

FORM PTO 1585

08-28-2001

SHEET

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101826346

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof

1. Name of conveying party(ies):

SIEMENS POWER CORPORATION

Additional name(s) of conveying parties attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other: _____

Execution date: July 18, 2001

2. Name and address of receiving party(ies)

Name: Framatome ANP Inc.Street Address: 3315 Old Forest Road
P.O. Box 10935City: Lynchburg State: Virginia ZIP: 24506-0935

4. Application numbers or patent numbers:

If this document is being filed together with a new application, the execution date of the application is:

Date of Execution:

A. Patent Applications:

B. Patent No.(s) See Schedule A Attached

Additional Numbers attached? ☒ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Patrick J. Birde, Esq.
Internal Address: KENYON & KENYONStreet Address: One Broadway
City: New York State: New York ZIP: 10004

6. Total number of applications and patents involved: 61

7. Total fee (37 C.F.R. 3.41) \$ 2440.00

- ☐ Enclosed
☒ Authorized to be charged to deposit account

8. Deposit account number:

11-0600

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9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Patrick J. Birde (Reg. No.29,770)

Name of Person Signing

Signature

Date

Total Number of pages including cover sheet, attachments, and document: 26

OMB No. 0651-0011 (exp. 4/94)

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08/27/2001 LMUELLER 00000149 110600 4784825

01 FC:581 2440.00 CH

NY01 398256 v 1

PATENT
 REEL: 012075 FRAME: 0949

SCHEDULE A

PATENT NO.	ISSUE DATE
4,784,825	November 15, 1988
4,942,015	July 17, 1990
4,692,303	September 8, 1987
4,830,841	May 16, 1989
4,879,088	November 7, 1989
4,668,482	May 26, 1987
4,726,926	February 23, 1988
4,849,161	July 18, 1989
4,951,299	August 21, 1990
4,957,698	September 18, 1990
5,084,237	January 28, 1992
5,030,412	July 9, 1991
5,215,706	June 1, 1993
5,255,300	October 19, 1993
5,259,009	November 2, 1993
5,264,109	November 23, 1993
6,165,367	December 26, 2000
5,345,485	September 6, 1994
5,384,815	January 24, 1995

PATENT NO.	ISSUE DATE
5,375,153	December 20, 1994
5,790,617	August 4, 1998
5,491,733	February 13, 1996
5,247,552	September 21, 1993
5,247,550	September 21, 1993
5,278,883	January 11, 1994
5,259,756	November 9, 1993
5,282,231	January 25, 1994
5,274,685	December 28, 1993
5,383,227	January 17, 1995
5,377,532	January 3, 1995
5,353,317	October 4, 1994
5,452,334	September 19, 1995
5,434,898	July 18, 1995
5,479,461	December 26, 1995
5,524,031	June 4, 1996
5,481,577	January 2, 1996
5,490,191	February 6, 1996
5,555,281	September 10, 1996
5,627,865	May 6, 1997
5,661,766	August 26, 1997
5,625,657	April 29, 1997

PATENT NO.	ISSUE DATE
5,572,560	November 5, 1996
6,002,735	December 14, 1999
5,991,354	November 23, 1999
6,005,906	December 21, 1999
6,088,419	July 11, 2000
6,192,098	February 20, 2001
6,058,155	May 2, 2000
5,692,024	November 25, 1997
5,790,623	August 4, 1998
5,772,798	June 30, 1998
5,768,332	June 16, 1998
5,787,142	July 28, 1998
5,892,807	April 6, 1999
5,926,517	July 20, 1999
5,844,959	December 1, 1998
5,838,753	November 17, 1998
5,854,818	December 29, 1998
5,835,550	November 10, 1998
6,016,701	January 25, 2000
6,010,671	January 4, 2000

ASSIGNMENT

WHEREAS, **Siemens Power Corporation**, a corporation having a place of business at **2101 Horn Rapids Road, Richland, Washington 99352-0130**; and who, together with its successors, assigns and legal representatives, is hereinafter called "Assignor", owns the entire right, title and interest in and to the Letters Patents of the United States of America and patents and applications for patents elsewhere, listed in the attached Schedule, and to the inventions described and claimed therein; and

WHEREAS, **Framatome ANP, Inc.**, a corporation having a place of business at **3315 Old Forest Road, P.O. Box 10935, Lynchburg, VA 24506-0935**, who, together with its successors, assigns and legal representatives, is hereinafter called "Assignee", is desirous of acquiring the entire right, title and interest in and to the Letters Patents and patent applications listed in said Schedule and the inventions therein described and claimed;

NOW, THEREFORE, for valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby assigns, sells and transfers unto said Assignee, its successors and assigns, the entire right, title and interest in and to the said patents and the inventions therein contained, including the right to apply for any Letters Patent and any applications for Letters Patent in any and all countries on the inventions, and any Letters Patent that may issue thereon or therefor, in the United States and elsewhere, and all reissues, extensions, renewals, divisions and continuations thereof, to the full end of the term or terms for which the Letters Patent may be issued, the same to be held and enjoyed by Assignee, its successors and assigns, the same as it would have been held and enjoyed by Assignor if this Assignment had not been made; together with all claims or

damages by reason of past infringement of any of said patents; with the right to sue for, and collect the same for its own use and for the use of its successors and assigns.

IN TESTIMONY WHEREOF, Siemens Power Corporation has hereunto set its hand and seal this 18 day of July, 2001.

SIEMENS POWER CORPORATION

By: [Signature]
Name: Roger Reynolds
Title: DIRECTOR, RESEARCH & DEVELOPMENT

WITNESSED BY:

[Signature]
Signature

Robert A. Dutton
Name

2101 HOAN RAPIDS ROAD
Address Richland, WA

FRAMATOME ANP, INC.

