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Stichting Laka: Documentatie- en onderzoekscentrum kernenergie

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Laka plays with, amongst others things, its information services, an important role in the Dutch anti-nuclear movement.

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**COMPAGNIE GENERALE DES MATIERES
NUCLEAIRES**

and

**N.V. PROVINCIALE ZEEUWSE
ENERGIE MAATSCHAPPIJ**

SERVICE AGREEMENT

for the

REPROCESSING

of

IRRADIATED OXIDE FUEL

ORIGINAL

SECRET DES MATIERS

CORRIGENDUM LIST

Page	Paragraph	Line	Remark
7	Re-Investment Cost	2	read "Reprocessor's"
1.5	2. I0.2	7	replace "being" by "to be"
2.5	6.1	.5	read "resolving"
26	6.3	8	replace "percentage" by "proportion"
27	7.1.2	1	remove comma after "Company 0"
31	7.4	1	read "provisions"
	7.4.3	7	read "to the provision"
31+	9.6	1	read "reserve"
37	I0.2.3	3	insert after "and" the word "agree"
41	I0.7.2	last line	read "minimizing"
1+9	12.6	12	remove comma after "shall"
.52	12 9.3	13	read "draw-down"
.51+	12.13.2	7	read "annually"
72	19.2.2	3	read "not to be"
76	21.2.3	last but one line	read "regulations"
8.5	2.4	1	replace "ensures" by "assures"
87	B2	3	replace "that" by "on which"
93	3.2		read "the options given in Paragraph 3. 1.1 and 3.1.2"
116	LI	5	after "samples" add "and the analysis of samples"
117	3.3	3	read "... nitrate. The samples"
119	6.1	1	read "in Paragraphs 3.1.1 and 3.1.2"
	&.2. I. I	4	delete p; ;renthesis
	6.2.1.1	5	add comma after "3.1.1"
	6.2.1.1	6	delete parenthesis
130	3.2		read "in Paragraphs 3.1.1 and 3.1.2"
130	3.6	11	read "MP..DE AV J1.ILABLE"
134	6.2.2.5	following lines missing between lines 5 and 6	"plutonium dioxide equivalent to tha quantity of"

137	2	LO	change line after "concentrate ;"
11t8	3	3	read "AGREEMENT"
I 1t9	2	last but one li ne	read "... with the previous .; . "
152	3.2. 1	6	read "Be informed of and ;.. "
		8	read "Be informed of and discuss the .; . "
		10	read ";.. and be informed of and"
		11	read "advise on the"
153	3.2. 1	2	read "Discuss the selection .; "
	3.2.3		read "Discuss the construction ... "
151;	3.3	5	read "decide on the"
	It	It	read "Chairman's attempt" ... and delete
			"of"
156	2(a)	2	read "'Reprocessor's"
162	1. I	&	read "flask"
163	1.3	line 11	read "active"
16/t	!. 3	15	read "precise the conditions"
[65	1.1	5 lines from	read "not yet"
		bottom	
166	1.1	4	read "solid"
	1.5	5	read "...on the following assumptions".
I 7/t	(I)	3	read 11annuitiessn

(ii)

ADDITION TO THE CORRIGENDUM LIST

Page	Paragraph	Line	Remark
32	8.2	1	read "finds"
32	8.2	2	read "he shall do"
39	10.2	2	read "develops or adopts"
40	10.7.2.J	2	read "CUSTOMERS"
68	18.2.1.J. 1	5	read "have"
69	18.2.1.1.2	4	read "have"
71	18.2.2 ¿¿ J (2)	5	read "considers"
88	E	1	· read "Before transporting to the .¿¿ ti
94	4. I	I	read "ratio method"
102	3.J	4	read "'CUSTOMERS"
103	1	5and11	read "t U"
103	2.2	3	read "The proportion ..¿"
11 2	2.1	6	read "example"
128	3	4	read "achieve an actual ..."
130	3.6	3	read "0,1 %. The weight ...¿"
137	2	2	read "notify his"
139	5.2	4	read "¿¿¿ which has... "
153	3.2.J	5	relete "of"
165	1.4.2	6	read "before"
166	2.1	I	add after U "REPROCESSED"
166	3	2	read no,5 11
170			read "t U" instead of "tes U"

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19	FUND REQUIREMENT SCHEDULE	158
20	SPECIMEN FORM OF LETTERS OF CREDIT TO BE ISSUED BY THE COMPANY IN FAVOUR OF COGEMA FROM THE COMPANY'S BANK	159
21	REPROCESSING PLANT DESCRIPTION AND PRELIMINARY COSTS ANALYSIS	

This Agreement is made this 20 MAR 1978 day of One thousand nine hundred and seventy-eight between COMPAGNIE GENERALE DES MATIERES NUCLEAIRES having their registered office at 31-33 rue de la Federation, Paris 15e (hereinafter called "the Reprocessor") of the one part and N.V. PROVINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ having their registered office at Middelburg, Nederland (hereinafter called "the Company") of the other part.

WHEREAS

- (A) The Company are or will be operating at Borssele a nuclear power station (hereinafter called "the POWER STATION") and wish the Reprocessor to store and reprocess fuel assemblies irradiated in the POWER STATION (hereinafter called "FUEL").
- (B) The Reprocessor confident in its technical proficiency and know how is in the process of constructing more extensive facilities for storage and reprocessing and accordingly is willing to accept FUEL for transport, storage and reprocessing upon the terms and conditions hereinafter set forth.
- (C) The Company, trusting in the Reprocessor's technical abilities recognize that for reasons outside the Reprocessor's control the structure of the transaction as a joint venture is not feasible. Therefore the Reprocessor and all BASELOAD CUSTOMERS (such customers being defined in Clause I hereinafter) shall consult together in the operation of this Agreement and all similar Service Agreements by means of a Joint Committee to be established for that purpose pursuant to Clause 2.9 hereof.
- (D) The said facilities will include a REPROCESSING PLANT, as defined in Clause I, which will have a design capacity of 2,6 t U per day and will be designed and constructed to be able to REPROCESS not less than 6000 t U of light water reactors' fuel. The said facilities shall be designed, constructed and used for performance of services on behalf of the Company and other customers and the costs of providing such facilities shall be borne

by the Company and such other customers.

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- (E) The Company shall provide to the Reprocessor sums corresponding to a proportion of the costs of the design, procurement and commissioning of the said facilities,

- (F) This Agreement has been negotiated in collaboration with BRITISH NUCLEAR FUELS LIMITED of Risley Warrington Cheshire United Kingdom (hereinafter called "BNFL ") who intends to enter into agreements the terms of which will be similar to the terms herein contained, it being intended that the said collaboration should continue for the purposes of flexibility and better technical performance of the Agreement as below described with the Reprocessor being solely liable for the performance of its obligations hereunder, and

- (G) The Reprocessor will co-operate with BNFL with respect to the techniques and processes to be utilized for performance of services hereunder, including technical co-operation on the conversion of radioactive waste into residues (as defined in Clause I hereof),

NOWHEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS
HEREINAFTER CONTAINED IT IS HEREBY AGREED AS FOLLOWS:

CLAUSE I

DEFINITIONS

In this Agreement and the Appendices hereto the following expressions shall, unless the context otherwise requires, have the following meanings respectively (with the singular including the plural and verb tenses being changed as the context may require), that is to say:

"AGREED" means agreed in writing between the parties ;

"AVAILABILITY PROGRAMME"

means the programme which shall specify the estimated dates when quantities of uranyl nitrate and plutonium dioxide appropriate to all BASELOAD CUSTOMERS shall be MADE AVAILABLE at the Reprocessing Site ;

"BASELOAD CUSTOMERS"

means any customer of the Reprocessor (including the parties to this Agreement and all French Generating Boards) for the STORAGE and REPROCESSING of FUEL and the conversion of WASTE derived therefrom who has AGREED to bear amounts corresponding to a proportion of the total COSTS involved in the procurement of STORAGE, REPROCESSING and WASTE conversion facilities and services relevant to a total of 6000 t U of fuel ;

"COMPLETION DATE"

means the date on which the construction and commissioning of the relevant facility shall have been completed (which dates will be

- (a) in the case of a STORAGE facility the date on which the first quantity of FUEL, uranium, plutonium, WASTE or RESIDUES derived therefrom as the case may be from any relevant BASELOAD CUSTOMER shall have been first received into the said facility;
- (b) in the case of a REPROCESSING facility the date on which the first active dissolution occurs on behalf of any BASE LOAD CUSTOMER in the said facility ;
- (c) in the case of a facility to be constructed for the purposes of converting WASTE into RESIDUES, the date of the first processing of such WASTE through the said facility on behalf of any BASE LOAD CUSTOMER ;
- (d) in the case of a STORAGE facility for Highly Radio-Active Liquors the date on which such facility shall have first become available for use or operation for its required purpose whether then so used or retained for stand-by purposes ;

"CONSIGNMENT"

means

- (a) in respect of FUEL, the quantity of FUEL delivered at one time and shall consist of at least one full or partially full transport flask ;
- (b) in respect of uranium and plutonium, the quantity transported at one time ;
- (c) in respect of RESIDUES, the quantity transported at one time to a particular REPOSITORY;

"COOLED"

means stored after discharge for a period of time as shall permit

has the following meaning :

- (a) in case the Reprocessor is providing transportation of the FUEL:
 - 0) in respect of the empty (i.e free of FUEL) flask : the unloading of the flask from the transport vehicle at the installation where the FUEL is stored by the Company ;
 - (2) in respect of FUEL : the loading of the flask containing the FUEL onto the transport vehicle at the installation where the FUEL is stored by the Company ;
- (b) in case the Company is arranging the transportation of the FUEL:
 - (I) in respect of FUEL : the mloading of the flask containing the FUEL from the transport vehicle at the installation where the FUEL is stored by the Reprocessor ;
 - {2) in respect of the empty (i.e free of FUEL} flask : the loading of the flask onto the transport vehicle at the installation where the FUEL is stored by the Reprocessor ;
- {c) in respect of uranium and plutonium : the meaning ascribed thereto in Clause 7.5 ;
- (d) in respect of RESIDUES : the meaning ascribed thereto in Clause 9.7 ;
- (e)

"DELIVERY PROGRAMME"

means the programme for the DELIVERY of FUEL during one calendar year ;

"FIRM QUANTITY"

means the firm quantity of FUEL notified by the Company as being available for DELIVERY ;

"FIXED SCHEDULE"

means the schedule set out in Clause 2 hereof ;

"FUEL"

has the meaning ascribed thereto in Recital 1, hereof ;

"MADE AVAILABLE"

means

- (a) in respect of FUEL, FUEL acceptable to the Reprocessor pursuant to Clause 4.2.2 and which has been declared by the Company as being available for DELIVERY;
- (b) in respect of uranium and plutonium, uranium and plutonium which has been either declared by the Reprocessor to be available for collection by the Company from the REPROCESSING SITE, or placed into STORAGE pursuant to Clause 21.2.2 whichever shall first occur;
- (c) in respect of RESIDUES any such RESIDUES in respect of which notice shall have been given by the Reprocessor to the Company pursuant to Clause 9.4.2 ;

"NOTIFIED DATE"

means in respect of uranyl nitrate and plutonium dioxide the date notified by the Reprocessor to the Company under AVAILABILITY PROGRAMME when such products are estimated to be MADE AVAILABLE at the REPROCESSING SITE ;

"PROVISIONAL DELIVERY PROGRAMME"

means the programme for the expected DELIVERY of FUEL to the Reprocessor during a period of two consecutive calendar years;

"PROVISIONAL QUANTITY"

means the quantity of FUEL expected to be MADE AVAILABLE for REPROCESSING ;

"RE-INVESTMENT COST"

means capital expenditure (defined in accordance with Reprocessor normal costing procedure) incurred after COMPLETION DATE of a nominated facility and which is the consequence of obsolescence or physical deterioration in the said facility;

"REPOSITORY"

means a site or facility wherein the Company shall arrange for STORAGE of RESIDUES relevant to the Company's FUEL;

"REPROCESSING"

means the separation of the plutonium, uranium and fission products contained in the irradiated fuel ;

"REPROCESSING PLANT"

"REPROCESSING SITE"

means the site of the establishment at La Hague, Manche;

"RESEARCH AND DEVELOPMENT"

means such industrial tests and research and development into oxide REPROCESSING technology undertaken after 1 January 1978 associated with the REPROCESSING PLANT and the other relevant facilities (including facilities for the conversion of WASTE into RESIDUES) constructed and used for the performance of this Agreement and other similar Service Agreements that result in COSTS as defined in Clause 12.2.1 which will be considered as part of the construction COSTS of the facilities as referred to in Clauses 12.4 and 12.5 until the relevant facilities are completed ;

"RESIDUES"

means all such WASTE as defined below which is in a form suitable for transportation and return to the Company pursuant to the provisions of Clause 9 hereof;

"STORAGE"

means

- (a) in respect of FUEL : the storage of FUEL in the ponds prior to REPROCESSING at the REPROCESSING SITE ;
- (b) in respect of uranium and plutonium, the storage of uranium and plutonium after the date on which the same are MADE AVAILABLE and prior to the collection of the same from the REPROCESSING SITE ;
- (c) in respect of WASTE, the interim storage of WASTE
- (d) in respect of RESIDUES, the RESIDUES by the Reprocessor at the same

