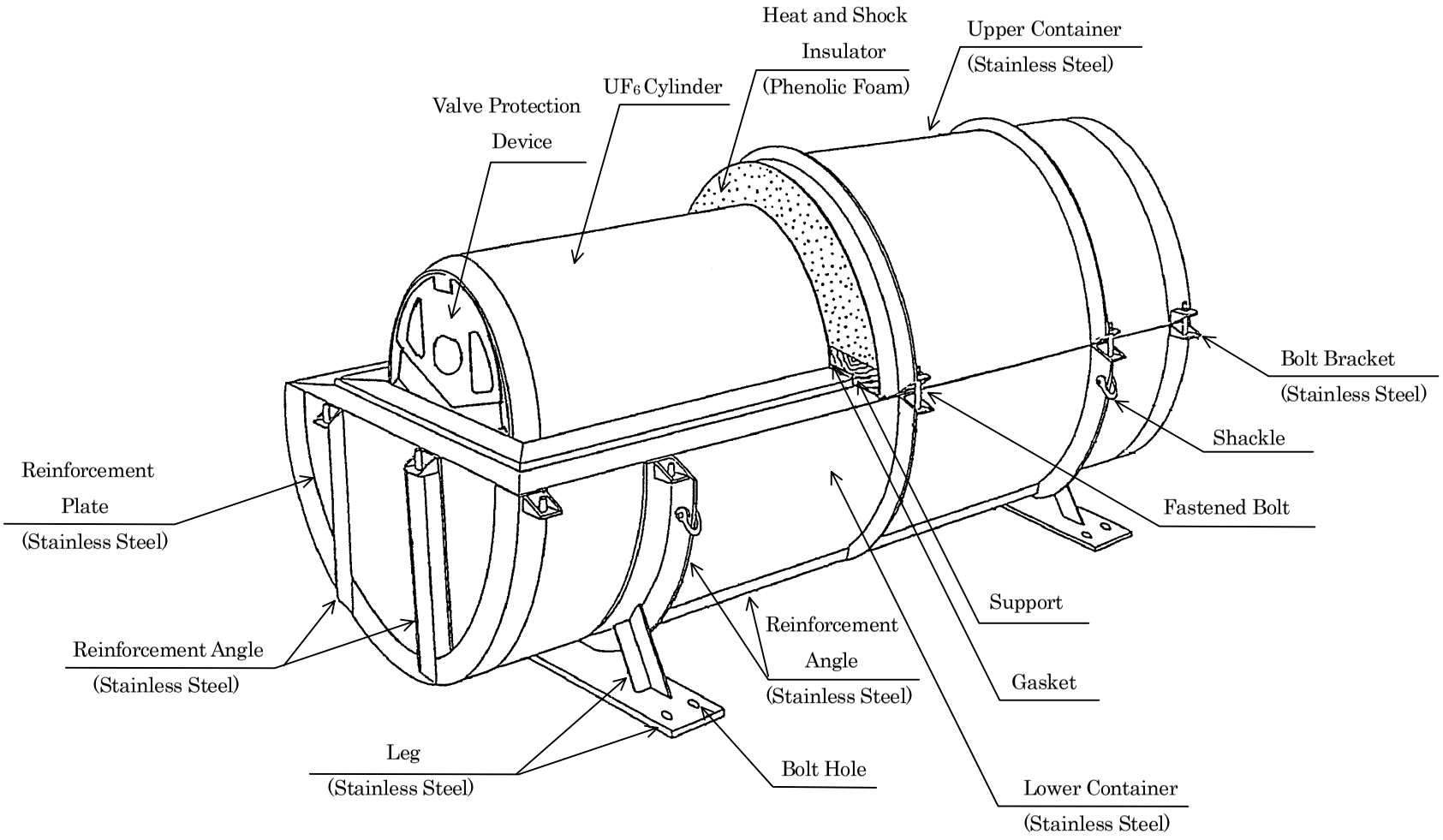
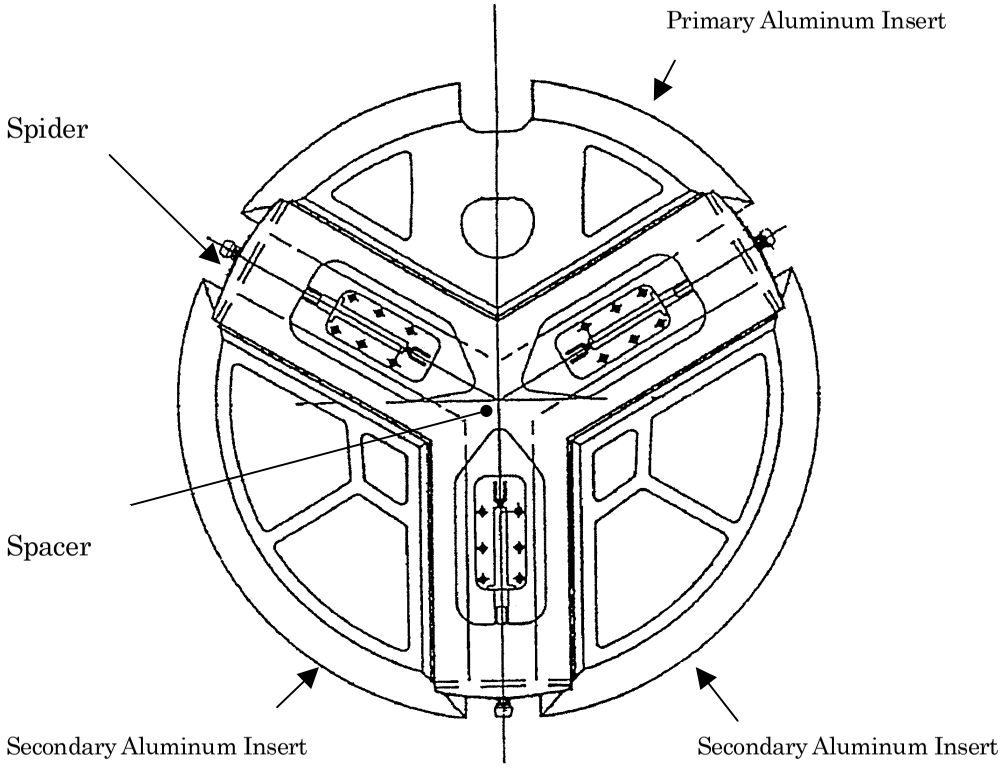