By: [Signature]
Name: DAVID F GUZZA
Title: SECRETARY

WITNESSED BY:

[Signature]
Signature

DAVIDA R. KIDD
Name

3315 OLD FOREST ROAD
Address LYNCHBURG, VA 24501

Pat #:	Issue Date	Title:
4,784,825	15-Nov-1988	Method and Apparatus for Preventing and Repairing ...
4,942,015	17-Jul-1990	Method and Apparatus for Preventing and Repairing Vibrational Fuel Rods
4,692,303	08-Sep-1987	SPACE CAPTURE ROD TO SPACER GRID ATTACHMENT DEVICE
4,830,841	16-May-1989	Conversion of Uranium Hexafluoride to Uranium Dioxide
4879088	07-Nov-1989	Method and Apparatus for Detecting Failed Fuel Rods
4,668,482	26-May-1987	RECOVERY OF URANIUM FORM SOLUTIONS
4,726,926	23-Feb-1988	MIXING GRIDS
4,849,161	18-Jul-1989	DEBRIS RESISTANT FUEL ASSEMBLY
4,951,299	21-Aug-1990	INTERMEDIATE MIXING GRID
4,957,698	18-Sep-1990	ADVANCED BWR FUEL ASSEMBLY DESIGN
5,084,237	28-Jan-1992	Side Insertable Spacer
5030412	09 Jul 91	Fuel Assembly Debris Screen
5,215,706	01-Jun-1993	Method and Apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
5,255,300	19-Oct-1993	FUEL ASSEMBLY FOR BOILING WATER REACTORS
5,259,009	02-Nov-1993	Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
5,264,109	23-Nov-1993	Zirconium and Zirconium Alloy Passivation Process
6,165,367	26-Dec-2000	Method for Removing a Heavy Metal from a Waste Stream
5,345,485	06-Sep-1994	Coolant Vent Fuel Rod for a Light Water Reactor
5,384,815	24-Jan-1995	Hydraulic Resistance Strip For A Light Water Reactor
5,375,153	20-Dec-1994	Coolant Vent Fuel Rod and Part Length Fuel Rod Having A Reflex Upper End Fitting For A light Water Reactor
5790617	04 Aug 1998	Method and Apparatus for Detection of Failed Fuel Rods by Use of Acoustic Energy Frequency Attenuation
5,491,733	13-Feb-1996	Nuclear Fuel Rod Assembly Apparatus
5,247,552	21-Sep-1993	Shortened and Boat-Tailed End for BWR Fuel Assembly Water Channel
5,247,550	21-Sep-1993	Corrosion Resistant Zirconium Liner for Nuclear Fuel Rod Cladding
5278883	11-Jan-1994	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
5259756	09-Nov-1993	Rotary Kiln Off-Gas Vent System
5282231	25-Jan-1994	Lower Tie Plate Cast Frame
5274685	28-Dec-1993	Non-Levitating PWR Fuel Assembly
5383227	17-Jan-1995	Method For Modifying Existing Transition Pieces In Bottom Entry Nuclear Fuel Assemblies For Reducing Coolant Pressure Drop
5377532	03-Jan-1995	Method and System for In-Line Detection of Moisture in Uranium-Containing Powders
5353317	04-Oct-1994	Shipping Shim For Nuclear Reactor Fuel Assemblies
5,452,334	19-Sep-1995	Pressurized Water Reactor Nuclear Fuel Assembly with Disengaging Upper Tie Plate Corner Post
5434898	18-Jul-1995	Nuclear Fuel Assembly

Pat #	Issue Date	Title
5,479,461	26-Dec-1995	Attachable Debris Filter For BWR Nuclear Fuel Assemblies
5,524,031	04-Jun-1996	Attachable Debris Filter For BWR Nuclear Fuel Assemblies
5,481,577	02-Jan-1996	Boiling Water Reactor Fuel Assembly Filter
5,490,191	06-Feb-1996	BWR Nuclear Fuel Assembly
5555281	10-Sep-1996	Triangular Lattice for LWR Square Fuel Assemblies
5627865	06-May-1997	Triangular Lattice For LWR Square Fuel Assemblies
5661766	26-Aug-1997	Nuclear Fuel Assembly Bow And Twist Measurement Apparatus
5,625,657	29-Apr-1997	Method Of Repairing A Nuclear Fuel Rod Assembly With A Damaged Fuel Rod And A Damaged Spacer
5,572,560	05-Nov-1996	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
6,002,735	14-Dec-1999	Nuclear Fuel Pellet
5,991,354	23-Nov-1999	Nuclear Fuel Pellet
6,005,906	21-Dec-1999	Corrosion and Hydride Resistant Nuclear Fuel Rod
6,088,419	11-Jul-2000	Corrosion And Hydride Resistant Nuclear Fuel Rod
6,192,098	20-Feb-2001	Corrosion And Hydride Resistant Nuclear
6,058,155	02-May-2000	Corrosion And Hydride Resistant Nuclear Fuel Rod
5,802,024	25-Nov-1997	Reactor Pressure Vessel Top Guide Structure Inspection Apparatus And Transport System
5,790,623	04-Aug-1998	Composite Cladding For Nuclear Fuel Rods
5,772,798	30-Jun-1998	High Strength Zirconium Alloys Containing Bismuth
5,768,332	18-Jun-1998	Nuclear Fuel Rod For Pressurized Water Reactor
5,787,142	28-Jul-1998	PWR Nuclear Fuel Assembly
5,892,807	06-Apr-1999	Pressurized Water Reactor Nuclear Fuel Assembly
5,926,517	20-Jul-1999	Pressurized Water Reactor Nuclear Fuel Assembly
5,844,959	01-Dec-1998	Zirconium-Niobium-Tin Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
5,838,753	17-Nov-1998	Method Of Manufacturing Zirconium-Niobium-Tin Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
5854818	29-Dec-1998	Zirconium-Tin-Iron Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
5835550	10-Nov-1998	Method Of Manufacturing Zirconium-Tin-Iron Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
6,016,701	25-Jan-2000	Ultrasonic Inspection System
6010671	04-Jan-2000	A Process For Selective Recovery Of Uranium From Sludge