Page	Paragraph	Line	Remark
7	Re-Investment Cost	2	read "R eprocessor's"
15	2.10.2	7	replace "being" by "to be"
25	6.1	5	read "resolving"
26	6.3	8	replace "percentage" by "pro"
27	7.1.2	1	remove comma after "Company"
31	7.4	1	read "provisions"
	7.4.3	7	read "to the provision"
34	9.6		read "reserve"
37	10.2.3	3	insert after "and" the word
It 1	10.7 .2	last line	read "minimizing"
49	12.6	12	remove comma after "shall"
52	12 9.3	13	read "draw-down"
54	12.13.2	7	read "annually"
72	19.2.2	3	read "not to be"
76	21.2.3	last but one li ne	read "regulations"
85	2.4	1	replace "ensures" by "assure"
87	B2	3	replace "that" by "on which"
93	3.2		read "the options given in P 3.1. 1 and 3.1.2"
116	I. I	5	after "samples" add "and the of samples"
117	3.3	3	read " .. nitrate. The sample"
119	6.1		read "in Paragraphs 3.1.1 and oolete parenthesis"
	6.2.J.1	It	
	6.2. 1. 1	5	add comma after "3. 1. 1"
	6.2.1.1	6	delete parenthesis
130	3.2		read "in Paragraphs 3.1. 1 an"
130	3.6	It	read "MADE AVAILABLE"
134	6.2.2.5	folowing lines missing between Jines 5 and 6	"plutonium dioxide equivalent quantity of"

137	2	10	change line after "concentrate ;"
148	3	3	read "AGREEMENT"
14 9	2	last but one line	read "... with the previous .;."
152	3.2.1	6	read "Be informed of and ;.;"
		g	read "Be informed of and discuss the ..."
		10	read 11; and be infonned of and"
		11	read "advise on the"
			II
153	3.2.I	2	read "Discuss the selection .;
	3.2.3	1	read "'Discuss the construction ... "
154	3.3	5	read "decide on the"
	4	4	read "Chairman's attempt" ... and delete 11Qf11
156	2(a)	2	read "Reprocessor's"
162	I. I	g	read "flask"
163	1.3	line 11	read "active"
164	J.3	15	read "precise the conditions"
165	J.1	5 lines from bottom	read "not yet"
166	1.1	4	read "solid"
	J.5	5	read "... on the following assumptions".
174	(I)	3	read "annuities"

(ii)

ADDITION TO THE CORRJGENDUM LIST

Page	Paragraph	Line	Remark
32	8.2	1	read "finds"
32	8.2	2	read "he shall do"
39	10.2	2	read "develops or adopts"
40	10.7.2.3	2	read "CUSTOMERS"
68	18.2.1.1.1	5	read "have"
69	18.2.1.1.2	4	read "have"
71	18.2.2 2.3 (2)	5	read "considers"
88	E	1	read "Before transporting to the ... "
94	4.1		read "ratio method"
102	3.3	4	read "CUSTOMERS"
103	j	5 and II	read "t U"
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137	2	2	read "notify his"
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166	2.1	I	add after U "REPROCESSED"
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170			read "t U" instead of "tes U"

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 having their registered office at 31-33 rue de Ia Federation, Paris 15e (hereinafter called "the Reprocessor") of the one part and
 N.V. PROVINCIALE ZEE'UWSE ENERGIE-MAATSCHAPPD
 having their registered office at Middelburg, Nederland (hereinafter called "the Company") of the other part.

WHEREAS

- (A) The Company are or will be operating at Borssele a nuclear power station (hereinafter called "the POWER ST A T!ON") and wish the Reprocessor to store and reprocess fuel assemblies irradiated in the POWER ST ATION (hereinafter called "FUEL").
- (B) The Reprocessor confident in its technical proficiency and know how is in the process of constructing more extensive facilities for storage and reprocessing and accordingly is willing to accept FUEL for transport, storage and reprocessing upon the terms and conditions hereinafter set forth.
- (C) The Company, trusting in the Reprocessor's technical abilities recognize that for reasons outside the Reprocessor's control the structure of the transaction as a joint venture is not feasible. Therefore the Reprocessor and all BASE LOAD CUSTOMERS (such customers being defined in Clause 1 hereinafter) shall consult together in the operation of this Agreement and all similar Service Agreements by means of a Joint Committee to be established for that purpose pursuant to Clause 2. 9 hereof.
- (D) The said facilities will include a REPROCESSING PLANT, as defined in Clause I, which will have a design capacity of 2,6 t U per day and will be designed and constructed to be able to REPROCESS not less than 6000 t U of light water reactors' fuel. The said facilities shall be designed, constructed and used for performance of services on behalf of the Company and other customers and the costs of providing such facilities by the Company and such other customers.

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- (E) The Company shall provide to the Reprocessor sums corresponding to a proportion of the costs of the design, procurement and commissioning of the said facilities,
- (F) This Agreement has been negotiated in collaboration with. BRITISH NUCLEAR FUELS LIMITED of Risley Warrington Cheshire United Kingdom (hereinafter called "BNFL ") who intends to enter into agreements the terms of which will be similar to the terms herein contained, it being intended that the said collaboration should continue for the purposes of flexibility and better technical performance of the Agreement as below described with the Reprocessor being solely liable for the performance of its obligations hereunder, and
- (G) The Reprocessor will co-operate with BNFL with respect to the techniques and processes to be utilized for performance of services hereunder, including technical co-operation on the conversion of radioactive waste into residues (as defined in Clause 1 hereof),

NOWHEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS
HEREINAFTER CONTAINED IT IS HEREBY AGREED AS FOLLOWS:

2

DEFINITIONS

In this Agreement and the Appendices hereto the following expressions shall, unless the context otherwise requires, have the following meanings respectively (with the singular including the plural and verb tenses being changed as the context may require), that is to say :

"AGREED" means agreed in writing between the parties ;

"AV AJLABILITY PROGRAMME"

means the programme which shall specify the estimated dates when quantities of uranyl nitrate and plutonium dioxide appropriate to all BASELOAD CUSTOMERS shall be MADE AVAILABLE at the Reprocessing Site ;

"BASELOAD CUSTOMERS"

means any customer of the Reprocessor (including the parties to this Agreement and all French Generating Boards) for the STORAGE and REPROCESSING of FUEL and the conversion of WASTE derived therefrom who has AGREED to bear amounts corresponding to a proportion of the total COSTS involved in the procurement of STORAGE, REPROCESSING and WASTE conversion facilities and services relevant to a total of 6000 t U of fuel ;

"COMPLETION DATE"

means the date on which the construction and commissioning of the relevant facility shall have been completed (which dates will be notified by the Reprocessor to the Company) ~. "'-:~'" ~~hall be deemed to be as follows 'n the following cases~.'l~ v./ /';'~ .,!,., ~<"<
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- (a) in the case of a STORAGE facility the date on which the first quantity of FUEL, uranium, plutonium, WASTE or RESIDUES derived therefrom as the case may be from any relevant BASELOAD CUSTOMER shall have been first received into the said facility;
- (b) in the case of a REPROCESSING facility the date on which the first active dissolution occurs on behalf of any BASELOAD CUSTOMER in the said facility;
- (c) in the case of a facility to be constructed for the purposes of converting WASTE into RESIDUES, the date of the first processing of such WASTE through the said facility on behalf of any BASELOAD CUSTOMER ;
- (d) in the case of a STORAGE facility for Highly Radio-Active Liquors the date on which such facility shall have first become available for use or operation for its required purpose whether then so used or retained for stand-by purposes ;

"CONSIGNMENT"

means

- (a) in respect of FUEL, the quantity of FUEL delivered at one time and shall consist of at least one full or partially full transport flask ;
- (b) in respect of uranium and plutonium, the quantity transported at one time ;
- (c) in respect of RESIDUES, the quantity transported at one time to a particular REPOSITORY ;

"COOLED"

means stored after discharge from the reactor time as shall permit transportation of the

''

has the following meaning :

- (a) in case the Reprocessor is providing transportation of the FUEL:
 - (1) In respect of the empty (i.e free of FUEL) flask : the unloading of the flask from the transport vehicle at the installation where the FUEL is stored by the Company;
 - (2) in respect of FUEL : the loading of the flask containing the FUEL onto the transport vehicle at the installation where the FUEL is stored by the Company ;

- (b) in case the Company is arranging the transportation of the FUEL:
 - (1) in respect of FUEL : the unloading of the flask containing the FUEL from the transport vehicle at the installation where the FUEL is stored by the Reprocessor ;
 - (2) in respect of the empty (i.e free of FUEL) flask : the loading of the flask onto the transport vehicle at the installation where the FUEL is stored by the Reprocessor ;

- (c) in respect of uranium and plutonium : the meaning ascribed thereto in Clause 7.5 ;

- (d) in respect of RESIDUES : the meaning ascribed thereto in Clause 9.7 ;

- (e)

"DELIVERY PROGRAMME"

means the programme for the DELIVERY of FUEL during one calendar year ;

"ARM QUANTITY"

means the firm quantity of FUEL notified by the Company as being available for DELIVERY ;

"AXED SCHEDULE"

means the schedule set out in Clause 2 hereof ;

"FUEL"

has the meaning ascribed thereto in Recital A hereof ;

"MADE AVAILABLE"

means

- (a) in respect of FUEL, FUEL acceptable to the Reprocessor pursuant to Clause 1/.2.2 and which has been declared by the Company as being available for DELIVERY;
- (b) in respect of uranium and plutonium, uranium and plutonium which has been either declared by the Reprocessor to be available for collection by the Company from the REPROCESSING SITE, or placed into STORAGE pursuant to Clause 21 .2.2 whichever shall first occur;
- (c) in respect of RESIDUES any such RESIDUES in respect of which notice shall have been given by the Reprocessor to the Company pursuant to Clause 9.1/.2;

"NOTIFIED DATE"

means in respect of uranyl nitrate and plutonium dioxide the date notified by the Reprocessor to the Company under AVAILABILITY PROGRAMME when such products are estimated to be MADE AVAILABLE at the REPROCESSING SITE ;

"PROVISIONAL DELIVERY PROGRAM ME"

means the programme for the expected DELIVERY of-FUEL to the Rep~ocessor during a period of two consecutive calendar years ;

"PROVISIONAL QUANTITY"

means the quantity of FUEL expected to be MADE AVAILABLE for REPROCESSING ;

"RE-INVESTMENT COST"

means capital expenditure (defined in accordance with Reprocessor normal costing procedure) incurred after COMPLETION DATE of a n0minated facility and which is the consequence of obsolescence or physical deterioration in the said facility;

"REPOSITORY"

means a site or facility wherein the Company shall arrange for STORAGE of RESIDUES relevant to the Company's FUEL;

"REPROCESSING"

means the separation of the plutonium, uranium and fission products contained in the irradiated fuel ;

"REPROCESSING PLANT"

"REPROCESSING SITE"

means the site of the establishment at La Hague, Manche ;

"RESEARCH AND DEVELOPMENT"

means such industrial tests and research and development into oxide REPROCESSING technology unertaken after 1 January associated with the REPROCESSING PLANT and the other relevant facilities {including facilities for the conversion of WASTE into RESIDUES) constructed and used for the performance of this Agreement and other similar Service Agreements that result in COSTS as defined in Clause 12.2.1 which will be considered as part of the construction COSTS of the facilities as referred to in Clauses 12.4 and 12.5 until the relevant facilities are completed ;

"RESIDUES"

means all such WASTE as defined below which is in a form suitable for transportation and return to the Company pursuant to the provisions of Clause 9 hereof ;

"STORAGE"

means

- (a) in respect of FUEL : the storage of FUEL in the ponds prior to REPROCESSING at the REPROCESSING SITE ;
- (b) in respect of uranium and plutonium, the storage of uranium and plutonium after the date on which the same are MADE AVAILABLE and prior to the collection of the same from the REPROCESSING SITE ;
- (c) in respect of WASTE, the interim storage of WASTE
- (d) in respect of RESIDUES, the RESIDUES by the Reprocessor at the same time as the same are made available to the Reprocessor ;

"SWU"

means Separative Work Unit ;

,"WASTE"

means and includes any item falling within the description of "waste" as described in Paragraph 2 of Part A of Appendix 14 hereof when such items cannot be or have not been rendered into a form suitable for transportation in accordance with applicable regulations ;

"YEAR"

means a calendar year.

SCOPE OF AGREEMENT

2.1 The Company shall, during the period from 1 January 1981 to 31 December 1990, deliver to the Reprocessor and the Reprocessor shall accept from the Company for transport, STORAGE, REPROCESSING and conversion of WASTE into RESIDUES under the terms of this Agreement a quantity of fuel assemblies containing approximately 120 tonnes of uranium before irradiation in accordance with the FIXED SCHEDULE set out below:

YEAR	Quantity (t U) contained in fuel assemblies before irradiation and subject to the other provisions of this Clause 2.
1981	12
1982	12
1983	12
1984	12
1985	12
1986	12
1987	12
1988	12
1989	12
1990	12

2.2 Rights of the Company in respect of Fixed Schedule and Deliveries of Fuel

In respect of the FIXED SCHEDULE and DELIVERIES of FUEL to be made hereunder the Company shall have the following rights :

- 2.2.1 The Company may DELIVER to the Reprocessor in any of the YEARS specified in Clause 2.1 a quantity of FUEL which is less than the relevant quantity for the YEAR in the Fixed Schedule to 10 % more than the said relevant quantity.
- 2.2.2 The Company may advance or postpone delivery of FUEL before or after any of the YEARS specified in the Fixed Schedule.

PROVIDED THAT in either of the above cases:

- (1) the overall quantity limit of 120 tonnes is not thereby exceeded ;
- (2) the Company shall at all times be and remain liable to pay to the Reprocessor sums computed in accordance with the provisions of Clause 12 hereof ;
- (3) in the event of advanced DELIVERIES be subject to the Reprocessor's prior commitments and the availability of relevant facilities ; and
- (4) such alterations to relevant quantities of FUEL or postponement of DELIVERY of FUEL do not adversely affect the operation of the Reprocessor's facilities and means for the performance of this Agreement and other similar Service Agreements.