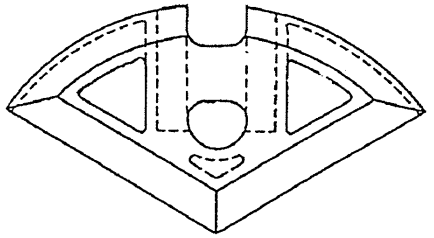
FIGURE-1 21PF-1 Type Transport Package External Appearance

Protective Package : Type e

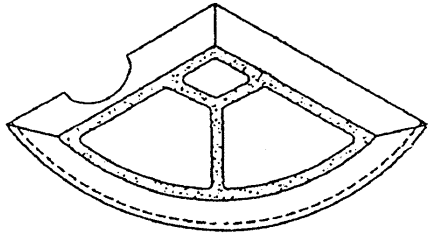
(i.e. Model 21PF-1B)



Valve Protection Device



Primary Aluminum Insert (one (1) piece, valve position)



Secondary Aluminum Insert (two (2) pieces)

FIGURE-2 VALVE PROTECTION DEVICE 【J/27/AF-96 (Rev.1)】

Table－１ MATERIAL OF PACKAGING

Construction	Material
1. Protective Overpack (Model DOT Specification) Outer Shell Inner Shell Reinforcement Members Heat Insulator Support Pad	Type e (21PF-1B) Stainless Steel（SUS304, or 304L） ditto ditto Phenolic Foam（USAEC SP-9） Oak Wood or Maple Wood Sponge Rubber, Neoprene and Viton
2. Cylinder Shell Heads Skirt Valve Plug	 Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service（ASTM A516） Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service（ASTM A516） Structural Steel (ASTM A36) or Pressure Vessel Plates, Carbon Steel, for Moderate-and-Lower Temperature Service (ASTM A516) Aluminum Bronze（ALLOY-636） Aluminum Bronze (ASTM B150) or Forged Steel (ASTM A105)
3. Valve Protection Device Primary Aluminum Insert Secondary Aluminum Insert Spider and Spacer	 Aluminum-Alloy Sand Castings （ASTM B26 ALLOY514） Aluminum-Alloy Sand Castings （ASTM B26 ALLOY514） Structural Steel （ASTM A36）