Case Number	Country	App. #	Filing Date	Pub. #	Issue Date	Title
84P7452	Belgium	86301964	18-Mar-1986	230087	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium
84P7454	Belgium	85307290.8	11-Oct-1985	178,860	05-Jun-1991	Mechanism for Testing Fuel Tubes in Nuclear Fuel Bundles
89P7432	Belgium	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	Belgium	92108777.1	25-May-1992	0517064	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7463	Belgium	92113975.4	17-Aug-1992	532,920	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	Belgium	92115614.7	11-Sep-1992	0533073	27-Mar-1996	Structural Elements for A Nuclear Reactor Fuel Assembly
92P7425	Belgium	93104164.4	15-Mar-1993	056862	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Belgium	93104479.6	18-Mar-1993	0563694	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Belgium	93109041.9	04-Jun-1993	574,778	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Belgium	93114611.2	10-Sep-1993	0589312	19-Nov-1997	Lower Tie Plate Cast Frame
94P7501	Belgium	95112555.8	09-Aug-1995	0704857	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Belgium	96101824.9	07-Feb-1996	727787	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
93P7469	Canada	""	21-Sep-1994	""		Uranium-Rare Earth Composition and Articles Formed Therefrom
93P7471	Canada	2133014	27-Sep-1994	""		Method and System for In-Line Detection of Moisture in Uranium-Containing Powders
93P7493	Canada	2137964	13-Dec-1994	""		Shipping Shim For Nuclear Reactor Fuel Assemblies
93P7494	Canada	2138225	15-Dec-1994	""		Pressurized Water Reactor Nuclear Fuel Assembly with Disengaging Upper Tie Plate Corner Post
98P7547	Canada	""	10-Jun-1999	""		High Strength Zirconium Alloy Containing Bismuth And Niobium
98P7548	Canada	""	10-Jun-1999	""		High Strength Zirconium Alloys Containing Bismuth, Tin, Niobium

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
99P7659	Canada	2311913	16-Jun-2000			Method for the Inspection of Steam Generator Tubing Utilizing Nonaxisymmetric Guided Waves
83P7453	Europe	84300443.3	25-Jan-1984	0,117,073	12-Aug-1987	APPARATUS AND METHOD FOR PREVENTING VIBRATIONAL ...
84P7450	Europe	85305016.9	12-Jul-1985	0,171,210	07-Jun-1989	Method and Apparatus for Preventing And Repairing ...
84P7452	Europe	86301964.2	18-Mar-1986	0230087	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Europe	85307290.8	11-Oct-1985	0,178,860	05-Jun-1991	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
84P7456	Europe	85307726.1	25-Oct-1985	180424	12-May-1993	RECOVERY OF URANIUM FORM SOLUTIONS
89P7402	Europe	90100089.3	03-Jan-1990	0378094	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	Europe	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	Europe	92108777.1	25-May-1992	0517064	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7451	Europe	92112018.4	15-Jul-1992	526777	26-Jun-1996	Improved Fuel Assembly for Boiling Water Reactors
91P7453	Europe	92113681.8	11-Aug-1992	528333	27-Mar-1996	Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
91P7463	Europe	92113975.4	17-Aug-1992	532,920	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
92P7425	Europe	93104164.4	15-Mar-1993	056862	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Europe	93104479.6	18-Mar-1993	0563694	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Europe	93109041.9	04-Jun-1993	574,778	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Europe	93114611.2	10-Sep-1993	0589312	19-Nov-1997	Lower Tie Plate Cast Frame
94P7420	Europe	95103599.7	13-Mar-1995	674321	10-Jun-1998	Nuclear Fuel Assembly
94P7471	Europe	95108907.7	09-Jun-1995	0690453	09-Jun-1995	Boiling Water Reactor Fuel Assembly Filter
94P7491	Europe	95112556.6	09-Aug-1995	0704859	10-Mar-1999	BWR Nuclear Fuel Assembly
94P7495	Europe	95112551.7	09-Aug-1995	0704856	10-Mar-1999	10X12 Hexagonal BWR Fuel Assembly

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
94P7501	Europe	95112555.8	09-Aug-1995	0704857	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Europe	96101824.9	07-Feb-1996	727787	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
95P7424	Europe	96102748.9	23-Feb-1996	0735543	10-May-2000	Method Of Repairing A Nuclear Fuel Rod Assembly With A Damaged Fuel Rod And A Damaged Spacer
95P7473	Europe	96108112.2	21-May-1996	0751527	01-Dec-1999	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
96P7403	Europe	97100367.8	10-Jan-1997	"		Nuclear Fuel Pellet
96P7481	Europe	97107598.1	07-May-1997	"		Corrosion and Hydride Resistant Nuclear Fuel Rod
96P7527	Europe	97114119.7	14-Aug-1997	"		Reactor Pressure Vessel Top Guide Structure Inspection Apparatus And Transport System
97P7432	Europe	98104909.1	18-Mar-1998	"		Composite Cladding For Nuclear Fuel Rods
97P7433	Europe	98104910.9	18-Mar-1998	"		High Strength Zirconium Alloys Containing Bismuth
97P7438	Europe	98105017.2	19-Mar-1998	"		Nuclear Fuel Rod For Pressurized Water Reactor
97P7467	Europe	98107120.2	20-Apr-1998	"		PWR Nuclear Fuel Assembly
97P7564	Europe	98114175.7	29-Jul-1998	"		Method Of Manufacturing Zirconium-Niobium-Tin Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7573	Europe	98116201.9	27-Aug-1998	"		Zirconium-Tin-Iron Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7574	Europe	98116184.7	27-Aug-1998	"		Method Of Manufacturing Zirconium-Tin-Iron Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
98P7419	Europe	99101653.6	05-Feb-1999	"		Method For The Inspection Of Nuclear Fuel Rod For Fretting And Wear Within A Nuclear Fuel Assembly
98P7421	Europe	99101619.7	03-Feb-1999	"		Detection Of Nuclear Fuel Rod Failure
98P7547	Europe	99110922.4	04-Jun-1999	"		High Strength Zirconium Alloy Containing Bismuth And Niobium