2.3 In addition to the foregoing :

2.3.I Should the Reprocessor determine after consultation with the Company and other BASELOAD CUSTOMERS within the frame of the Joint Committee that there may be free capacity in the REPROCESSING PLANT before the completion of REPROCESSING of the BASELOAD CUSTOMERS' 6000 t U of fuel, or if the REPROCESSING capacity is not fully utilized, the Reprocessor shall offer, every time it arises, such capacity to the Company for the PROVISION in the proportion of 120/6000 of the total of such free capacity. For such services the Reprocessor shall receive from the Company, in addition to the payments of the variable costs directly related to such services and not otherwise paid by the BASELOAD CUSTOMERS a fee corresponding to the average unit fee due to it as shown in the updated unit cost estimate prepared in the year in which the surplus capacity is expected to arise.

If the Company do not accept such offer within one month of the date of offer the Reprocessor may then sell such free capacity to other customers, in which case the Company shall have the benefit of the income from such additional business; the aforementioned variable costs and fee.

2.3.2 .Should it be determined that the REPROCESSING of the BASE LOAD CUSTOMERS'6000 t U of fuel will be completed within ten years from COMPLETION DATE of the REPROCESSING PLANT and if the Reprocessor considers the REPROCESSING PLANT capable of further operation, the Reprocessor shall offer to the Company for the POWER STATION 120/6000 of all capacity expected to be available during the remaining period up to the end of the 10th year.

Such services shall be offered to the Company at the then Reprocessor's standard terms and conditions for REPROCESSING adjusted as to reflect the Company's financial contribution to the construction of the REPROCESSING PLANT : such adjustment shall consist in a discount to the said standard mit charge for REPROCESSING equal in amount to the depreciation component of the average unit COST for REPROCESSING Company's FUEL.

If the Company do not accept such offer within three months of the date of offer the Reprocessor shall then be free to dispose of the said capacity. If the Reprocessor then finds other customer(s) the Company shall however receive a benefit from such business which will consist, for each tonne secured, of an amount equal to the discount they would have benefit from if they had accepted the Reprocessor's offer, less the eventual rebate the Reprocessor might have to grant in order to get such business.

2.3.J If, after completion of REPROCESSING 01 the BASELOAD CUSTOMERS'6000 t U of fuel and after 10 years but within 15 years from the COMPLETION DATE of the REPROCESSING PLANT, the Reprocessor considers the REPROCESSING PLANT capable of further operation, the Reprocessor shall offer to the Company for the POWER STATION 120/12000 of all capacity expected to be available during that period. Such services shall be offered to the Company by the Reprocessor at its then standard terms and conditions for REPROCESSING, adjusted in recognition of the long term co-operation between the parties: such adjustment shall consist of a discount of 15 % of the REPROCESSING price then charged to non-BASE LOAD CUSTOMERS.

If the Company do not accept such offer, the Reprocessor shall be obliged to offer the said capacity and shall not be obliged to offer the said capacity

an)'. further offers of capacity period of time and the Company shall not

2.3.1/ If, after completion or REPROCESSING of the BASELOAD CUSTOMERS 6000 t U of fuel and after the end of the 15 th year from COMPLETION DATE of the REPROCESSING PLANT, a capacity is considered to arise the Reprocessor shall offer to the Company for the POWER STATION 120/6000 of such capacity to the extent that such capacity is not required by French Generating Boards. Such services shall be offered to the Company by the Reprocessor at its then standard terms and conditions for REPROCESSING.

The offers shall be valid for three months. If the Company do not accept the offers, the Reprocessor shall then be free to dispose of the said capacity and the Company shall not benefit of such additional business. In any event the Reprocessor shall not be required to make any offer after the end of the 20th year from COMPLETION DATE.

2.3.5 In the event of any interruption of operation of the REPROCESSING facilities, the time limits of JO, 15 or 20 years referred to in this Clause 2.3 shall be extended by a period of time corresponding to the said interruption affecting the dissolution of fuel being made on behalf of the BASELOAD CUSTOMERS for any such interruption lasting more than 180 successive days.

2.3.6 The Company may request the Reprocessor to provide to the Company any services additional to those set out above and the Reprocessor shall, taking into account their then other existing commitments and subject to their then availability of facilities, use reasonable endeavours in the circumstances then prevailing to accept such request on terms and conditions to be AGREED.

2.1/ The FUEL DELIVERED shall conform to the relevant specification set out in Appendix 1 hereto, or to such other specification as may be AGREED.

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the Repro'ces.sor until such time as the Reprocessor sha
the same.

- 2.6 Following REPROCESSING, the Reprocessor shall recover uranium and plutonium. Unless otherwise AGREED, WASTE shall be STORED by the Reprocessor prior to conversion into RESIDUES. At all times, FUEL and uranium, plutonium, WASTE and RESIDUES derived or deemed to be derived from such FUEL shall be and remain the property of the Company unless otherwise AGREED. PROVIDED that in the event that the Company shall have DELIVERED FUEL hereunder and then defaulted on any of its obligations hereunder to the extent that the provisions of Clause 13. J hereof shall apply then the Reprocessor shall have the right after giving notice to the Company to take all such measures with respect to such materials as it deems to be required and appropriate in order to defray any expenses.
- 2.7 The Reprocessor shall pursuant to the terms hereof use its best efforts to undertake STORAGE, REPROCESSING and conversion of WASTE into RESIDUES in an economical manner having regard to the state of the art and plant requirements.
- 2.8 The Reprocessor shall grant the Company the benefit of terms and conditions granted to other non French BASE LOAD CUSTOMERS to the extent that the Company considers them to be more favourable than those contained in this service Agreement.
- 2.9 To contribute to the efficient performance of this Agreement and other similar service agreements with other BASELOAD CUSTOMERS and in order to achieve a close collaboration between the parties, the parties shall procure that a Joint Committee shall be set up consisting of representatives of the Reprocessor, the Company and other BASELOAD CUSTOMERS and one observer from BNFL. The scope of activity of the Joint Committee is specified in Appendix 18 hereof.

2.10

2.10.1 Not later than 31.12.1978 the Reprocessor shall:

submit an offer for the transport of FUEL from the point of DELIVERY to the REPROCESSING PLANT which offer shall be open to acceptance by the Company for not less than 4 months, and

notify :

the specifications and the basic design requirements of the means of transportation the Company have to meet if they wish to make their own arrangements for transport and,

necessary alterations and amendments to this Agreement, if the Company wish to make their own arrangements for transport;

2.10.2 If the Company reject the offer made under the above Clause 2.10.1 and therefore decide to make their own arrangements for transport, the present Agreement shall be altered or amended respectively according to the following principles :

the basic design and the specifications of the transport means shall be subject to the prior approval of the Reprocessor, such approval not being unreasonably withheld, .

the transport programmes shall be AGREED between the parties, taking into account the limited flexibility of the Reprocessor,

the roles of the parties shall, in Clauses 3 and 4 and Appendix 2 be reversed to such extent as will be necessary to reflect the changed circumstances;

the Company shall not be relieved of their remaining obligations under this Agreement,

additional costs, if any, that the Reprocessor can demonstrate to have incurred in the handling and/or unloading of the flasks at the REPROCESSING PLANT shall be borne by the Company.

CLAUSE 3

PROGRAMMES FOR DELIVERY OF FUEL

3. Unless otherwise AGREED :

3.1 Not later than 31 January in each YEAR the Company shall give to the Reprocessor details as set out in ;

3.1.1 Appendix 2 Part A in respect of FUEL expected to be MADE AVAILABLE in each remaining YEAR of this Agreement; and

3.1.2 Appendix 2 Part B in respect of the PROVISIONAL QUANTITY of FUEL expected to be MADE AVAILABLE in the period of 2 years commencing on 1 January next following.

The first operative date for Clause 3.1.1 shall be 31 January 1978 and for Clause 3.1.2. shall be 31 January 1979.

3.2 DELIVERY PROGRAMME

3.2.1 Not later than 30 June in each YEAR the Reprocessor shall give the Company details as set out in Appendix 2 Part C in respect of the PROVISIONAL DELIVERY PROGRAMME for FUEL to be DELIVERED in the period of 2 years commencing on 1 January next following.

3.2.2 Not later than 31 October in each YEAR the Reprocessor shall give the Company after consultation with the Company a DELIVERY

- 3.3 Not less than 12 months before FUEL is scheduled to be MADE AVAILABLE the Company shall inform the Reprocessor which quantity of the FUEL is to be MADE AVAILABLE and is to be DELIVERED to the Reprocessor, such FUEL shall constitute the FIRM QUANTITY of FUEL. Should the Company wish to MAKE AVAILABLE FUEL with a COOLING time of less than 12 months then such information shall be provided to the Reprocessor within three months after the discharge of that particular FUEL from the POWER STATION and the Reprocessor shall decide about the acceptance within three months of such request. At the same time as such notification is given to the Reprocessor, the Company shall, in respect of the FUEL constituting the FIRM QUANTITY of FUEL give the Reprocessor the details as set out in Appendix 2 Part D.
- 3.t; Each FIRM QUANTITY shall be DELIVERED in accordance with the DELIVERY PROGRAMME relevant thereto. If necessary, the Reprocessor may after consultation with the Company and following receipt of information pursuant to Clause 3.3 amend the DELIVERY PROGRAMME as appropriate. The Reprocessor shall notify the Company of any such amendment within one month after such amendment.
- 3.5 As soon as practicable after loading the last flask in a CONSIGNMENT of FUEL the Company shall give to the Reprocessor details as set out in Appendix 2 Part E.
- 3.6 The relevant information provided by the Company pursuant to Clause 3.3 shall be entered by the Reprocessor in, a Special Register. The matters to be included in the Special Register are specified in the specimen entry in Appendix 3. The Reprocessor shall also enter in the Special Register similar information relevant to fuel deliveries from other BASELOAD CUSTOMERS. Not later than 31 December in each YEAR, the Reprocessor shall distribute to all BASELOAD CUSTOMERS, copies of the Special Register including all entries relevant up to the date of issue.

CLAUSE 4

PACKING, TRANSPORT AND DELIVERY OF FUEL

In the event that the Reprocessor is arranging for transportation of FUEL the following conditions shall apply :

4.1 Responsibilities

4.1.1 The Reprocessor shall be responsible for transporting
CONSIGNMENT from the point or DELIVERY to
REPROCESSING SITE.

4.1.2 The Company shall be responsible for :

4.1.2.1 accepting the empty flask at the point of DELIVERY ;

4.1.2.2 unloading the flask from the transport vehicle ;

4.1.2.3 loading the FUEL into the flask ;

4.1.2.4 decontaminating the loaded flask ;

4.1.2.5 loading the loaded flask onto the transport vehicle.

4.2 Specifications regarding transport

4.2.J Flasks

FUEL shall be transported in flasks which shall be to a design and

material shall be provided by the Reprocessor and
to the Company at the point of DELIVERY.

Such designs shall comply with the regulations referred to in Clause 4.2.6 below.

4.2.2 Fuel cooling time

The Reprocessor shall accept DELIVERY of FUEL which has been between the date of discharge from the reactor and the date of DELIVERY to the Reprocessor been COOLED for at least a period of one year or such other period as may be agreed according to Clause 3.3.

In addition to the foregoing on a case by case basis, the Reprocessor will use reasonable efforts to assist the Company to overcome eventual problems caused by limitations of cooling pond capacity and licensing restrictions. In such cases the acceptance of DELIVERY of FUEL which has been COOLED for less than one year shall be granted, provided this is technically feasible.

4.7.3 Damaged FUEL or FUEL outside specifications

4.7.3.1 The Company shall when the information set out in Appendix 2 Part D is provided to the Reprocessor also notify the Reprocessor if they know or suspect that any of the FUEL which they wish to send to the Reprocessor is damaged or otherwise fails to meet the specification set out in Appendix I.

Following such notification the Reprocessor shall use all reasonable endeavours to accept such FUEL and if the Reprocessor shall then be willing and able to accept such FUEL, the parties shall consult together to determine a safe and economic means of transport, unloading and STORAGE of such FUEL by the Reprocessor. The Company may at the discretion of the Reprocessor include an enclosure of FUEL in non-standard bottles provided they are suitable for the Reprocessor.

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4.2.3.2 In the event of a CONSIGNMENT being found after arrival at the REPROCESSING SITE to include any FUEL which is damaged or which otherwise fails to meet the specification set out in Appendix 1 and of which the Company had not previously notified the Reprocessor in pursuance of Clause 4.2. 3.1 the Reprocessor shall take such special measures as may be deemed by the Reprocessor to be necessary. In the event of such measures being found to be necessary the Reprocessor will endeavour to notify the Company of the nature of the damage or failure as aforesaid and of the action taken or to be taken in respect thereof, if possible before such action is taken and in any event thereafter provided always that such notification shall in no way limit or derogate from the Reprocessor's discretion to take such special measures.

4.2.4 Procedures

Before the DELIVERY of each CONSIGNMENT of FUEL to the Reprocessor, the Company shall ensure that each of the fuel assemblies has been packed in accordance with procedures to be specified by the Reprocessor after consultation with the Company. Representatives of the Reprocessor shall have the right to witness the performance of those procedures. In the event of the exercise by the Reprocessor of the foregoing right revealing non-compliance by the Company with any of the requirements of the said procedures, the Company shall take such measures as may, in the opinion of the Reprocessor, be necessary to ensure compliance with the said requirements. A consignor's certificate shall be completed by the Company in respect of each flask delivered to the Reprocessor together with a loading chart showing the position of each fuel assembly in the flask.

Without prejudice to the of this Agreement, the to the Company, have the

general en-ordination at the point Cla~
responsibilities of the Company listed in

4.2. 5 Rt:gulatinn applicable on the reactor site.

In due time when required by the Reprocessor the Company shall notify the Reprocessor of the regulations which are applicable within the site of each reactor referred to in this Agreement or alternatively the site of the point of DELIVERY. The Reprocessor will comply with these regulations.