Table－２ SPECIFICATION, PHYSICAL STATE, WEIGHT AND TOTAL ACTIVITY OF CONTENT

Material of Nuclear Fuel	Uranium Hexafluoride (UF_6)	
Physical State	Solid (Block and Powder)	
Total Weight of Nuclear Fuel	2,277 kg / cylinder in maximum	
Total Activity	245 GBq / cylinder in maximum	
Initial Enrichment	5 % in maximum	
Burn-Up Rate	Not Applicable	
Total Heat Generation Rate		
Cooling Time		
Moderation control	Purity of UF_6 is 99.5 % or more H/U Atomic Ratio is 0.088 or less	
Radio-nuclides	^{232}U	$\leqq 2\times10^{-9}$ g/g ^{235}U
	^{234}U	$\leqq 1\times10^{-2}$ g/g ^{235}U
	^{236}U	$\leqq 5\times10^{-3}$ g/g ^{235}U
	^{99}U	$\leqq 2\times10^{-7}$ g/g ^{235}U

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】(1/3)

Different models of Protective Overpacks are shown with the last letter of each number of the Overpack (For example: 'e').

Each packaging to be used for each shipment of UF_6 can consist of any protective overpack, any cylinder and any set of valve protection device

No.1 OVERPACK

No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks	No.	Reg. Nos.	Numbers of Protective Overpacks
1	S587A27	MNF-OPP-587 e	18	S646A27	MNF-OPP-646 e	35	S691A27	MNF-OPP-691 e	52	S708A27	MNF-OPP-708 e
2	S590A27	MNF-OPP-590 e	19	S647A27	MNF-OPP-647 e	36	S692A27	MNF-OPP-692 e	53	S709A27	MNF-OPP-709 e
3	S592A27	MNF-OPP-592 e	20	S650A27	MNF-OPP-650 e	37	S693A27	MNF-OPP-693 e	54	S710A27	MNF-OPP-710 e
4	S595A27	MNF-OPP-595 e	21	S654A27	MNF-OPP-654 e	38	S694A27	MNF-OPP-694 e	55	S711A27	MNF-OPP-711 e
5	S596A27	MNF-OPP-596 e	22	S656A27	MNF-OPP-656 e	39	S695A27	MNF-OPP-695 e	56	S712A27	MNF-OPP-712 e
6	S599A27	MNF-OPP-599 e	23	S660A27	MNF-OPP-660 e	40	S696A27	MNF-OPP-696 e	57	S713A27	MNF-OPP-713 e
7	S621A27	MNF-OPP-621 e	24	S670A27	MNF-OPP-670 e	41	S697A27	MNF-OPP-697 e	58	S716A27	MNF-OPP-716 e
8	S623A27	MNF-OPP-623 e	25	S671A27	MNF-OPP-671 e	42	S698A27	MNF-OPP-698 e	59	S717A27	MNF-OPP-717 e
9	S624A27	MNF-OPP-624 e	26	S672A27	MNF-OPP-672 e	43	S699A27	MNF-OPP-699 e	60	S718A27	MNF-OPP-718 e
10	S630A27	MNF-OPP-630 e	27	S673A27	MNF-OPP-673 e	44	S700A27	MNF-OPP-700 e	61	S720A27	MNF-OPP-720 e
11	S633A27	MNF-OPP-633 e	28	S674A27	MNF-OPP-674 e	45	S701A27	MNF-OPP-701 e	62	S721A27	MNF-OPP-721 e
12	S634A27	MNF-OPP-634 e	29	S675A27	MNF-OPP-675 e	46	S702A27	MNF-OPP-702 e	63	S723A27	MNF-OPP-723 e
13	S636A27	MNF-OPP-636 e	30	S681A27	MNF-OPP-681 e	47	S703A27	MNF-OPP-703 e	64	S725A27	MNF-OPP-725 e
14	S637A27	MNF-OPP-637 e	31	S682A27	MNF-OPP-682 e	48	S704A27	MNF-OPP-704 e	65	S726A27	MNF-OPP-726 e
15	S639A27	MNF-OPP-639 e	32	S684A27	MNF-OPP-684 e	49	S705A27	MNF-OPP-705 e	66	S727A27	MNF-OPP-727 e
16	S640A27	MNF-OPP-640 e	33	S689A27	MNF-OPP-689 e	50	S706A27	MNF-OPP-706 e	67	S728A27	MNF-OPP-728 e
17	S641A27	MNF-OPP-641 e	34	S690A27	MNF-OPP-690 e	51	S707A27	MNF-OPP-707 e	68	S729A27	MNF-OPP-729 e