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
98P7548	Europe	99110923.2	04-Jun-1999	""		High Strength Zirconium Alloys Containing Bismuth, Tin, Niobium
98P7971	Europe	99124877.4	16-Dec-1999	""		Apparatus And Method For Void Distribution Measurement In An Array Of Emulated Nuclear Fuel Rods Using Neutron Detectors
99P7629	Europe	00111063.4	02-Jun-2000	""		Fuel Assembly Mechanical Flow Restriction Apparatus For Detecting Failure In Situ Of Nuclear Fuel Rods In A Fuel Assembly During Reactor Shutdown
99P7632	Europe	00111098.0	05-Jun-2000	""		Apparatus For Reactor Vessel Piping Weld Inspection Using Ultrasonic Guided Waves
99P7659	Europe	00111099.8	05-Jun-2000	""		Method for the Inspection of Steam Generator Tubing Utilizing Nonaxisymmetric Guided Waves
99P7703	Europe	00114096.1	07-Jul-2000	""		Radiation Induced Growth Indication Apparatus For Pressurized Water Reactor Nuclear Fuel Assemblies
99P7814	Europe	00119449.7	14-Sep-2000	""		Treatment Process for Removing Radioactive Thorium from Solvent Extraction Liquid Effluent
99P7815	Europe	00119450.5	14-Sep-2000	""		Method For Measuring Oxide Thickness Underlying A Ferromagnetic Material On Nuclear Fuel Rods
99P7835	Europe	00120179.7	22-Sep-2000	""		Method for Measuring Crud Thickness on Nuclear Fuel Rods
83P7453	France	84300443.3	25-Jan-1984	117,073	12-Aug-1987	APPARATUS AND METHOD FOR PREVENTING VIBRATIONAL ...
84P7450	France	85305016.9	12-Jul-1985	171,210	07-Jun-1989	Method and Apparatus for Preventing And Repairing ...
84P7452	France	86301964.2	18-Mar-1986	0230087	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	France	85307290.8	11-Oct-1985	178,860	05-Jun-1991	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES

Case Number	Country	App. #	Filing Date	Part	Issue Date	Title
84P7456	France	85307726.1	25-Oct-1985	180424	12-May-1993	RECOVERY OF URANIUM FORM SOLUTIONS
89P7402	France	90100089.3	03-Jan-1990	0378094	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	France	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	France	92108777.1	25-May-1992	0517064	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7463	France	92113975.4	17-Aug-1992	532,920	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	France	92115614.7	11-Sep-1992	0533073	27-Mar-1996	Structural Elements for A Nuclear Reactor Fuel Assembly
92P7425	France	93104164.4	15-Mar-1993	056862	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	France	93104479.6	16-Mar-1993	0563694	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	France	93109041.9	04-Jun-1993	074,773	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	France	93114611.2	10-Sep-1993	0589312	19-Nov-1997	Lower Tie Plate Cast Frame
94P7501	France	95112555.8	09-Aug-1995	0704857	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	France	96101824.9	07-Feb-1996	727787	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
83P7453	Germany	84300443.3	25-Jan-1984	P3465391.0	12-Aug-1987	APPARATUS AND METHOD FOR PREVENTING VIBRATIONAL ...
84P7450	Germany	85305016.9	12-Jul-1985	P3570938.3	07-Jun-1989	Method and Apparatus for Preventing And Repairing ...
84P7452	Germany	86301964.2	18-Mar-1986	P3650339.8	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Germany	85307290.8	11-Oct-1985	P3583106.5	05-Jun-1991	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
84P7456	Germany	85307726.1	25-Oct-1985	P3587334.5	12-May-1993	RECOVERY OF URANIUM FORM SOLUTIONS
89P7402	Germany	90100089.3	03-Jan-1990	69008200.2	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	Germany	90115791.7	17-Aug-1990	69026664.2	24-Apr-1996	Side Insertable Spacer
91P7436	Germany	92108777.1	25-May-1992	69204748.4	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
91P7451	Germany	92112018	15-Jul-1992	69211785.7	26-Jun-1996	Improved Fuel Assembly for Boiling Water Reactors
91P7453	Germany	92113681.8	11-Aug-1992	69209401.6	27-Mar-1996	Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
91P7463	Germany	92113975.4	17-Aug-1992	69217784.1	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	Germany	92115614.7	11-Sep-1992	69209415.6	27-Mar-1996	Structural Elements for A Nuclear Reactor Fuel Assembly
92P7425	Germany	93104164.4	15-Mar-1993	59300320	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Germany	93104479.6	18-Mar-1993	69201325.7	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Germany	93109041.9	04-Jun-1993	69307782.4	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Germany	93114611.2	10-Sep-1993	69315292.3	19-Nov-1997	Lower Tie Plate Cast Frame
94P7420	Germany	95103599.7	13-Mar-1995	69502864.2	10-Jun-1998	Nuclear Fuel Assembly
94P7471	Germany	95108907.7	05-Jun-1995	69504588.1	09-Sep-1998	Boiling Water Reactor Fuel Assembly Filter
94P7491	Germany	69508174.8	09-Aug-1995	69508174.8	10-Mar-1999	BWR Nuclear Fuel Assembly
94P7495	Germany	95112551.7	09-Aug-1995	95112551.7	10-Mar-1999	10X12 Hexagonal BWR Fuel Assembly
94P7501	Germany	95112555.8	09-Aug-1995	69508171.3	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Germany	96101824.9	07-Feb-1996	69603098.5	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
95P7473	Germany	69605361.6	21-May-1996	69605361.6	01-Dec-1999	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
84P7452	Great Britain	86301964.2	18-Mar-1986	0230087	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Great Britain	85307290.8	11-Oct-1985	178,860	05-Jun-1991	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
84P7456	Great Britain	85307726.1	25-Oct-1985	180424	12-May-1993	RECOVERY OF URANIUM FORM SOLUTIONS
89P7402	Great Britain	90100089.3	03-Jan-1990	0378094	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	Great Britain	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	Great Britain	92108777.1	25-May-1992	0517064	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
91P7463	Great Britain	92113975.4	17-Aug-1992	532,920	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	Great Britain	92115614.7	11-Sep-1992	0533073	27-Mar-1996	Structural Elements for a Nuclear Reactor Fuel Assembly
92P7425	Great Britain	93104164.4	15-Mar-1993	056862	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Great Britain	93104479.6	18-Mar-1993	0563694	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Great Britain	93109041.9	04-Jun-1993	574,778	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Great Britain	93114611.2	10-Sep-1993	0589312	19-Nov-1997	Lower Tie Plate Cast Frame
94P7501	Great Britain	95112555.8	09-Aug-1995	0704857	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Great Britain	96101824.9	07-Feb-1996	727787	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
84P7452	Japan	61-087220	17-Apr-1986	2708407	17-Oct-1997	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Japan	60-227924	15-Oct-1985	1884377	11-Oct-1994	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
87P7441	Japan	63-295893	21-Nov-1988	2849099	06-Nov-1998	DEBRIS RESISTANT FUEL ASSEMBLY
89P7402	Japan	02-001437	08-Jan-1990	2851339	13-Nov-1998	INTERMEDIATE MIXING GRID
89P7432	Japan	02-230480	31-Aug-1990	2885912	12-Feb-1999	Side Insertable Spacer
91P7436	Japan	04-168611	03-Jun-1992	3113730	22-Sep-2000	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7451	Japan	04-223471	29-Jul-1992	***		Improved Fuel Assembly for Boiling Water Reactors
91P7453	Japan	04-241300	18-Aug-1992	***		Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
91P7463	Japan	04-268123	09-Sep-1992	***		Zirconium and Zirconium Alloy Passivation Process
91P7465	Japan	04-268124	09-Sep-1992	***		Method for Removing a Heavy Metal from a Waste Stream
92P7423	Japan	05-076196	10-Mar-1993	***		Coolant Vent Fuel Rod for a Light Water Reactor
92P7423	Japan	05-344041	17-Dec-1993	***		Coolant Vent Fuel Rod for a Light Water Reactor