4.2:6 Radiation

The Company shall, on the DELIVERY to the Reprocessor of each flask containing FUEL, ensure . that it complies in respect of radiation and contamination with limits set out in the Regulations for the Safe Transport of Radioactive Materials (1973 Edition) published by the International . Atomic Energy Agency under reference ST1/PUB/323 in Safety Series Number 6, and with such other limits as may be required by the relevant authorities. The Reprocessor shall deliver to the Company the empty flasks in such conditions as to allow immediate loading.

4. 3 Programmes

4.3.1 Pursuant to Clause 3 the parties shall AGREE on the programme for DELIVERY of FUEL which is to be delivered by the Company.

4.3.2 The Company shall use its best endeavours to ensure that DELIVERY to the Reprocessor of each CONSIGNMENT is completed in accordance with the DELIVERY PROGRAMME referred to in Clause 3. If the Company foresee that, through any cause attributable to the Company there is any likelihood of delay in DELIVERY of a CONSIGNMENT, they shall give notice to the Reprocessor and the parties shall consult together with a view to the course of action to be taken in the circ~~~~;:<

4. 3. 3 If DELIVERY of a CONSIGNMENT is no due <late, the Reprocessor Company, either :

- 4. 3.3.1 arrange for the departure of the transport vehicle to be delayed until DELIVERY has been completed, or
- 4.3.3.2 arrange for the departure of the transport vehicle without delay notwithstanding the fact that DELIVERY of a full flask has not been effected.

CLAUSE 5

STORAGE OF FUEL AND REPROCESSING

- 5.1 After transport of each CONSIGNMENT of FUEL to the REPROCESSING SITE the Reprocessor shall STORE such FUEL until such time as the same is REPROCESSED hereunder.
- 5.2 The weights of uranium, plutonium and fissile isotopes thereof contained in the Company's FUEL shall be determined in accordance with Appendix 4.
- 5.3 After the samples have been taken from the FUEL in accordance with Appendix 4, the FUEL may at the Reprocessor's discretion be physically and chemically mixed during REPROCESSING with other fuel in accordance with normal operational requirement.
- 5.4 The Reprocessor shall, following REPROCESSING of quantities of FUEL, recover quantities of uranium and plutonium which the Reprocessor shall subsequently allocate and dispose of pursuant to Clause 6 and 7. It is recognized that operational requirements demand that the Reprocessor may return to the Company uranium or plutonium not actually derived from the Company's FUEL. /.

CLAUSE 6

REPROCESSING PROGRAMME AND PRIORITIES

- 6.1 FUEL shall be REPROCESSED in such quantities and at such times as may be determined by the Reprocessor, according to the best technical and economical advantage to the operation of the REPROCESSING PLANT. However should difficulties arise because of the flexibility so given to the Reprocessor, the parties shall consult in the frame of the Joint Committee with a view to resolve any such difficulties (including the final allocation of WASTE and remaining FUEL not REPROCESSED - if any - before permanent shut-down of the REPROCESSING PLANT) in a fair and non-discriminatory manner.
- 6.2 The overall system of priority for transport, STORAGE of FUEL and the MAKING AVAILABLE of uranium and plutonium by the Reprocessor in relation to BASELOAD CUSTOMERS shall be determined in accordance with the principles set out in Appendix 5 and also by reference to the Special Register.
- 6.3 . The REPROCESSING of FUEL and/or the MAKING AVAILABLE of uranium and plutonium scheduled in a particular YEAR hereunder may be delayed following French Government instructions or according to the provisions of paragraphs 3.3 and 5 of the Appendix 5.

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In such a situation the parties shall consult to the intent of AGREEING measures for minimising inconvenience to the Company and the Reprocessor shall ensure that in respect of sums payable by the Company for STORAGE and REPROCESSING of FUEL, no increase in cost under this Agreement shall fall upon the Company due to delay in REPROCESSING of such FUEL and/or MAKING AVAILABLE such uranium and plutonium, in particular :

in such a situation,

operation COSTS (excluding depreciation) and fees for
REPROCESSING of non-BASELOAD CUSTOMERS shall
not be charged to the BASELOAD CUSTOMERS.

~ repay to the Company J 2J/500G of the amount of
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moreover the Elir!e limits of 10 or 15 years after CC.\IPLETI

be extended by a period of time corresponding to a number of years
and/or part of year equal to the sum of the percentage of quantities
of fuel REPROCESSED each year for non-BASEI, .OAD CUSTOMERS
by reference to the total quantities of fuel REPROCESSED in the
same year.

If~) allowing any of the above mentioned circumstances, some 01. ;::lc Company's
f~iEL cannot be REPRO.CESSED in the ct.EPROCE.5SING ?Lr.¿\jT .:,.,.,.o; e its
defintj ve shutdown the REPROCESSOR. shall undeniie t'l '¿C..'C
R2;:::..~z,;,c:SSED in one er 1".:,j clher .facilities.

CLAUSE 7

URANIUM AND PLUTONIUM

7. Subject to the provisions of Clause 21 hereof :

7.1 Programmes for making available Uranium and Plutonium

- 7.1.1 Not later than 31 July in each YEAR commencing one YEAR before the expected completion of the REPROCESSING PLANT the Reprocessor shall propose to the Company and other BASELOAD CUSTOMERS a Programme (hereinafter called "PROVISIONAL AVAILABILITY PROGRAMME") whereby uranium and plutonium relevant to their FUEL will be MADE AVAILABLE in the 24 month period commencing 1 January next following.
- 7.1.2 Not later than 30 September in each YEAR, the Company, may submit their comments on the PROVISIONAL AVAILABILITY PROGRAMME and may request an earlier or later order of ranking in their priority to reflect their requirements which requests shall be sympathetically considered by the Reprocessor having regard to their then existing commitments with the Company hereunder and with other BASELOAD CUSTOMERS.
- 7.1.3 As soon as possible following the 30 September above mentioned the Reprocessor shall, taking into account insofar as practicable requests made pursuant to Clause 7.1.2, notify the Company of the programme for return of uranium and plutonium in the following YEAR (hereinafter called "AVAILABILITY PROGRAMME"). The AVAILABILITY PROGRAMME shall specify the estimated dates when quantities of uranyl nitrate and plutonium dioxide will be MADE AVAILABLE at the REPROCESSING SITE (which such dates are hereinafter called "NOTIFIED DATES").

7.1.4 In the event that:

7.1.4.1 the. actual quantity of uranium and plutonium MADE AVAILABLE in any YEAR is less than the quantity specified in the relevant AVAILABILITY PROGRAMME any shortfall shall be carried over into the succeeding YEAR and shall have priority under the AVAILABILITY PROGRAMME for that YEAR; and

7.1.4.2 the actual quantity of uranium and plutonium MADE AVAILABLE in any YEAR is greater than the quantity specified in the relevant AVAILABILITY PROGRAMME the excess quantity shall be deducted from the quantity having the highest priority for the succeeding YEAR pursuant to the PROVISIONAL AVAILABILITY PROGRAMME.

7.1.5 The Reprocessor shall notify the Company as soon as possible in the event that there is a likelihood that uranium and plutonium will be MADE AVAILABLE on dates other than the NOTIFIED DATE following which notification the parties shall consult with the intention of making suitable arrangements as to how such uranium and plutonium shall be allocated and disposed of in the light of circumstances then prevailing.

7.2 Return of Uranium

7.2.1 Uranium MADE AVAILABLE shall be in the form of uranyl nitrate to the specification in Appendix 7.

7.2.2 The quantity of uranium as uranyl nitrate to be MADE AVAILABLE shall be in accordance with the provisions of Appendix 8.

7.2.3 Before the uranium as uranyl nitrate is MADE AVAILABLE the Reprocessor shall carry out the output determination with the provisions of Appendix 9.

7.2.4 The Company have the option either to arrange for collection of uranyl nitrate or to request the Reprocessor to arrange the transport of the uranyl nitrate. Upon request of the Company the Reprocessor shall submit to the Company the terms and conditions of such transport services two years in advance of the expected date of the transport. Within six month of such submission the Company shall inform the Reprocessor of their decision.

7.2.4.1 In case the Company decide to arrange for collection they shall not later than six weeks before the NOTIFIED DA TES referred to in Clause 7.I 3 arrange to make available to the Reprocessor at the REPROCESSING SITE containers for the uranyl nitrate solution and

not later than three months after the uranyl nitrate is MADE AVAILABLE, arrange to transport and collect the uranyl nitrate containers from the REPROCESSING SITE ..

7.2.4.2 In case the Company decide to request the Reprocessor to arrange the transport of uranyl nitrate, the Reprocessor shall provide such transport at the then AGREED terms and conditions.

7:2.5 If, for any reason the Company have failed:

7.2.5.I to provide containers for the uranyl nitrate within a period of three months after it is MADE AVAILABLE and if the Reprocessor considers it is not appropriate to STORE for longer periods uranium as uranyl nitrate, the Reprocessor may after consultation with the Company convert the uranyl nitrate to another chemical form at the expense of the Company,

7 .2.5.2 to collect the loaded uranyl nitrate containers they shall be STORED by the Reprocessor at the Company's expense.

7.2.6 The Company have the right to request the Reprocessor to arrange the STORAGE of uranyl nitrate in the Reprocessor's facilities. In order to enable the Company to exercise this right, the Reprocessor informs the Company about the terms and conditions of STORAGE two years in advance of the first STORAGE of uranyl nitrate. The Company shall indicate their requirement for each STORAGE to be provided by the Reprocessor 18 months in advance. The Reprocessor shall be obliged to undertake STORAGE at the then AGREED terms and conditions.

7.2.7 Before the uranyl nitrate is MADE AVAILABLE, the weights of uranium, and fissile isotopes thereof contained in the uranyl nitrate shall be determined by the Reprocessor in accordance with Appendix 9.

7.2.8 The Reprocessor shall further notify the Company when the Uranium has been DELIVERED to the Carrier or Transporter.

7.J Return of plutonium

7.J.I Plutonium MADE AVAILABLE shall be in the form of plutonium dioxide to the specification in Appendix 10.

7.3.2 The quantity of plutonium dioxide to be MADE AVAILABLE shall be in accordance with the provisions of Appendix 1J.

7.3.J Before the plutonium dioxide is MADE AVAILABLE the weights of plutonium and fissile isotopes thereof shall be determined in accordance with Appendix 12.

7.3.ti If not removed from the REPROCESSING

7.3.5 After STORAGE the plutonium dioxide shall be transported to an AGREED destination by the Reprocessor. in accordance with a programme to be AGREED.

7.3.6 The containers provided by the Reprocessor for transporting the plutonium dioxide shall be deaned and decontaminated by the Company before being collected by the Reprocessor at destination referred to in Clause 7 3.5 within a period to be AGREED.

7.4 Other forms of Uranium and Plutonium and provisions of storage services.

7.4.1 In the event that the Company wish the Reprocessor to make available uranium and plutonium in a form other than those specified in Clause 7.2 and 7.3 respectively, the Company shall so notify the Reprocessor and the parties shall consult with the intent of AGREEING terms and conditions for such further services.

7.4.2 In particular, should the Company require the Reprocessor to make available the uranium in the form of uranium hexafluoride, the Company shall give the Reprocessor . 5 years notice of such requirement unless a shorter period is AGREED and it shall be provided on terms to be AGREED.

7.4.J In the event that the Company wish the Reprocessor to provide long term STORAGE services for uranium and/or for plutonium additional to STORAGE provided for implementation of Clause 21.2.2, the Company shall so notify the Reprocessor not less than 4 years in advance in the case of plutonium and 3 years in advance in the case of uranium and the parties shall consult with the intent of AGREEING terms and conditions relevant to provision of such ADDITIONAL SERVICES.

7.5 For the purpose of this Agreement unless otherwise AGREED no party's liability in the uranium and plutonium shall pass from the company on physical transfer of the uranium and plutonium

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_____ ?eerneif control of the Company. The point of DELIVERY shall be the Company after consultation with the Reprocessor.

VARIATION

- 8.1 The parties recognise that at the date of signature of this Agreement the services to be performed by the Reprocessor hereunder are to be performed in plants yet to be completed and hence that the operating conditions of such plants cannot yet be fully ascertained, even though based on the Reprocessor's current best estimates of such conditions. It is therefore agreed that changes to the technical conditions of this Agreement may become necessary following the Reprocessor's actual operating experience of the said plants. In such circumstances the Reprocessor shall have the option, following consultation with the Company, to make such changes as may have become necessary as a result of the actual evolution of techniques and plant operating conditions as then ascertained, including the chemical form of the end products specifications and process losses. Such changes shall correspond to the changes in the technical conditions then being applied to services offered to all customers including the French Generating Boards.
- 8.2 In the event that the Reprocessor find it necessary to implement the provisions of Clause 8.1 hereof they shall do so in such a way as to minimize the consequences thereof and cause as little inconvenience to the Company as shall be possible in the circumstances.