No.2 CYLINDER

No.	Reg. Nos.	Numbers of Cylinder	No.	Reg. Nos.	Numbers of Cylinder	No.	Reg. Nos.	Numbers of Cylinder	No.	Reg. Nos.	Numbers of Cylinder
1	S47A27C	MNFC-047	6	S243A27C	MNFC-243	11	S322A27C	MNFC-322	16	S367A27C	MNFC-367
2	S60A27C	MNFC-060	7	S247A27C	MNFC-247	12	S327A27C	MNFC-327	17	S376A27C	MNFC-376
3	S115A27C	MNFC-115	8	S263A27C	MNFC-263	13	S336A27C	MNFC-336	18	S406A27C	MNFC-406
4	S188A27C	MNFC-188	9	S269A27C	MNFC-269	14	S350A27C	MNFC-350			
5	S231A27C	MNFC-231	10	S311A27C	MNFC-311	15	S356A27C	MNFC-356			

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】(2/3)

No.3 PRIMARY ALUMINUM INSERT

No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert
1	S 2A27D	MNFD-002	14	S20A27D	MNFD-020	27	S56A27D	MNFD-056	40	S69A27D	MNFD-069
2	S 7A27D	MNFD-007	15	S43A27D	MNFD-043	28	S57A27D	MNFD-057	41	S70A27D	MNFD-070
3	S 9A27D	MNFD-009	16	S44A27D	MNFD-044	29	S58A27D	MNFD-058	42	S71A27D	MNFD-071
4	S10A27D	MNFD-010	17	S45A27D	MNFD-045	30	S59A27D	MNFD-059	43	S72A27D	MNFD-072
5	S11A27D	MNFD-011	18	S46A27D	MNFD-046	31	S60A27D	MNFD-060	44	S73A27D	MNFD-073
6	S12A27D	MNFD-012	19	S47A27D	MNFD-047	32	S61A27D	MNFD-061	45	S74A27D	MNFD-074
7	S13A27D	MNFD-013	20	S48A27D	MNFD-048	33	S62A27D	MNFD-062	46	S75A27D	MNFD-075
8	S14A27D	MNFD-014	21	S49A27D	MNFD-049	34	S63A27D	MNFD-063	47	S89A27D	MNFD-089
9	S15A27D	MNFD-015	22	S51A27D	MNFD-051	35	S64A27D	MNFD-064	48	S95A27D	MNFD-095
10	S16A27D	MNFD-016	23	S52A27D	MNFD-052	36	S65A27D	MNFD-065	49	S97A27D	MNFD-097
11	S17A27D	MNFD-017	24	S53A27D	MNFD-053	37	S66A27D	MNFD-066	50	S99A27D	MNFD-099
12	S18A27D	MNFD-018	25	S54A27D	MNFD-054	38	S67A27D	MNFD-067			
13	S19A27D	MNFD-019	26	S55A27D	MNFD-055	39	S68A27D	MNFD-068			