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
92P7425	Japan	05-090626	24-Mar-1993	""		Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7426	Japan	05-090627	24-Mar-1993	""		Shortened and Boat-Tailed End for BWR Fuel Internal Channel
92P7427	Japan	05-090628	24-Mar-1993	""		Corrosion Resistant Zirconium Liner for Nuclear Fuel Rod Cladding
92P7428	Japan	05-90629	24-Mar-1993	""		Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Japan	05168678	14-Jun-1993	""		Rotary Kiln Off-Gas Vent System
92P7484	Japan	05-259450	22-Sep-1993	""		Lower Tie Plate Cast Frame
92P7488	Japan	05-259451	22-Sep-1993	""		Non-Levitating PWR Fuel Assembly
93P7460	Japan	06-215376	17-Aug-1994	""		Method For Modifying Existing Transition Pieces In Bottom Entry Nuclear Fuel Assemblies For Reducing Coolant Pressure Drop
93P7469	Japan	06-258878	28-Sep-1994	""		Urania-Rare Earth Composition and Articles Formed Therefrom
93P7471	Japan	06-258879	28-Sep-1994	""		Method and System for In-Line Detection of Moisture in Uranium-Containing Powders
93P7493	Japan	06-332150	12-Dec-1994	""		Shipping Shim For Nuclear Reactor Fuel Assemblies
93P7494	Japan	06-332151	12-Dec-1994	""		Pressurized Water Reactor Nuclear Fuel Assembly with Disengaging Upper Tie Plate Corner Post
94P7420	Japan	07/080,738	13-Mar-1995	""		Nuclear Fuel Assembly
94P7471	Japan	07-180782	23-Jun-1995	""		Boiling Water Reactor Fuel Assembly Filter
94P7491	Japan	07-272117	27-Sep-1995	""		BWR Nuclear Fuel Assembly
94P7495	Japan	248014/95	26-Sep-1995	""		10X12 Hexagonal BWR Fuel Assembly
94P7501	Japan	254012/95	29-Sep-1995	""		Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Japan	08-47905	09-Feb-1996	""		Fuel Assembly Bow/Twist Measurement Apparatus
95P7424	Japan	08-103392	29-Mar-1996	""		Method Of Repairing A Nuclear Fuel Rod Assembly With A Damaged Fuel Rod And A Damaged Spacer

Patent Number	Country	App #	Filing Date	Pub #	Issue Date	Title
95P7473	Japan	08-185395	26-Jun-1996	""		BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
96P7403	Japan	13594/97	28-Jan-1997	""		Nuclear Fuel Pellet
96P7481	Japan	151842/97	10-Jun-1997	""		Corrosion and Hydride Resistant Nuclear Fuel Rod
96P7527	Japan	221605/97	18-Aug-1997	""		Reactor Pressure Vessel Top Guide Structure Inspection Apparatus And Transport System
97P7432	Japan	75481/90	24-Mar-1998	""		Composite Cladding For Nuclear Fuel Rods
97P7433	Japan	75485/98	24-Mar-1998	""		High Strength Zirconium Alloys Containing Bismuth
97P7438	Japan	75488/98	24-Mar-1998	""		Nuclear Fuel Rod For Pressurized Water Reactor
97P7467	Japan	118865/90	28-Apr-1998	""		PWR Nuclear Fuel Assembly
97P7563	Japan	219149/98	03-Aug-1998	""		Zirconium-Niobium-Tin Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7573	Japan	243319/98	28-Aug-1998	2941798	18-Jun-1999	Zirconium-Tin-Iron Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7574	Japan	243318/98	28-Aug-1998	3086207	07-Jul-2000	Method Of Manufacturing Zirconium-Tin-Iron Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
98P7419	Japan	31499/99	09-Feb-1999	""		Method For The Inspection Of Nuclear Fuel Rod For Fretting And Wear Within A Nuclear Fuel Assembly
98P7421	Japan	31500/99	09-Feb-1999	""		Detection Of Nuclear Fuel Rod Failure
98P7971	Japan	p1999-361534	20-Dec-1999	""		Apparatus And Method For Void Distribution Measurement In An Array Of Emulated Nuclear Fuel Rods Using Neutron Detectors
99P7629	Japan	2000-167860	05-Jun-2000	""		Fuel Assembly Mechanical Flow Restriction Apparatus For Detecting Failure In Situ Of Nuclear Fuel Rods In A Fuel Assembly During Reactor Shutdown