OPTION FOR RETURN OF RESIDUES

- 9.1 .The Reprocessor shall have the optiOIJ to return to the Company RESIDUES allocated to the Company pursuant to Appendix 14. If the Reprocessor exercises this option the Company shall be obliged, without any expense to the Reprocessor, to arrange the storage of the RESIDUES in a repository located in Nederland or in such other location outside France as may be AGREED. Such AGREEMENT may be withheld if the REPOSITORY is located in an area which is not under the control of a Sovereign State.
- 9.2 The option in Clause 9.1 above shall be exercisable by the Reprocessor only if the WASTE can be put into a form which can be safely transported to the REPOSITORY and stored in accordance with such regulatioos as may be specified by the relevant competent national authorities, it being anticipated by both parties that such regulatioos will conform with such standard as may be laid cbwn by competent international agencies oo which the Dutch and the French Governmaits may be represented. In connection with the development by the Reprocessor of various processes to enable RESIDUES to be so transported and stored, the Reprocessor can obtain and will utilise where appropriate technology being developed within United Reprocessors GmbH or certain other organisations.
- 9.3 The option referred to in Clause 9.1 shall be exercisable by the Reprocessor, within a period of 25 YEARS following the YEAR in which the FUEL from which the RESIDUES were derived was actually REPROCESSED, provided that the Reprocessor shall have given to the Company not less than five YEARS notice expiring on or before the end of the said period of 25 YEARS informing the Company of the Reprocessor's intentioo to exercise the option.
- 9.4 In the event that the Reprocessor exercises the option set out in Clause 9.1 :
- 9.4.1 the Reprocessor shall return to the Company a proportion of the RESIDUES relevant to the REPROCESSING of any FUEL and being determined in pursuance of Appendix lif,

9.4.2 the Reprocessor shall give to the Company, a period of not less than two years' notice of the date when RESIDUES will be in a suitable form for transport and storage and shall also notify the Company of the quantity of RESIDUES allocated to the Company pursuant to Clause 9.4.1. The Company shall within a period of three years after the date of such notice accept such quantity of RESIDUES at the REPOSITORY provided that unless otherwise AGREED no such notice shall be given to take effect before 1st January 1990,

9.1.3 the parties shall conclude a separate contract (hereinafter called "the residues transport Contract") relevant to the transport by the Reprocessor of CONSIGNMENTS of RESIDUES and DELIVERY to the Company of the same. The residues transport Contract shall provide that the Reprocessor shall before transport arrangements are made consult with the Company as to such arrangements and then determine the quantity to be included in each CONSIGNMENT and the date for transport of the same. The RESIDUES shall be packed in suitable containers which shall comply with the relevant safety requirements and shall be provided by the Reprocessor. The Reprocessor shall give the Company 18 months notice of the earliest estimated date for DELIVERY of each CONSIGNMENT and the Company shall make all arrangements relevant to receipt of the same at the REPOSITORY.

9.5 The Reprocessor shall, if so required by the Company and subject to terms to be AGREED, provide advice and design information relevant to storage of RESIDUES at the REPOSITORY.

9.6 The Reprocessor reserves the right to allocate as further described in Appendix 11/ WASTE to the Company either at the time when the uranium and/or plutonium are MADE AVAILABLE to the Company or not later than six months after the FUEL has actually been REPROCESSED.

9.7 Unless otherwise AGREED, DELIVERY of RESIDUES to the Company shall be effected and risk therein shall pass from the Reprocessor to the Company when the RESIDUES are physically handed over to the Company in the Netherlands or such other location as may be AGREED.

- 9.8 . The Company shall have the like rights and option to the rights and option granted to the Reprocessor under this Clause 9 to require, at their own expense, the return of RESIDUES to the Company in Nederland or such other location outside Nederland as may be AGREED subject always to the approval and such conditions as may be imposed b)i the International Agencies and relevant competent national authorities as referred to in Clause 9.2 having jurisdiction for the transportation of the said RESIDUES.

MODIFICATION

10.1 In no event shall the Reprocessor commence REPROCESSING operations hereunder until such time as the WASTE or the converted WASTE arising from the process(es) to be applied shall, in the Reprocessor's opinion, - satisfy the criteria in Clause 9.2. However the Reprocessor shall commence REPROCESSING even though a facility to perform the process has not been completed at that time.

10.2

. 10.2.1 In connection with Clause 10.1 above the Reprocessor shall endeavour to submit to the Company not later than 1st January 1982 a specification which in the opinion of the Reprocessor shall satisfy the said criteria and the Reprocessor shall then seek to obtain as soon as possible the approval of such specification by the French and any other relevant authorities having jurisdiction in this respect at that time. However, the Reprocessor shall in no case be responsible for the obtaining of approval of this specification by the Dutch authorities but shall endeavour to assist the Company in the obtaining of such approvals if requested to do so.

10.2.2 The Company shall seek to obtain as soon as possible the approval of this specification by the relevant Dutch authorities having jurisdiction in this respect at that time. However the Company shall in no case be responsible for the obtaining of approval of this specification by the non-Dutch authorities but shall endeavour to assist the Reprocessor in obtaining such approval if requested to do so. The Company shall proceed to obtain the necessary approval as soon as the Reprocessor shall have submitted the specification pursuant to Clause 10.2.1 above and shall not wait for the approval of the specification by the French authorities ~~~~~ obtain the approval required pursuant to this Cl ~

10.2.3 The parties shall collaborate in the obtaining of such approval by arranging where possible and to such extent as may be reasonable the exchange of information between all the relevant experts and that, if approval from authorities other than Dutch or French authorities is required they shall in so far as practicable seek to obtain such approval jointly.

10.2.4 In the event that following submission of the said specification by the Reprocessor confirmation is not received within a period of two years of such submission or by 1st January 1984 whichever is the later from the Dutch and French authorities and any other authority, having jurisdiction in this respect at that time that the product

derived from such specification is acceptable or if any such confirmation shall be withdrawn then the Reprocessor shall have the right to modify this Agreement in which case the provisions of Clauses 10.5 and 10.7 hereof shall apply.

Notwithstanding the above provisions, this Agreement will not be modified in case the specifications of high level activity RESIDUES are acceptable by all authorities having jurisdiction and if an agreement concerning the other waste is reached within the framework of Paragraph 5.2 of Appendix 14.

10.3 The Reprocessor shall also have the right to modify this Agreement, and the provisions of Clauses 10.5 and 10.7 hereof shall apply in the following circumstances, viz :

10.3.1 If the Reprocessor concludes following consultation with the Company that the WASTE or the converted WASTE arising from the process(es) to be applied will not satisfy the criteria specified in Clause 9.2 ; or

10.3.2 If following confirmation by the said relevant authorities as described in Clause 10.2 above that the specification of RESIDUES is acceptable, the said authorities then for any reason conclude that it will not be possible for the RESIDUES to be returned to the Company in accordance with the provisions of this Agreement or withdraw such confirmation.

10.4 The Reprocessor shall not exercise any rights to modify this Agreement pursuant to Clause 10.3 above without first consulting with the Company.

In the event that after submission of a specification as provided for in Clause 10.2.1, it appears that the specification will not be accepted and if the Company considers that an amended specification would make return of RESIDUES practicable then the Reprocessor shall not exercise its option to modify this Agreement PROVIDED THAT the Reprocessor considers that

it is possible to develop a process complying with such amended specification, and

such amended specification will actually make the return of RESIDUES practicable, and

the Company make all reasonable endeavours to have the specification accepted by the Dutch authorities,

and PROVIDED FURTHER THAT approval of the amended specification by the relevant authorities is not delayed until after the completion of the REPROCESSING facility. The Company shall bear all the costs of such amendment of the specification on the basis of COSTS plus fee as defined in Clause 12.

10.5 In the event that the Reprocessor exercises the right to modify in pursuance of Clause 10.2 or 10.3, this Agreement shall be modified such that the Reprocessor shall continue to collect, transport and STORE FUEL. The Reprocessor's obligation to accept FUEL shall continue until 31 December 1990 and its obligation to STORE FUEL shall continue until 31 December 1995. However in any event the Company shall be obliged to take back all the FUEL before the 31 December 1995. Upon request of the Reprocessor the Company shall provide appropriate guarantees to this extent.

10.6 In the event that following modification in pursuance of Clause 10.5 Reprocessor at a later date develop or adopt a process which will satisfy the criteria in Clause 9.2, the parties shall consult to the intent of restoring the original arrangements of this Agreement.

10.7 In the event that this Agreement is modified pursuant to Clause 10.5 :

10.7.1 All sums paid by the Company to the Reprocessor up to the date of modification which are not related to STORAGE shall be repaid to the Company as soon as practicable. In particular :

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10.7.1.1 Sums advanced pursuant to Clause 12 other than those related to STORAGE facilities and not committed shall be immediately repaid ;

10.7.1.2 Sums advanced pursuant to Clause 12 other than those related to STORAGE facilities and committed by the Reprocessor shall be repaid by the Reprocessor as soon as possible to the extent that they are recovered from other customers who utilise and assist in financing the said facilities. Deductions for operation COS (excluding depreciation) and fee may be made before repayments to the Company ;

10.7.1.3 The proportion of the, sum paid by the Company to the Reprocessor under Clause 12.3 relating to REPROCESSING shall be repaid forthwith and the provisions of Clauses 12.9 and 12.13 shall apply only to STORAGE of FUEL;

10.7.1.4 All sums other than those related to STORAGE paid by the Company to the Reprocessor under Clauses 12.9 and 12.13 up to the date of modification shall be repaid

10.7.1.5 Any remaining amounts under Clause 10.7.1.2 after any repayments shall be repaid by the Reprocessor only from the depreciation content of charges payable by any other customers for provision of services in the relevant facilities as and when the same are utilised including interest m sums outstanding in s:i far as the Reprocessor can obtain such Interest from other such customers.

10.7.2 All financial obligations of the Company related to the FUEL which has not been reprocessed and which are not related to STORAGE shall cease except that in the event that :

10.7.2.1 the Reprocessor has produced a specification for RESIDUAL~ and

10.7.2.2 such specification has been approved by the relevant authorities having jurisdiction within France and satisfies the requirements of the relevant international authorities having jurisdiction over the transport of such RESIDUES and

10.7.2.3 ' such specification has been accepted by one or more non-French BASELOAD CUSTOMER and

10.7.2.11 this Agreement is modified due to non acceptance of SL' specification by the relevant authorities having jurisdiction in Nederland.

the Company shall nevertheless pay to the Reprocessor all charges pursuant to Clause 12 in respect of STORAGE of FUEL, of REPROCESSING and of conversion of WASTE into RESIDUES (save that fee shall be due only on STORAGE of FUEL) to the extent that the

in this Agreement, it being FURTHER agree

the Reprocessor shall undertake to re-examine, as far as it would be practicable without affecting its reprocessing policy and following consultation within the Joint Committee, to what extent construction programs of other reprocessing plants could be re-adjusted, the construction of the STORAGE and of the conversion facilities of WASTE arising from the REPROCESSING PLANT into RESIDUES could be adapted, the construction of STORAGE of FUEL facilities will need an extension and if it is possible to find alternative customers including French Generating stations, the view to minimize the inconvenience to all BASE LOAD CUSTOMERS.

I 10.7.J In connection with facilities which will not be used for STORAGE of FUEL on behalf of the Company following modification and as to the balance of any sums remaining due to the Company in respect thereof under Clause 12 the parties shall consult concerning any necessary modification of the R liabilities hereunder following the principles of this Agreement: it shall be the Reprocessor shall not bear financial risk hereunder.

I 10.7.4 In case of any Service Agreement of any BASELOAD CUSTOMER except that of the Company being modified, the Reprocessor shall offer the Company for the POWER STATION to enter into all rights and obligations of the said BASELOAD CUSTOMER which are not related to STORAGE of fuel for a quantity of fuel corresponding to 120/6000 of the available REPROCESSING capacity resulting from the said modification it being however recognized Reprocessor's obligation to accept Company's fuel for STORAGE shall be subject to the Reprocessor's prior commitments and the availability of STORAGE facility. This availability shall be clearly specified by the Reprocessor at the time of the above offer and STORAGE services available shall be offered on conditions similar to those of the present Agreement and taking into account the Company's previous contribution to the construction of STORAGE facilities.

DETERMINATION OF QUANTITIES

- 11.1 When the Company's FUEL is actually dissolved for REPROCESSING, the Reprocessor shall determine the weights of uranium, plutonium and fissile isotopes thereof in accordance with the provisions of Appendix ti and as soon as practicable after the results are available, the Reprocessor shall notify the same to the Company.
- 11.2 In the event that uranium and plutonium are MADE AVAILABLE to the Company before the date oo which the relevant FUEL is actually REPROCESSED, the quantity of uranium and plutonium to be MADE AVAILABLE shall be determined by reference to the data provided by the Company pursuant to Clause 3.3 and adjustments shall be made at a later date in accordance with Clause 11.3 following the availability of the data referred to in Clause 11. ! .
- 11.3 In the event that the quantity of uranium and/or plutonium as the case may be actually MADE AVAILABLE is greater or less than the quantity due to be MADE AVAILABLE pursuant to Appendices 8 an"d 11 hereof an adjustment shall be made between the parties as follo~ : (
- 11.3.J Whenever possible the Reprocessor shall adjust differences in such quantities by an appropriate quantity adjustment to the quantity of uranium and/or plutonium to be MADE A VA!LABLE subsequently ; and
- 11.3.2 in cases not covered by the provisions of Clause 11.3.1 above and when all FUEL DELIVERED by the Company hereunder has been REPROCESSED and all relevant data have become available to the parties a financial settlement shall be made to cover any remaining differences as aforesaid either way pursuant to the provisions of Appendix 13 hereof.

11.3.J If within 5 years after all the uranium and plutonium owing to the Company have been MADE AVAILABLE the corresponding FUEL has not been reprocessed, the determination according to Clause 11.2 above shall be final and all further daims and obligations with respect to such lllprocessed FUEL shall cease and property in any such unprocessed FUEL shall pass from the Company to the Reprocessor.

FINANCIAL PROVISIONS

Principles - Services Charges

12.1 Charges will be made by the Reprocessor hereunder for :

- 12.1.1. STORAGE of FUEL and REPROCESSING operations leading to recovery of uranium and plutonium nitrates, interim STORAGE of WASTE, the conversion of recovered uranium and plutonium nitrates into the forms specified in Appendices 7 and 10 or such other forms as may be notified by the Reprocessor pursuant to Clause 8, and STORAGE of the same and all services implemented pursuant to Clause 21 ; (which services are sometimes below in this clause referred to as "FUEL SERVICES").
- 12.1.2. Conversion of WASTE into RESIDUES and STORAGE of RESIDUES prior to DELIVERY of the same to the Company ; (which services are sometimes below in this Clause referred to as "RESIDUE SERVICES").
- 12.1.3. Such further services other than those specified in Clauses 12.1.1. and 12.1.2. above as may be AGREED following a consultation between the parties in respect thereof ; (which services are sometimes below in this clause referred to as "ADDITIONAL SERVICES").