No.4 SECONDARY ALUMINUM INSERT

No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert	No.	Reg. Nos.	Numbers of Al Insert
1	S 3A27E	MNFE-003	26	S38A27E	MNFE-038	51	S109A27E	MNFE-109	76	S134A27E	MNFE-134
2	S 4A27E	MNFE-004	27	S39A27E	MNFE-039	52	S110A27E	MNFE-110	77	S135A27E	MNFE-135
3	S13A27E	MNFE-013	28	S40A27E	MNFE-040	53	S111A27E	MNFE-111	78	S136A27E	MNFE-136
4	S14A27E	MNFE-014	29	S85A27E	MNFE-085	54	S112A27E	MNFE-112	79	S137A27E	MNFE-137
5	S17A27E	MNFE-017	30	S86A27E	MNFE-086	55	S113A27E	MNFE-113	80	S138A27E	MNFE-138
6	S18A27E	MNFE-018	31	S87A27E	MNFE-087	56	S114A27E	MNFE-114	81	S139A27E	MNFE-139
7	S19A27E	MNFE-019	32	S88A27E	MNFE-088	57	S115A27E	MNFE-115	82	S140A27E	MNFE-140
8	S20A27E	MNFE-020	33	S89A27E	MNFE-089	58	S116A27E	MNFE-116	83	S141A27E	MNFE-141
9	S21A27E	MNFE-021	34	S90A27E	MNFE-090	59	S117A27E	MNFE-117	84	S142A27E	MNFE-142
10	S22A27E	MNFE-022	35	S91A27E	MNFE-091	60	S118A27E	MNFE-118	85	S143A27E	MNFE-143
11	S23A27E	MNFE-023	36	S92A27E	MNFE-092	61	S119A27E	MNFE-119	86	S144A27E	MNFE-144
12	S24A27E	MNFE-024	37	S93A27E	MNFE-093	62	S120A27E	MNFE-120	87	S145A27E	MNFE-145
13	S25A27E	MNFE-025	38	S94A27E	MNFE-094	63	S121A27E	MNFE-121	88	S146A27E	MNFE-146
14	S26A27E	MNFE-026	39	S95A27E	MNFE-095	64	S122A27E	MNFE-122	89	S147A27E	MNFE-147
15	S27A27E	MNFE-027	40	S96A27E	MNFE-096	65	S123A27E	MNFE-123	90	S148A27E	MNFE-148
16	S28A27E	MNFE-028	41	S97A27E	MNFE-097	66	S124A27E	MNFE-124	91	S149A27E	MNFE-149
17	S29A27E	MNFE-029	42	S98A27E	MNFE-098	67	S125A27E	MNFE-125	92	S150A27E	MNFE-150
18	S30A27E	MNFE-030	43	S101A27E	MNFE-101	68	S126A27E	MNFE-126	93	S177A27E	MNFE-177
19	S31A27E	MNFE-031	44	S102A27E	MNFE-102	69	S127A27E	MNFE-127	94	S178A27E	MNFE-178
20	S32A27E	MNFE-032	45	S103A27E	MNFE-103	70	S128A27E	MNFE-128	95	S189A27E	MNFE-189
21	S33A27E	MNFE-033	46	S104A27E	MNFE-104	71	S129A27E	MNFE-129	96	S190A27E	MNFE-190
22	S34A27E	MNFE-034	47	S105A27E	MNFE-105	72	S130A27E	MNFE-130	97	S193A27E	MNFE-193
23	S35A27E	MNFE-035	48	S106A27E	MNFE-106	73	S131A27E	MNFE-131	98	S194A27E	MNFE-194
24	S36A27E	MNFE-036	49	S107A27E	MNFE-107	74	S132A27E	MNFE-132	99	S197A27E	MNFE-197
25	S37A27E	MNFE-037	50	S108A27E	MNFE-108	75	S133A27E	MNFE-133	100	S198A27E	MNFE-198

Table-3 : Registered Serial Numbers 【IDENTIFICATION MARK: J/27/AF-96 (Rev.1)】(3/3)

No.5 SPIDER

No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider	No.	Reg. Nos.	Numbers of Spider
1	S 2A27F	MNFF-002	14	S20A27F	MNFF-020	27	S56A27F	MNFF-056	40	S69A27F	MNFF-069
2	S 7A27F	MNFF-007	15	S43A27F	MNFF-043	28	S57A27F	MNFF-057	41	S70A27F	MNFF-070
3	S 9A27F	MNFF-009	16	S44A27F	MNFF-044	29	S58A27F	MNFF-058	42	S71A27F	MNFF-071
4	S10A27F	MNFF-010	17	S45A27F	MNFF-045	30	S59A27F	MNFF-059	43	S72A27F	MNFF-072
5	S11A27F	MNFF-011	18	S46A27F	MNFF-046	31	S60A27F	MNFF-060	44	S73A27F	MNFF-073
6	S12A27F	MNFF-012	19	S47A27F	MNFF-047	32	S61A27F	MNFF-061	45	S74A27F	MNFF-074
7	S13A27F	MNFF-013	20	S48A27F	MNFF-048	33	S62A27F	MNFF-062	46	S75A27F	MNFF-075
8	S14A27F	MNFF-014	21	S49A27F	MNFF-049	34	S63A27F	MNFF-063	47	S89A27F	MNFF-089
9	S15A27F	MNFF-015	22	S51A27F	MNFF-051	35	S64A27F	MNFF-064	48	S95A27F	MNFF-095
10	S16A27F	MNFF-016	23	S52A27F	MNFF-052	36	S65A27F	MNFF-065	49	S97A27F	MNFF-097
11	S17A27F	MNFF-017	24	S53A27F	MNFF-053	37	S66A27F	MNFF-066	50	S99A27F	MNFF-099
12	S18A27F	MNFF-018	25	S54A27F	MNFF-054	38	S67A27F	MNFF-067			
13	S19A27F	MNFF-019	26	S55A27F	MNFF-055	39	S68A27F	MNFF-068			