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
99P7632	Japan	2000-167861	05-Jun-2000	""		Apparatus For Reactor Vessel Piping Weld Inspection Using Ultrasonic Guided Waves
99P7659	Japan	2000-183564	19-Jun-2000	""		Method for the Inspection of Steam Generator Tubing Utilizing Nonaxisymmetric Guided Waves
99P7703	Japan	2000-208653	10-Jul-2000	""		Radiation Induced Growth Indication Apparatus For Pressurized Water Reactor Nuclear Fuel Assemblies
99P7814	Japan	2000-280769	14-Sep-2000	""		Treatment Process for Removing Radioactive Thorium from Solvent Extraction Liquid Effluent
99P7815	Japan	2000-282680	18-Sep-2000	""		Method For Measuring Oxide Thickness Underlying A Ferromagnetic Material On Nuclear Fuel Rods
99P7835	Japan	2000-292406	26-Sep-2000	""		Method for Measuring Crud Thickness on Nuclear Fuel Rods
83P7453	Korea	298/84	24-Jan-1984	49351	02-Feb-1992	Apparatus and Method for Preventing Vibrational Damage
84P7452	Korea	1935/86	17-Mar-1986	62501	22-Feb-1993	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Korea	7441/85	10-Oct-1985	76118	09-Aug-1994	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
84P7456	Korea	7959/85	28-Oct-1985	64813	27-Aug-1993	RECOVERY OF URANIUM FORM SOLUTIONS
87P7441	Korea	15228/88	19-Nov-1988	129541	11-Nov-1997	DEBRIS RESISTANT FUEL ASSEMBLY
89P7432	Korea	13855/90	01-Sep-1990	229366	16-Aug-1999	Side Insertable Spacer
91P7463	Korea	16798/92	16-Sep-1992	272297	24-Aug-2000	Zirconium and Zirconium Alloy Passivation Process
92P7423	Korea	1993-3721	12-Mar-1993	""		Coolant Vent Fuel Rod for a Light Water Reactor
92P7423	Korea	27206/93	10-Dec-1993	""		Nuclear Fuel Rod Assembly Apparatus
92P7425	Korea	1993-4817	26-Mar-1993	270724	05-Aug-2000	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
92P7427	Korea	4818/93	26-Mar-1993	274767	15-Sep-2000	Corrosion Resistant Zirconium Liner for Nuclear Fuel Rod Cladding
92P7428	Korea	4819/93	26-Mar-1993	285032	28-Dec-2000	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Korea	11078/93	17-Jun-1993	""		Rotary Kiln Off-Gas Vent System
92P7484	Korea	19388/93	23-Sep-1993	""		Lower Tie Plate Cast Frame
92P7488	Korea	19389/93	23-Sep-1993	""		Non-Levitating PWR Fuel Assembly
93P7460	Korea	""	23-Aug-1994	""		Method For Modifying Existing Transition Pieces In Bottom Entry Nuclear Fuel Assemblies For Reducing Coolant Pressure Drop
93P7469	Korea	24693/94	29-Sep-1994	""		Urania-Rare Earth Composition and Articles Formed Therefrom
93P7471	Korea	24692/94	29-Sep-1994	""		Method and System for In-Line Detection of Moisture in Uranium-Containing Powders
93P7493	Korea	34341/94	15-Dec-1994	""		Shipping Shim For Nuclear Reactor Fuel Assemblies
93P7494	Korea	35462/94	17-Dec-1994	""		Pressurized Water Reactor Nuclear Fuel Assembly with Disengaging Upper Tie Plate Corner Post
95P7403	Korea	2878/96	07-Feb-1996	""		Fuel Assembly Bow/Twist Measurement Apparatus
95P7424	Korea	10385/96	01-Apr-1996	""		Method Of Repairing A Nuclear Fuel Rod Assembly With A Damaged Fuel Rod And A Damaged Spacer
96P7403	Korea	2753/97	30-Jan-1997	""		Nuclear Fuel Pellet
96P7481	Korea	23714/97	10-Jun-1997	""		Corrosion and Hydride Resistant Nuclear Fuel Rod
97P7432	Korea	10227/98	25-Mar-1998	""		Composite Cladding For Nuclear Fuel Rods
97P7433	Korea	10228/98	25-Mar-1998	""		High Strength Zirconium Alloys Containing Bismuth
97P7438	Korea	10685/98	27-Mar-1998	""		Nuclear Fuel Rod For Pressurized Water Reactor
97P7467	Korea	15255/98	29-Apr-1998	""		PWR Nuclear Fuel Assembly
97P7564	Korea	31015/98	31-Jul-1998	284833	26-Dec-2000	Method Of Manufacturing Zirconium-Niobium-Tin Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
97P7573	Korea	34773/98	27-Aug-1998	284643	21-Dec-2000	Zirconium-Tin-Iron Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7574	Korea	34774/98	27-Aug-1998	284208	18-Dec-2000	Method Of Manufacturing Zirconium-Tin-Iron Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
98P7419	Korea	1999-4185	08-Feb-1999	***		Method For The Inspection Of Nuclear Fuel Rod For Fretting And Wear Within A Nuclear Fuel Assembly
98P7421	Korea	1999-4404	09-Feb-1999	***		Detection Of Nuclear Fuel Rod Failure
98P7547	Korea	1999-0021105	08-Jun-1999	***		High Strength Zirconium Alloy Containing Bismuth And Niobium
98P7548	Korea	1999-0021338	09-Jun-1999	***		High Strength Zirconium Alloys Containing Bismuth, Tin, Niobium
98P7971	Korea	1999-0058932	18-Dec-1999	***		Apparatus And Method For Void Distribution Measurement In An Array Of Emulated Nuclear Fuel Rods Using Neutron Detectors
99P7629	Korea	2000-0030342	02-Jun-2000	***		Fuel Assembly Mechanical Flow Restriction Apparatus For Detecting Failure In Situ Of Nuclear Fuel Rods In A Fuel Assembly During Reactor Shutdown
99P7632	Korea	***		***		Apparatus For Reactor Vessel Piping Weld Inspection Using Ultrasonic Guided Waves
99P7659	Korea	2000-0033425	17-Jun-2000	***		Method for the Inspection of Steam Generator Tubing Utilizing Nonaxisymmetric Guided Waves
99P7703	Korea	2000-0038870	07-Jul-2000	***		Radiation Induced Growth Indication Apparatus For Pressurized Water Reactor Nuclear Fuel Assemblies
99P7814	Korea	2000-0054408	16-Sep-2000	***		Treatment Process for Removing Radioactive Thorium from Solvent Extraction Liquid Effluent