12.2 Calculation of costs and charges for services :

- 12.2.1. For the purposes of this Agreement "COSTS" shall be determined in accordance with the Reprocessor's normal costing procedures as described in Appendix 16 and unless otherwise this
 Agreement operation COSTS (or COSTS for an appropriate component for depreciation.

12.2.2. The Reprocessor shall under this Agreement provide capacity for the performance of services in pursuance of Clauses 12.1.1. and 12.1.2. above in respect of 120 tonnes of FUEL and the charges hereunder shall be payable by the Company whether or not such capacity is fully utilised by the Company.

12.2.3. In the case of FUEL SERVICES and RESIDUE SERVICES charges will comprise :

- (1) 120/6000 of the recorded COSTS incurred by the Reprocessor in the construction and operation of any facility constructed and used wholly for the purposes of this Agreement and the other service agreements similar to this Agreement concluded with BASELOAD CUSTOMERS and used in common among all BASELOAD CUSTOMERS ;
- (2) 120/6000 of the recorded COSTS incurred by the Reprocessor in the operation of any facility not originally constructed for the purposes of this or the other service agreements but used only in common among all BASELOAD CUSTOMERS ;
- (3) Such other proportion on strictly prorata, non discriminatory basis, of the recorded COSTS incurred by the Reprocessor as may be appropriate

in respect of variable COSTS relevant to such services

in the construction and operation of a facility constructed and used

wholly for the purposes of this or other service agreements but not used in common by all BASELOAD CUSTOMERS or

partially for Agreement and common CUSTOMERS

in the operation of a facility not originally constructed for the purposes of this and other service agreements and not used in common among all BASELOAD CUSTOMERS

which proportionate COSTS will be notified by the Reprocessor to the Company after consultation within the Joint Committee.

- (4) Such other proportion as may be appropriate of the RE-INVESTMENT COST incurred before completion of REPROCESSING of 6000 tonnes of fuel in the REPROCESSING PLANT or conversion of corresponding WASTE into RESIDUES (which equitable proportionate COST will be notified by the Reprocessor to the Company on a case by case basis after consultation within the Joint Committee and which normally result from equitable sharing between the BASELOAD CUSTOMERS and the Reprocessor taking into account the value of such RE-INVESTMENT COST which will remain after completion of REPROCESSING of 6000 tonnes of fuel or conversion of corresponding WASTE)

together with a fee of _____ on the total of such COSTS. The said fee shall be subject to reduction in accordance with the circumstances and subject to the provisions of Appendix 6 hereof. The fee shall be charged separately in respect of depreciation and operation (excluding depreciation) COSTS.

- 12.2.4. In the case of ADDITIONAL SERVICES charges shall either be calculated on a cost plus basis or on a basis to be AGREED between the parties.

Charges for Fuel Services, Estimated Unit Charge, Updating
Deposit

12.3

12.3. 1. The Reprocessor shall in accordance with the above principles and the procedures set out in the said Appendix 16 estimate a unit charge per tonne of uranium contained in the FUEL. before irradiation for performance of services pursuant to Clause 12.1.1, to be applicable on date of signature hereof.

12.3.2. The Reprocessor shall throughout the duration of this Agreement not later than three months before the commencement of each YEAR determine and update the estimated total and unit charges for FUEL SERVICES in respect of the 6000 tonnes of fuel, such charges shall not take account of anticipated changes in money values and prices beyond the end of such YEAR. COSTS shall be classified as fixed (including depreciation of the capital expended won the relevant facility) and variable within the following categories, viz :

12.3.2.1 STORAGE of FUEL ; and

12.3.2.2 REPROCESSING ; (including interim STORAGE of WASTE prior to conversion into RESIDUES}

and the appropriate fee shall also be calculated in similar categories.

Appendix 21 includes a general description of the REPROCESSING PLANT together with a preliminary COSTS analysis of the project. Within 90 days of signature of this Agreement the Reprocessor shall provide to the Company the model of the financial document to be updated pursuant to the present Clause 12.3.2 which financial document shall specify the then estimated charges for FUEL SERVICES and the flow of funds estimated to be paid by or to the Company.

12.3:3 The Company shall pay as a deposit to the Reprocessor within 30 days of signature hereof or of invoice, whichever the latest, the sum of equivalent to of the estimated unit charge deemed to be applicable at that time for the total quantity of FUEL to which this Agreement relates. An invoice for the said sum shall

12.3.4 The said cjeposit shall be repaid in ten equal instalments by the Reprocessor to the Company at .the end of each YEAR starting with the first year of operation of the REPROCESSING facility.

Such repayment shall be made by means of a credit note or in cash according to the choice of the Company which the Company shall notify to the Reprocessor not later than 60 days before.the first of such repayments. Credit notes shall be offset against the first payment to be made by the Company following the notification of such credit. The last credit note shall be settled in cash.

Payments during Construction of Facilities

12.4 Not later than four months after signature of this Agreement or 60 days after notification by the Reprocessor whichever the latest the Company shall advance to the Reprocessor a sum corresponding in amount to the appropriate proportion due by the Company in accordance with Clause 12.2.3 of

12.4. 1 the recorded COSTS for RESEARCH ANO DEVELOPMENT, design, procurement and commissioning of the fachities to be constrocted wholly or partially for the p.irposes of this Agreement incurred to the end of the quarter immediately preceding the date of signature hereof (su::h COSTS however to exclude any relating to facilities not originally constructed wholly or in part for the p.irposes of this Agreement) ; and

12.4.2 the estimated COSTS for RESEARCH AND DEVELOPMENT, design, procurement and commissioning of the facilities to be constructed wholly or partially for the purposes of this Agreement to be incurred during the quarter of signature of this Agreement and the quarter immediately following (such estimated COSTS excluding any relating to facilities not originally constructed wholly or in part for the purposes of this Agreement).

Not later than two months after signature of this Agreement th_y-j~~l'!!.

shall notify to the Company the amount of such sum to be adv..(a~~~

12.5 Thereafter the Company shall advance to the Reprocessor not later than three months prior to the beginning of each quarter throughout the YEAR (until such time as all facilities necessary for the performance of services pursuant to Clause 12.1.1 and 12.1.2 hereof have been provided) or 60 days after notification by the Reprocessor whichever the latest is corresponding to the appropriate proportion of estimated COSTS for RESEARCH AND DEVELOPMENT, design, procurement and commissioning of the facilities to be constructed wholly or partially for the purposes of this Agreement to be incurred during that quarter. Not later than five months prior to the beginning of each quarter the Reprocessor shall notify to the Company the amount of the relevant sum to be advanced. Notwithstanding the above provisions it is agreed that no advance shall be due earlier than 120 days after signature of this Agreement.

12.6 The fund requirement schedule set out in Appendix 19 specifies the Reprocessor's present estimate of the payments required in accordance with Clauses 12.4 and 12.5 during the construction of facilities for STORAGE of FUEL and REPROCESSING.

The said schedule shall, - following consultation within the Joint Committee, be reviewed annually by the Reprocessor in the light of revised COST estimates as part of the updating referred to in Clause 12.3.2 and the

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Reprocessor' shall, not later than five months prior to the commencement of each YEAR notify the Company of the updated revised schedule and such updated revised schedule when notified shall supersede the original and any previously updated revised schedule for the purposes of this Agreement. The Reprocessor shall, at all times endeavour to limit the fund requirements for RESEARCH AND DEVELOPMENT, design, procurement and commissioning of the REPROCESSING facilities to the minimum extent acceptable without, in the Reprocessor's opinion, jeopardizing the project and more particularly until such time as the RESIDUES shall meet the specifications referred to in Clause 9.2.

- 12.7 The Reprocessor shall, as soon as possible and in any event not later than 6 months after expiration of each YEAR, calculate (in accordance with the procedures set out in Appendix 16) and notify to the Company the actual COSTS for RESEARCH AND DEVELOPMENT, design, procurement and commissioning of facilities incurred in each YEAR. Not later than one month after such notification by the Reprocessor appropriate adjustments will be made either by means of payment of an additional advance or by way of a credit to the Company to be offset against the first payment to be made by the Company following the notification of such credit. The last credit note shall be settled in cash.
- 12.8 The parties recognise that at the date of signature hereof the COSTS of providing facilities for the conversion of WASTE into RESIDUES cannot be calculated with acceptable accuracy and that further advances may be needed by the Reprocessor during the construction of such facilities. The Reprocessor will consult with and notify the Company when the requirement for such payments on account becomes known.

Payments on Fuel Delivery

- 12.9
- 12.9.J The Reprocessor shall not later than two months before commencement of each YEAR notify to the Company the estimated FUEL: .. SERVICES (excluding STORAGE of FUEL) and RESIDUE SERVICES' operation COSTS (excluding depreciation in respect of facilities constructed wholly or partially for the purposes of this Agreement)
- (hereinafter called in this Clause 12.9 and in Clause 12.13 OPERATION COSTS) relevant to the FUEL expected to be DELIVERED in that YEAR. Such estimated OPERATION COSTS shall be calculated according to the principles set out in Clause 12.3. 2.

12.9.2 Not earlier than two months before DELIVERY of each CONSIGNMENT of FUEL, the Reprocessor shall invoice the Company with an amount corresponding to the said estimated OPERATION COSTS relevant to the quantity of FUEL expected to be DELIVERED in that CONSIGNMENT. Notwithstanding the provisions of Clause 12.21, the invoice shall not be due and payable before DELIVERY of the relevant quantity of FUEL.

12.9.3 With regard to the remaining of the said estimated OPERATION COSTS and at the same time as each instalment shall be due pursuant to Clause 12.9.2 above the

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Company shall

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provide a security acceptable to the Reprocessor according to which the relevant OPERATION COSTS will be duly paid to the Reprocessor

OR

arrange for a bank acceptable to the Reprocessor to issue in favour of the Reprocessor an irrevocable Letter of Credit, in the form specified in Appendix 20 and with a period of validity to be notified by the Reprocessor at the time of invoicing in French Francs sufficient to meet the said amount of such instalment. The Company shall arrange for the Reprocessor to be notified of the opening of such Letter of Credit and of the amount thereof on or before the date on which payment of the relevant instalment shall be due pursuant to Clause 12.9.2 above. The documents to be presented by the Reprocessor for payments against such Letters of Credit shall consist of a receipt for the monies payable thereunder and a copy of the original invoice rendered pursuant to Clause 12.9.2 above together with a statement from the Company certifying that the relevant services described therein have been performed or have been deemed to have been performed.

Such Letters of Credit shall be drawn not later than the last working day of the YEAR in which such services are or are deemed to be performed ; immediately upon drawn down, the Reprocessor shall issue a credit note of an equal amount for offset against the first available invoice issued after the date of the credit note concerned or arrange for refund to the Company the corresponding amount in case no further invoice is due to be issued by the Reprocessor within a maximum of 90 days.

Payments during Operation of Facilities

12.10

12.10.1 As soon as practicable following the COMPLETION DATE of a facility constructed wholly or partially for the purposes of this Agreement or the date of commencement of use in the case of a facility not constructed wholly or partially for the purposes of this Agreement as described in Clause 12.2.J hereof (being either an individual STORAGE facility or a combined STORAGE and REPROCESSING facility or a facility for the conversion of WASTE into RESIDUES or a facility for STORAGE of RESIDUES as the case may be) the Reprocessor shall estimate the COSTS to be incurred in respect of the operation of the said facility during the remainder of the current YEAR. The Reprocessor shall endeavour to limit the COSTS to be incurred on the said facilities without affecting the safety of the personnel it being understood that, at all times, the Reprocessor shall comply with all applicable French laws and regulations.

12.10.2 Thereafter not later than three months before the commencement of each YEAR following the YEAR in which COMPLETION DATE occurs and until such time as FUEL SERVICES as described in Clause 12.1.1 hereof have been completed in respect of 6000 tonnes of fuel covered by this and other similar Service Agreements the Reprocessor shall calculate the COSTS (as described in Clause 12.2.J) to be incurred in respect of the operation during the relevant YEAR.

12.11 The Reprocessor shall invoice the Company in the proportion of 120/6000 or such other proportion as may be appropriate as the case may be of the COSTS for operation (excluding depreciation) of the facility. The invoices shall be dispatched as follows :

12.11.1 not later than two months after COMPLETION DATE or commencement of use as the case may be in respect of a facility as aforesaid in respect of the COSTS calculated under Clause 12.10.1 :

and

12.11.2 not later than two months prior to the beginning of each YEAR in respect of the COSTS calculated under Clause 12.10.2

12.12 Sums invoiced under Clause 12.11.2 above will be due and payable by means of four equal instalments at three monthly intervals the first of such instalments being due on the first day of the said YEAR.

Repayments of payments made on Fuel Delivery

12.13

12.13.1 Repayments of sums paid by the Company on FUEL DELIVERY according to Clause 12.9 shall be made as follows by means of a credit note or in cash according to the choice of the Company which the Company shall notify to the Reprocessor not later than 60 days before the first of such repayments :

12.13.1.1 in respect of payments made pursuant to Clause 12.9.2 relevant to OPERATION COSTS for REPROCESSING of FUEL repayment shall be made at the end of each quarter starting with the first quarter of operation of the REPROCESSING PLANT. The amount of the credit in any quarter shall be equal to the amount paid under Clause 12.9.2 for such quantity of the Company's FUEL as is equivalent to the quantity of uranium MADE AVAILABLE to the Company in that quarter it being recognized as a rule for such calculation that the FUEL was DELIVERED the earlier the FUEL was REPROCESSED. b

12.13.1.2 in respect of payments made pursuant to Clause 12.9 2 relevant to OPERATION COSTS of RESIDUE SERVICES credit shall be made mutatis mutandis in the manner set out in Clause 12.13.J.1.

12.13.2 Any sums paid under Clause 12.9 and not repaid after five YEARS of payment by the Company shall bear interest to the Company from the end of the fifth YEAR after payment until the date of performance of services corresponding to such payments.