No.6 SPACER

No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer	No.	Reg. Nos.	Numbers of Spacer
1	S 2A27G	MNFG-002	14	S20A27G	MNFG-020	27	S56A27G	MNFG-056	40	S69A27G	MNFG-069
2	S 7A27G	MNFG-007	15	S43A27G	MNFG-043	28	S57A27G	MNFG-057	41	S70A27G	MNFG-070
3	S 9A27G	MNFG-009	16	S44A27G	MNFG-044	29	S58A27G	MNFG-058	42	S71A27G	MNFG-071
4	S10A27G	MNFG-010	17	S45A27G	MNFG-045	30	S59A27G	MNFG-059	43	S72A27G	MNFG-072
5	S11A27G	MNFG-011	18	S46A27G	MNFG-046	31	S60A27G	MNFG-060	44	S73A27G	MNFG-073
6	S12A27G	MNFG-012	19	S47A27G	MNFG-047	32	S61A27G	MNFG-061	45	S74A27G	MNFG-074
7	S13A27G	MNFG-013	20	S48A27G	MNFG-048	33	S62A27G	MNFG-062	46	S75A27G	MNFG-075
8	S14A27G	MNFG-014	21	S49A27G	MNFG-049	34	S63A27G	MNFG-063	47	S89A27G	MNFG-089
9	S15A27G	MNFG-015	22	S51A27G	MNFG-051	35	S64A27G	MNFG-064	48	S95A27G	MNFG-095
10	S16A27G	MNFG-016	23	S52A27G	MNFG-052	36	S65A27G	MNFG-065	49	S97A27G	MNFG-097
11	S17A27G	MNFG-017	24	S53A27G	MNFG-053	37	S66A27G	MNFG-066	50	S99A27G	MNFG-099
12	S18A27G	MNFG-018	25	S54A27G	MNFG-054	38	S67A27G	MNFG-067			
13	S19A27G	MNFG-019	26	S55A27G	MNFG-055	39	S68A27G	MNFG-068			

U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

**East Building, PHH-23
1200 New Jersey Avenue Southeast
Washington, D.C. 20590**

CERTIFICATE NUMBER: USA/0406/AF-96, Revision 13

ORIGINAL REGISTRANT(S):

Mr. Darren Condrey
Transport Logistics International
Transport Logistics International
4000 Blackburn Lane
Suite 250
Burtonsville, 20866
USA

Mr. Mark Lambert
Transport Logistics International
Transport Logistics International
4000 Blackburn Lane
Suite 250
Burtonsville, 20866
USA

REGISTERED USER(S):

Mr. Michael Buckner
Customer Service and Product Scheduling
United States Enrichment Corporation
Paducah Gaseous Diffusion plant
P.O. Box 1410
5600 Hobbs Road
Paducah, 42002-1410
USA

Mr. Don McCarty
Packaging and Transportation
United States Enrichment Corporation
P.O. Box 628
Piketon, 45661
USA

Mr. Mutsuo Mishina
Mitsubishi Corporation
16-3 Konan
2-Chrone
Minato-Ku
, Tokyo 108-8228
Japan

Mr. Yutaka Ikada
Mitsubishi Nuclear Fuels Company
622-1 Funaisikawa
Tokai-mura
Naka-gun, Ibaraki 319-1197
Japan