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
99P7815	Korea	2000-0054407	16-Sep-2000	""		Method For Measuring Oxide Thickness Underlying A Ferromagnetic Material On Nuclear Fuel Rods
99P7835	Korea	2000-0055770	22-Sep-2000	""		Method for Measuring Crud Thickness on Nuclear Fuel Rods
98P7419	Mexico	99.1324	08-Feb-1999	""		Method For The Inspection Of Nuclear Fuel Rod For Fretting And Wear Within A Nuclear Fuel Assembly
84P7452	Spain	553,114	18-Mar-1986	553114	16-Mar-1987	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Spain	547833	14-Oct-1985	547833	28-May-1987	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
89P7402	Spain	90100089.3	03-Jan-1990	0378094	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	Spain	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	Spain	92108777.1	25-May-1992	2078586	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7451	Spain	92112018	15-Jul-1992	2090422	26-Jun-1996	Improved Fuel Assembly for Boiling Water Reactors
91P7453	Spain	92113681.8	11-Aug-1992	2088520	27-Mar-1996	Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
91P7463	Spain	92113975.4	17-Aug-1992	2097842	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	Spain	92115614.7	11-Sep-1992	2089324	27-Mar-1996	Structural Elements for A Nuclear Reactor Fuel Assembly
92P7425	Spain	93104164.4	15-Mar-1993	2075734	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Spain	93104479.6	18-Mar-1993	1082536	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Spain	93109041.9	04-Jun-1993	2096804	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Spain	93114611.2	10-Sep-1993	2111115	19-Nov-1997	Lower Tie Plate Cast Frame
94P7420	Spain	95103599.7	13-Mar-1995	2118463	10-Jun-1998	Nuclear Fuel Assembly
94P7471	Spain	95108907.7	09-Jun-1995	2123859	09-Sep-1998	Boiling Water Reactor Fuel Assembly Filter
94P7491	Spain	95112556.6	09-Aug-1995	2133628	10-Mar-1999	BWR Nuclear Fuel Assembly

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title:
94P7495	Spain	95112551.7	09-Aug-1995	2133625	10-Mar-1999	10X12 Hexagonal BWR Fuel Assembly
94P7501	Spain	95112555.8	09-Aug-1995	2133627	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Spain	96101824.9	07-Feb-1996	2135801	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
95P7473	Spain	96108112.2	21-May-1996	751527	01-Dec-1999	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
84P7452	Sweden	86301964.2	18-Mar-1986	0230087	21-Jun-1995	Conversion of Uranium Hexafluoride to Uranium Dioxide
84P7454	Sweden	85307290.8	11-Oct-1985	178,860	05-Jun-1991	MECHANISM FOR TESTING FUEL TUBES IN NUCLEAR FUEL BUNDLES
84P7456	Sweden	85307726.1	25-Oct-1985	180424	12-May-1993	RECOVERY OF URANIUM FORM SOLUTIONS
89P7402	Sweden	90100089.3	03-Jan-1990	0378094	20-Apr-1994	INTERMEDIATE MIXING GRID
89P7432	Sweden	90115791.7	17-Aug-1990	0,415,205	24-Apr-1996	Side Insertable Spacer
91P7436	Sweden	92108777.1	25-May-1992	0517064	13-Sep-1995	Method and apparatus for Ultrasonic Testing of Nuclear Fuel Rods Employing An Alignment Guide
91P7451	Sweden	92112018	15-Jul-1992	526777	26-Jun-1996	Improved Fuel Assembly for Boiling Water Reactors
91P7453	Sweden	92113881.8	11-Aug-1992	528333	27-Mar-1996	Boiling Water Reactor Fuel Rod Assembly with Fuel Rod Spacer Arrangement
91P7463	Sweden	92113975.4	17-Aug-1992	532,920	05-Mar-1997	Zirconium and Zirconium Alloy Passivation Process
91P7464	Sweden	92115614.7	11-Sep-1992	0533073	27-Mar-1996	Structural Elements for A Nuclear Reactor Fuel Assembly
92P7425	Sweden	93104164.4	15-Mar-1993	056862	02-Aug-1995	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7428	Sweden	93104479.6	18-Mar-1993	0563694	17-Jan-1996	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Sweden	93109041.9	04-Jun-1993	574,778	29-Jan-1997	Rotary Kiln Off-Gas Vent System
92P7484	Sweden	93114611.2	10-Sep-1993	0589312	19-Nov-1997	Lower Tie Plate Cast Frame
94P7420	Sweden	95103599.7	13-Mar-1995	695028964.2	10-Jun-1998	Nuclear Fuel Assembly
94P7471	Sweden	95108907.7	09-Jun-1995	0690453	09-Sep-1998	Boiling Water Reactor Fuel Assembly Filter
94P7491	Sweden	95112556.6	09-Aug-1995	0704859	10-Mar-1999	BWR Nuclear Fuel Assembly

Patent Number	Country	App. #	Filing Date	Pat. #	Issue Date	Title
94P7495	Sweden	95112551.7	09-Aug-1995	0704856	10-Mar-1999	10X12 Hexagonal BWR Fuel Assembly
94P7501	Sweden	95112555.8	09-Aug-1995	0704857	10-Mar-1999	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Sweden	96101824.9	07-Feb-1996	727787	07-Jul-1999	Fuel Assembly Bow/Twist Measurement Apparatus
95P7473	Sweden	96108112.2	21-May-1996	0751527	01-Dec-1999	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
84P7452	Taiwan	75101130	15-Mar-1986	26095	11-Apr-1987	Conversion of Uranium Hexafluoride to Uranium Dioxide
87P7441	Taiwan	77107182	17-Oct-1988	34032	15-Jan-1990	DEBRIS RESISTANT FUEL ASSEMBLY
89P7402	Taiwan	79100032	04-Jan-1990	41334	21-Dec-1990	INTERMEDIATE MIXING GRID
89P7432	Taiwan	79107198	28-Aug-1990	45846	12-Jul-1991	Side Insertable Spacer
91P7451	Taiwan	81105012	25-Jun-1992	"	06-Jul-1993	Improved Fuel Assembly for Boiling Water Reactors
91P7463	Taiwan	81106690	25-Aug-1992	"	06-Jun-1997	Zirconium and Zirconium Alloy Passivation Process
91P7465	Taiwan	81106756	27-Aug-1992	64061	04-Feb-1994	Method for Removing a Heavy Metal from a Waste Stream
92P3095	Taiwan	81103484	05-May-1992	84565	19-Jun-1997	Werkstoff und Stukturteil aus Modifiziertem Zirkaloy
92P7423	Taiwan	82101392	26-Feb-1993	"	05-Dec-1995	Coolant Vent Fuel Rod for a Light Water Reactor
92P7423	Taiwan	83100090	06-Jan-1994	67732	28-Dec-1994	Coolant Vent Fuel Rod for a Light Water Reactor
92P7425	Taiwan	82101531	02-Mar-1993	67649	28-Dec-1994	Method and Apparatus for Detection of Failed Fuel Rods by the Use of Acoustic Energy Frequency Attenuation
92P7426	Taiwan	82101581	03-Mar-1993	"	08-May-1997	Shortened and Boat-Tailed End for BWR Fuel Internal Channel
92P7427	Taiwan	82101451	14-Feb-1996	82101451	21-Oct-1995	Corrosion Resistant Zirconium Liner for Nuclear Fuel Rod Cladding
92P7428	Taiwan	82101446	27-Feb-1993	072678	27-Jun-1995	Low Pressure Drop Spacer for Nuclear Fuel Assemblies
92P7443	Taiwan	82103405	01-May-1993	66481	04-Oct-1994	Rotary Kiln Off-Gas Vent System
92P7484	Taiwan	82106744	20-Aug-1993	70152	04-Jan-1995	Lower Tie Plate Cast Frame
92P7488	Taiwan	82107367	08-Sep-1993	N1083620	09-Dec-1996	Non-Levitating PWR Fuel Assembly