Interest shall be calculated at the then best rate of interest, with regard to the duration of the deposit, that the Reprocessor could have obtained from its bank(s) and shall be compounded annually.

Interest shall be treated in the same manner as principal sums for the purpose of repayment to the Company pursuant to Clause 12.13.1.

Adjustment for Actual Costs

12.14 The Reprocessor shall, as soon as possible and in any event, not later than 6 months after expiration of each YEAR calculate (in accordance with the procedures set out in Appendix 16) and notify to the Company the actual COSTS incurred in that YEAR. The Reprocessor shall not later than one month after such notification make appropriate adjustments by the issue of separate invoices or credit note. Such credit note will be offset against the first available invoice issued to the Company following the issue of that credit note. The last credit note shall be settled in cash.

12.1.5 The fee shall be calculated in accordance with the principles and procedure set out in Appendix 6 hereof. The amount of the fee payable in each YEAR shall be estimated and added to the COSTS invoiced in accordance with Clause 12.11 hereof. The amount so estimated will be adjusted to an actual basis at the end of each YEAR and shall be included in the sum 12.14 hereof.

• Charges for Return of Uranium and Plutonium

12.16 In respect of any. ADDITIONAL SERVICES for the return of uranium and plutonium which the Company shall require the Reprocessor to provide pursuant to the provisions of Clauses 7.2 and 7.J hereof the Company shall pay to the Reprocessor sums to be calculated on the basis of COSTS plus a fee which charges shall be payable against invoices to be submitted by the Reprocessor to the Company.

Charges for Storage of Recovered Uranium

12.17 Charges payable for extended STORAGE of recovered uranium pursuant to Clause 7.2.6 shall be calculated on the basis of COSTS plus a fee of

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(for quantities of uranium determined pursuant to the provision of clause 7.2.2 hereof and shall be payable against invoices submitted to the Company by the Reprocessor in respect of such charges.

Auditor's Certificate

12.18 The Reprocessor shall, not later than 6 months after the end of each YEAR provide to the Company a certificate signed by an auditor or auditor organisation acceptable to the Reprocessor acting on behalf of the Company in the form set out in Appendix 17 together with such supporting documents as may be; AGREED.

Most Favoured Customers

12.19 In the event that, having regard to all the features of the case, more favourable financial terms than those in this Agreement are granted to non-French BASELOAD CUSTOMERS the Reprocessor will offer the like more favourable terms to the Company.

Non Exercise of Option

12.20 In the event that the Reprocessor does not exercise the option set out in Clause 9, or does not modify the Agreement pursuant to Clause 10 hereof the
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requirements of the relevant authorities) so notify the Company ' shall bear a proportionate amount calculated on~IU~~~~

to be notified by the Reprocessor in respect of long term STORAGE of WASTE or RESIDUES. When the RESIDUES are placed by the Reprocessor into long term storage, all the obligations of the Company including the obligation to bear the aforementioned charges shall cease. The same shall apply if, according to Clause 9.&, the Company require the RESIDUES to be removed from France.

Payment of Invoices

12.21 Unless otherwise specified in this Clause, the Company shall pay the net amount of all sums due under invoices submitted to them within 60 days of the date of the relevant invoices and, according to Article 124& of the Code Civil, all payments shall be made by the Company to the Reprocessor free of any deduction whatsoever. In the event of the Company being compelled by a further French law or regulation to make any deduction or withholding from any payment to the Reprocessor the parties shall consult together to determine to what extent the Company should compensate the Reprocessor for such deduction or withholding. In the event of the Company being compelled by any non-French law or regulation to make any such deduction or withholding or if after consultation between the Reprocessor and the Company it is determined that the Company should pay any additional amount due to a French law or regulation, then the Company shall forthwith pay to the Reprocessor such additional amount as will result in the receipt by the Reprocessor of the full amount stated. therein PROVIDED THAT if as a result of the taking of any credit against tax or by repayment of tax to the Reprocessor, which credit is referable to tax borne either directly or indirectly by the Company pursuant to this Clause, the net amount of the payment retained by the Reprocessor (after deduction of any applicable tax on profits and taking into account such credit or repayment), exceeds the net amount (after deducting such tax) which would have been retained by it had the payment due to it not been liable to taxes levied by any taxing authority having jurisdiction in relation to the Reprocessor, there shall be credited to the company the amount of such excess. The certificate of the Reprocessor as to the amount of such excess shall be conclusive.

Extra-profits

12.22 Other than as provided for in Clause 25, sums paid by the Company or any other BASELOAD CUSTOMER for any reason whatsoever which are not related to a service that has been or will be rendered by the Reprocessor shall not be paid by the Reprocessor to any nominated customer between the BASELOAD CUSTOMERS and will for the Reprocessor. Such sharing shall take established that no liability remains upon event giving rise to the extra-profit.

CLAUSE 13

DEF AUL TING BASELOAD CUSTOMERS

In the event that any BASELOAD CUSTOMER - including the Company - should fail to fulfil any of its financial obligations under this Agreement or the other service agreements for any reason including Force Majeure, other than Force Majeure attributable to acts of the French Government, for a continuous period of 28 days or more, the Reprocessor shall inform immediately the other BASELOAD CUSTOMERS and if the defaulting BASELOAD CUSTOMER does not within 14 days after notice rectify such failure, then the Reprocessor shall in addition to and not in substitution for or derogation from any other rights or remedies available to the Reprocessor hereunder or at law have the rights set out below :

13.1 in the case of the Company so failing, the Reprocessor :

13.1.1 will be relieved , after notification to the Company, from all of its then remaining obligations to the Company hereunder PROVIDED HOWEVER THAT, if the Company inform the Reprocessor as soon as practicable of any likelihood of failure the parties shall consult together in order to find means to overcome this situation (such means including the obligation for the Reprocessor, if the Company so, request, to try to find an alternative customer) and the Reprocessor shall extend the 14 days' notice referred to in the first paragraph of this Clause 13 for a period of time acceptable to the Reprocessor, which extension shall be notified to the Company,

13.1.2 may seek an alternative customer, it being however agreed that the Reprocessor shall repay to the Company any sum that the Reprocessor may obtain from alternative customers in replacement of the sums already paid by the Company.

13.2 in the case of a BASELOAD CUSTOMER other than the Company so failing, the Reprocessor and the remaining BASE LOAD CUSTOMERS shall consult within the Joint Committee to determine whether the remaining BASELOAD CUSTOMERS will assume the rights and obligations of the defaulting BASELOAD CUSTOMER and, to the extent such assignment is not possible, whether an alternative customer can be found.

To the extent the foregoing endeavours do not result Reprocessor may :

- 13.2. 1. suspend, after notice to the Company and with the minimum of inconvenience to the Company in the circumstances then prevailing all then subsisting obligations of the Reprocessor to the Company hereunder to the extent that such obligations should be affected and until such time as an alternative customer can be found, PROVIDED THAT suspension shall not take place earlier than 60 days after the 14 days' notice from the Reprocessor to the defaulting BASELOAD CUSTOMER referred above and that suspension shall not put an end to the consultation within the Joint Committee, and
- 13.2.2. declare a situation to which the provisions of Clause.18.2.1 hereof shall apply.

13.3 In addition to the above, it is agreed :

- 13.3.1. that if the Company default for a reason of force majeure, the Reprocessor shall in no event suspend its obligations to the Company for such time (up to a maximum of 11 months after the 14 days' notice) as the sums paid by the Company under Clause 12.9.2. shall suffice to compensate for the sums payable by the Company during the period of default PROVIDED THAT the Company shall furnish a guarantee acceptable to the Reprocessor according to which the sums expended in lieu of the sums otherwise payable by the Company shall be repaid as soon as the situation of force majeure has ceased, together with interest at the best possible rate the Reprocessor would itself have obtained from its bank(s) if those sums do not carry interest to the Company pursuant to Clause 12.13.2 herein, and moreover,
- 13.J.2. that if a BASELOAD CUSTOMER other than the Company defaults, the Reprocessor shall in no event suspend its obligations to the Company for the period of time mentioned under Clause 13.J.J if the defaulting BASELOAD CUSTOMER or the other BASELOAD CUSTOMERS or the Company furnish a guarantee meeting the requirements of Clause 13.J.J.

13.11 Notwithstanding the foregoing the Reprocessor will endeavour at all times to minimize any inconvenience and additional expenses which may fall upon those BASELOAD CUSTOMERS which have not failed to fulfil their obligations and will not exercise its rights unreasonably in the event of the ComlliJJl)!::~ default and more particularly the Reprocessor will do its best effort .Jlll<14'u customer(s), it being recognized that in the eve ...; cListomer(s) than necessary to replace the r..'11~ Reprocessor shall choose that alternative favourable conditions with respect to the t'""I ICIA~,tJ:Q'

THIRD PARTY LIABILITY, INDEMNITIES AND INSURANCE

14.I Other than in Respect of the Results of a Nuclear Incident

Notwithstanding Clause 14.3 hereof

14.1.I The Reprocessor shall hold the Company harmless and indemnified against all actions, claims and demands which may be made in respect of any damage to or loss of any property or in respect of any injury (including injury resulting in death) to any third person which may be attributable to :

14.1.1.1 any empty flask before DELIVERY thereof to the Company and any flask or FUEL after the DELIVERY of the FUEL by the Company to the Reprocessor and in the event of modification pursuant to Clause 10 any flask or FUEL .before the DELIVERY of FUEL to the Company and any empty flask after DELIVERY to the Reprocessor ; or

14.1.1.2 . any plutonium or uranium or container thereof prior to the DELIVERY of the plutonium or uranium by the Reprocessor to the Company ; or

14.1.1.3 any RESIDUES until DELIVERY to the Company

except

(I) when the said damage, injury or loss has been caused by a nuclear incident ; or

(2) in respect of Clause 14.1.1.1 insofar as the said damage,

were under an obligation to avoid.

14.1.2 The Company shall hold the Reprocessor harmless and indemnified against all actions, claims and demands which may be made in respect of any damage to or loss of any property or in respect of any injury (including injury resulting in death) to any third person which may be attributable to :

14.1.2.1 any empty flask after DELIVERY thereof to the Company and any flask or FUEL prior to the DELIVERY of the FUEL by the Company to the Reprocessor and in the event of modification pursuant to Clause 10 any flask or FUEL after DELIVERY to the Company and the empty flask prior to the DELIVERY to the Reprocessor ; or

14.1.2.2 any plutonium or uranium or containers thereof after the DELIVERY of the plutonium or uranium by the Reprocessor to the Company

except

(1) when the said damage, injury or loss has been caused by a nuclear incident ; or

(2) in respect of Clause 14.1.2.1 insofar as the said damage, injury or loss can be demonstrated to have arisen from some condition of the flasks or FUEL which the Reprocessor was under an obligation to avoid.

14.2 In respect of the results of a Nuclear Incident

14.2.1.1 When transport is carried out by land the Reprocessor shall be liable according to the terms and conditions of the Convention on Third Party liability in the Field of Nuclear Energy signed in Paris on 29 July 1960, for the consequences of a nuclear incident arising from the flasks or FUEL after the same have reached the Dutch-Belgian border.

14.2.1.2 When transport is carried out by sea, the Reprocessor shall be liable for the consequences of a nuclear incident arising from the flasks or FUEL outside the territorial limits of the Netherlands, it being agreed that :

the Reprocessor shall hold the Company harmless and indemnified to a maximum of for all actions, claims and demands against the Company in respect of a nuclear incident,

the Reprocessor shall if it so decides or if required do by any national law, purchase nuclear insurance or other cover above the limit of any source whatsoever in which the indemnity shall be increased accordingly,

in all cases the Company shall hold the Reprocessor harmless and indemnified for all actions, claims and demands against the Reprocessor in respect of a nuclear incident the liability for which exceeds the limits set in the two above Paragraphs.

14.2.2 The Reprocessor shall be responsible for taking all necessary insurances to cover nuclear incidents in transport from the boundary of the site where the FUEL is stored by the Company to the boundary of the REPROCESSING SITE.

14.2.3 The respective liabilities of the parties with respect to FUEL, plutonium, uranium and RESIDUES are ()

" this Clause and shall be AGREED before any . . .

[4.2.4- For the purpose of this clause the term "nuclear incident" shall mean any occurrence or succession of occurrences having the same origin which causes damage, provided that such occurrence or succession of occurrences, or any of the damage caused, arises out of or results from the radioactive properties, or a combination of radioactive properties with toxic, explosive, or other hazardous properties of nuclear fuel or radioactive products or waste or with any of them.

14.3 Risk and Damage

At all times during which the Reprocessor shall have custody of any FUEL, uranium, plutonium, WASTE and RESIDUES belonging or allocated to the Company the risk of loss thereof and damage thereto shall be with the

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Company. The Reprocessor shall nevertheless use all reasonable endeavours in relation to the physical security thereof in accordance with the rules of the art. If the Company so require any identifiable FUEL, plutonium, uranium or RESIDUES may be insured in the name of the Company at values which the Company may determine. Such insurance shall be obtained by the Reprocessor in which event the premium shall be subject to fee in accordance with Clause 12, or obtained by the Company at their own expense. Such insurance may alternatively be obtained by the Company through the agency of the Reprocessor in which event the premiums therefor shall be paid by the Company to the Reprocessor but shall not be subject to the said fee.