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93P7471	Taiwan	83108283	08-Sep-1994	79224	30-Oct-1996	Method and System for In-Line Detection of Moisture in Uranium-Containing Powders
93P7493	Taiwan	83110738	18-Nov-1994	78453	21-Sep-1996	Shipping Shim For Nuclear Reactor Fuel Assemblies
93P7494	Taiwan	83110739	18-Nov-1994	072722	26-Jun-1995	Pressurized Water Reactor Nuclear Fuel Assembly with Disengaging Upper Tie Plate Corner Post
94P7420	Taiwan	84102610	18-Mar-1995	79539	16-Nov-1996	Nuclear Fuel Assembly
94P7471	Taiwan	84105996	13-Jun-1995	81576	18-Feb-1997	Boiling Water Reactor Fuel Assembly Filter
94P7491	Taiwan	84111159	21-Oct-1995	"	01-Sep-1997	BWR Nuclear Fuel Assembly
94P7495	Taiwan	84108289	09-Aug-1995	"	12-Mar-1997	10X12 Hexagonal BWR Fuel Assembly
94P7501	Taiwan	84108291	09-Aug-1995	89338	05-Jan-1998	Triangular Lattice for LWR Square Fuel Assemblies
95P7403	Taiwan	85100609	19-Jan-1996	89084	19-Dec-1997	Fuel Assembly Bow/Twist Measurement Apparatus
95P7424	Taiwan	85101778	13-Feb-1996	"	30-Sep-1997	Method Of Repairing A Nuclear Fuel Rod Assembly With A Damaged Fuel Rod And A Damaged Spacer
95P7473	Taiwan	84113642	20-Dec-1995	"	08-May-1997	BWR Fuel Assembly Having Fuel Rods With Variable Fuel Rod Pitches
96P3055	Taiwan	86102908	10-Mar-1997	N1096345	04-Dec-1998	Nuclear Fuel Assembly Having A Transition Piece With Reduced Flow Resistance
96P7403	Taiwan	86100520	18-Jan-1997	096286	01-Aug-1998	Nuclear Fuel Pellet
96P7481	Taiwan	86106836	21-May-1997	96623	21-Aug-1998	Corrosion and Hydride Resistant Nuclear Fuel Rod
96P7527	Taiwan	86111972	16-Aug-1997	101575	26-Jul-1999	Reactor Pressure Vessel Top Guide Structure Inspection Apparatus And Transport System
97P7432	Taiwan	87103414	09-Mar-1998	"		Composite Cladding For Nuclear Fuel Rods
97P7433	Taiwan	87104010	18-Mar-1998	"		High Strength Zirconium Alloys Containing Bismuth
97P7438	Taiwan	87103555	11-Mar-1998	"		Nuclear Fuel Rod For Pressurized Water Reactor
97P7467	Taiwan	87104009	18-Mar-1998	"		PWR Nuclear Fuel Assembly
97P7563	Taiwan	87113715	20-Aug-1998	"		Zirconium-Niobium-Tin Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
97P7564	Taiwan	87112623	31-Jul-1998	""		Method Of Manufacturing Zirconium-Nioboim-Tin Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7573	Taiwan	87113649	19-Aug-1998	""		Zirconium-Tin-Iron Alloy For Nuclear Fuel Rods And Structural Parts For High Burnup
97P7574	Taiwan	87113716	20-Aug-1998	103234	13-Sep-1999	Method Of Manufacturing Zirconium-Tin-Iron Alloys For Nuclear Fuel Rods And Structural Parts For High Burnup
98P7419	Taiwan	88101631	03-Feb-1999	""		Method For The Inspection Of Nuclear Fuel Rod For Fretting And Wear Within A Nuclear Fuel Assembly
98P7421	Taiwan	88101899	08-Feb-1999	""		Detection Of Nuclear Fuel Rod Failure
98P7547	Taiwan	88109509	08-Jun-1999	""		High Strength Zirconium Alloy Containing Bismuth And Niobium
98P7548	Taiwan	88109288	04-Jun-1999	""		High Strength Zirconium Alloys Containing Bismuth, Tin, Niobium
98P7971	Taiwan	88122154	16-Dec-1999	""		Apparatus And Method For Void Distribution Measurement In An Array Of Emulated Nuclear Fuel Rods Using Neutron Detectors
99P7629	Taiwan	89108533	04-May-2000	""		Fuel Assembly Mechanical Flow Restriction Apparatus For Detecting Failure In Situ Of Nuclear Fuel Rods In A Fuel Assembly During Reactor Shutdown
99P7632	Taiwan	89107980	27-Apr-2000	""		Apparatus For Reactor Vessel Piping Weld Inspection Using Ultrasonic Guided Waves
99P7659	Taiwan	89107981	27-Apr-2000	""		Method for the Inspection of Steam Generator Tubing Utilizing Nonaxisymetric Guided Waves
99P7703	Taiwan	89112750	28-Jun-2000	""		Radiation Induced Growth Indication Apparatus For Pressurized Water Reactor Nuclear Fuel Assemblies

Case Number	Country	App #	Filing Date	Pat #	Issue Date	Title
99P7814	Taiwan	89116438	15-Aug-2000			Treatment Process for Removing Radioactive Thorium from Solvent Extraction Liquid Effluent
99P7815	Taiwan	89118104	05-Sep-2000			Method For Measuring Oxide Thickness Underlying A Ferromagnetic Material On Nuclear Fuel Rods
99P7835	Taiwan	89116439	15-Aug-2000			Method for Measuring Crud Thickness on Nuclear Fuel Rods