EXPORT AND IMPORT PERMITS AND CUSTOMS DUTY

- 15.1. The Reprocessor shall, in respect of the export of the empty flasks from France, the import into France of each CONSIGNMENT of FUEL and the export from France of the uranium, plutonium, RESIDUES and any FUEL to be returned to the Company:
- 15.1.1. promptly apply for any permits, licences and authorisations of a similar nature to be required from French authorities ; and
- 15.1.2. pay any customs duty or other impost which may be levied by French authorities and invoice the Company therefor.
- 15.2. The Company shall at their expense be responsible for applying for all other import and export permits licences and authorisations in respect of transport of flasks, FUEL, uranium, plutonium. and RESIDUES from Nederland to France or vice versa and shall bear the cost of any other customs duty or tax which may be levied by or required from any relevant authority other than French authorities.
- 15.3. In the event of either party experiencing any difficulty in obtaining such permits, licences or authorisations as the case may be such party may consult with and seek the assistance of the other party with a view to the making of such representations or rendering such other assistance as may then be reasonably required to obtain such permits, licences or authorisations.

CONFIDENTIALITY

- 16.1 The terms and amditions of this Agreement and all information and drawings provided by one party to the other under this Agreement shall be confidential. Neither party shall, without lhe prior written permission of the other, disclose such terms anCI conditions or information or drawings received from the said other party to any third party, except to such extent as may be required by relevant government authorities or other authorities having due legal competence or as may be necessary for the proper performance of this Agreement. However the Company shall be free to disclose the contents of this Agreement and any related agreement referred to in Clause 22 to all other BASELOAD CUSTOMERS and the Reprocessor shall be free to disclose the content of this Agreement to all other BASELOAD CUSTOMERS. The Reprocessor shall not withhold his written permission to any BASELOAD CUSTOMER to disclose to the Company the contents of his Service Agreement and any related Agreement.
- 16.2 Under this Agreement the Reprocessor shall not be required to transfer any information concerning any ot the Reprocessor's techniques. However upon request of the Company the Reprocessor shall transfer in due time, on a need to know basis, technical information concerning, more particularly, the transport means and the flasks to be used for transport (if the transport of FUEL is arranged by the Reprocessor) and the return of RESIDUES including the specifications of the said RESIDUES when required by the Company for transmission to the relevant safety and licensing authorities.
- 16.3 When the parties disclose any of the documents referred to in the above Clauses 16.I and 16.2 they shall draw attention of the third party to woom the documents are disclosed to the fact that these documents are confidential and, as far as practicable they will endeavour to
- 16.4 The Special Register referred to in Clause inspection by all BASE LOAD CUSTOMERS.

NOTICES

17 .1 Any notice or other communication required to be given by one party to the other under this Agreement shall be transmitted by hand, mail, telex or telegraph to the principal office of the party concerned. Either party may by notice to the other party given in accordance with the provisions of this Clause change the address to which the other party shall transmit notices or other communications.

17 .2 The addresses to which the aforementioned notices shall be sent are :

For the Customer N.V. PROVINCIALE ZEEUWSE
ENERGIE-MAA TSCHAPPIJ
Poelendaelensingel 10
Postbus 48
NL Middelhburg
Nederland

Telex 55275 PZEM NL

For the Reprocessor COGEMA
Cie Generale des Matieres Nucleaires
La Boursidiere
F 92357 Le Plessis Robinson Cedex

Telex COGEM 202050

17 .3 All invoices and notices and communications shall be sent by registered air-mail. A telex informing the receiving party that an invoice or such notice or communication containing a summary of its contents has been sent shall immediately be dispatched to the receiving party. The invoice, notice or communication shall be delivered when the said telex is received.

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FORCE MAJEURE AND CONSEQUENCES THEREOF

18.1 Force Majeure

18.1.1 If the performance of this Agreement or of any obligation hereunder by either party is prevented, hindered or delayed by reason of any circumstances beyond such party's reasonable control, which circumstances shall include but not be limited to war, hostile or criminal act, revolution, riot, civil commotion, blockade, embargo, industrial action (including strikes) by workpeople, lock-out, act or restraint of government or any other authority having jurisdiction in respect of the performance of any obligation under this Agreement or damage by fire or flood, that party shall upon giving notice to the other be excused, save as provided in Clause 18.2, from any liability for failure to fulfil any obligation hereunder to the extent that such obligation is so prevented, hindered or delayed.

18.J.2 In addition to the provisions of Clause 18.1.J it is accepted by the parties and has been a principle of negotiation between them that the Reprocessor will use every endeavour to provide facilities and services as specified herein. However, in the following circumstances namely :

18.1.2 I failure by the Reprocessor to commence or the permanent halt of the performance of FULL SERVICES and/or RESIDUE SERVICES (as defined in Clause 12) hereunder due to process or major technical difficulties associated with the radioactive nature of the facilities the provisions of Clause 18.2 I shall apply,

18.1.2.2 suspensions, delays or shutdown of plant caused by circumstances (including but not limited to accidents, plant breakdowns, stoppages, contamination of plant or nuclear incident) encountered during operation of the facilities, and

18.1.2.3 suspensions, delays or shutdown of plant resulting from the carrying out by the Reprocessor of design or operational changes and/or improvements where such changes and/or improvements are necessary and/or desirable in the Reprocessor's opinion for safety reasons or where such changes and/or improvements are ordered by government, health or other authorities having competent jurisdiction,

the provisions of Clause 18.2.2 shall apply.

18.1.3 Notwithstanding and further to the foregoing provisions of this clause, in the event that operations are delayed or suspended or this Agreement is modified or if for any reason, including but not limited to legal process, the Reprocessor is prevented from carrying out services hereunder, the Reprocessor shall have the right to take such action as is found necessary in order to run down operations in a safe manner or to render FUEL or derived products into a safe form. Where practicable the Reprocessor shall consult with the Company before such action is taken. However, in the event that for operational reasons such action is taken before the Company have been so consulted the Reprocessor shall notify the Company as soon as possible after such action has been taken. The appropriate proportion of the expense of such actions by the Reprocessor shall be charged to the Company.

11.2 Consequences of force majeure

18.2.1 Failure to commence or permanent halt.

18.2.1.I In the event that there is a failure to commence or a permanent halt in performance of FUEL SERVICES and/or RESIDUE SERVICES as defined in Clause 12.1 under this Agreement for reasons falling within Clause 18.1.1 or for any other reason whatsoever other than failure by the Company to perform obligations hereunder, the following provisions shall apply, namely:

18.2. 1. I. J Subject to Clause 25 hereof, all sums paid by the Company to the Reprocessor under Clauses 12.3.3 and 12.9 up to the date of failure to commence or of permanent halt which has not been already offset pursuant to Clauses 12.3.4 and 12.13 shall be repaid forthwith or a due proportion of such sums shall be repaid in the event that not all of the facilities hereunder are affected by a failure to commence or permanent halt as aforesaid.

PROVIDED ALWAYS THAT if any FUEL delivered to the Reprocessor hereunder or RESIDUES derived therefrom shall in such event still remain in the relevant STORAGE facilities an appropriate part of such repayment shall be withheld until the FUEL and/or the RESIDUES concerned are returned to the Company and the parties shall forthwith consult together to AGREE as to the appropriate measures to be taken in the circumstances including without limitation the interest on

18.2.1.1.2 All sums provided in advance by the Company to the Reprocessor er.dee Clauses 12.4 and 12.5 up to the said date which has not been committed by the Reprocessor in -connection with the relevant facilities so affected shall be repaid forthwith by the Reprocessor to the Company..

18.2.1.2 In addition the Reprocessor shall pay to the Company the proportion 120/6000 of any insurance moneys accruing to the Reprocessor in respect of failure to commence or permanent halt, and any other sums received from third parties pursuant to actions claims and demands by the Reprocessor in respect of such failure to commence or permanent halt.

18 .2.1.3 The Reprocessor shall notify the Company of such failure to commence or such permanent halt and this Agreement shall thereafter be modified, in the manner set out in Clause 10.5 mutatis mutandis with the Company in any event being obliged to accept the return of FUEL and/or RESIDUES derived therefrom as soon as may be practicable in the circumstances.

18 .2. 1.4 As to the balance of any sums remaining due to the Company which have not already been offset pursuant to Clauses 12.3.4, 12.13, and 12.14 hereof and have not been repaid pursuant to Clause 18.2.1 above the parties shall consult together concerning any necessary modification of the Reprocessor's liabilities hereunder following the principle of this Agreement that the Reprocessor shall not bear financial risk hereunder.

18.2.2 Suspensions, delays and shutdowns

1 8.2.2. 1 During suspensions, delays or shutdowns of a facility arising after the COMPLETION DATE of that facility in the circumstances set out in Clauses 18.1.1, 18.1.2.2 and 18.1.2.3 which the Reprocessor considers as being temporary, the operation of the said facility shall be deemed to continue and Clause 12 shall continue to apply.

18.2.2.2 During delays encountered before the COMPLETION DATE of a facility which the Reprocessor considers as being temporary, the construction of the said facility shall be deemed to continue and Clause 12 shall continue to apply.

18.2.2.3 Notwithstanding the provision of Clauses 18.2.2.1 and 18.2.2.2 above in the event that either :

(I) such suspensions delays or shutdowns result in the real costs (being the costs of construction after excluding any increases due to changes in money values) of construction of the facilities to be used for the purposes described in this Agreement increasing by an amount that the Company and the other BASE LOAD CUSTOMERS after consultation in the frame of the Joint Committee consider to be excessive having regard to the real costs of such construction prevailing at the time of such suspension delay or shutdown and in any event being not less than twice the

(2) a delay, suspension or shutdown of a facility applying after 1998 and with only part of the said 6000 tonnes of fuel having then been REPROCESSED and the Company theA consider that the operations so affected will not be able to continue:

then the parties shall consult together with all other BASELOAD CUSTOMERS and if they and the Company then unanimously AGREE the Company and all other BASELOAD CUSTOMERS acting jointly shall have the option to terminate this Agreement in which case the provisions of Clause 18.2.1 shall apply.

18.2.2.4 In the cases referred to in Clauses 18.2.2.1 and 18.2.2.2 above the implementation of payments and charges under Clause 12 shall be subject to the provisions of Appendix 6 hereof where appropriate.

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ASSIGNMENT AND SUBSTITUTION

19.1 Neither party shall, save as is set out in Clause 19.2, have any right to assign or part with any of its rights or obligations under this Agreement without the prior written consent of the other it being understood that, in the event that this Agreement is modified pursuant to Clause 10 hereof, the Company foresees any likelihood not to fulfil all their reasons described in Clauses 13.1, 18.1.1 or 25 x

Company has assumed the rights and obligations of CUSTOMER pursuant to Clause 13.2 or if for reasons of non-compliance with the specification as set out in Appendix I the Company cannot deliver FUEL to the Reprocessor, the Reprocessor will not unreasonably withhold its consent to any proposal of the Company aiming at finding replacement quantities by assigning their rights and obligations to other generating boards or utilities.

19.2 Notwithstanding the provisions of Clause 19.1 it is agreed that:

19.2.1 The Company shall have the right subject to the like conditions of Clause 2.2 hereof being deemed to apply to substitute on a case by case basis for quantities of FUEL to be DELIVERED by the Company hereunder :

19.2.1.1 quantities of fuel from other Dutch BASE LOAD CUSTOMERS subject only to the Reprocessor notifying the Company of any reasonable and justifiable objections to such substitutions ; and

19.2.1.2 quantities of fuel from any other BASE LOAD CUSTOMER subject to the prior approval of the Reprocessor, such approval not being unreasonably withheld,

19.2.2 The Company shall have the same Clause 19.2.1 for the use of capacity.

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19.2.3 The Reprocessor may arrange for the provision by BNFL of services due to be performed by the Reprocessor hereunder,

PROVIDED THAT nothing in this Clause 19.2 shall operate, so as to derogate from the obligations of the parties hereunder and PROVIDED ALSO THAT in case of implementation of Clause 19.2.3, COGEMA shall remain solely liable for its obligations towards the Company.

CLAUSE 20

WAIVER

No delay or failure by either party in exercising any right, power or remedy hereunder shall operate as a waiver of such right, power or remedy, nor shall any single or partial exercise of any such right, power or remedy preclude other or further exercise thereof or the exercise of any other right, power or remedy.

CLAUSE 21

SAFEGUARDS, PHYSICAL PROTECTION AND

GOVERNMENTAL UNDERTAKINGS

21.1 Nuclear material transferred under this Agreement and any subsequent generation of such material shall be subject to:

21.1.1 appropriate International Atomic Energy Agency or Euratom safeguarding procedures ;

21.1.2 any other relevant undertakings and regulations including without limitation those referring to physical protection requirements and conditions. for retransfers to countries other than countries of the parties to this Agreement ; and all such nuclear material shall be used for peaceful non-explosive purposes only.

21.2

21.2.1 If for any reason beyond the control of either or both of the parties, any uranium and/or plutonium due to be MADE AVAILABLE cannot be collected by or delivered to the Company, the parties shall consult together to determine the best course of action, at the Company's expense, to be pursued in the circumstances and with a view to minimising COSTS. Charges to be paid by the Company shall be based on COSTS plus fee.

21.2.2 When the plutonium due to the Company has been MADE AVAILABLE it shall be put into STORAGE and STORED for a period of five YEARS or until the plutonium is demonstrated by the Company to be required for fabrication of fuel. The plutonium shall be STORED by the Reprocessor at the REPROCESSING SITE or transported by the Reprocessor for storage at an international storage facility if such a facility is available, and if the Reprocessor has been instructed to do so by any authority having jurisdiction.

21.2.3 Plutonium and uranium MADE AVAILABLE to the Company shall be transferred subject to all applicable national and international regulations and any directives or orders of any governmental department having jurisdiction. In particular the uranium and plutonium shall be transported in a form suitable to ensure its physical protection according to the then prevailing regulation of the relevant countries.

WHOLE AGREEMENT

This Agreement and any Agreement or undertaking expressed to be ancillary or supplemental hereto to the extent therein set out, shall comprise the whole agreement between the parties and all representations, statements and undertakings related to the subject matter hereof and not contained therein are hereby excluded.

CLAUSE 23

CONDITIONALITY

If, within 120 days from the date of signature of this Agreement, for any reason: whatsoever an exchange of letters between the Governments of France and Nederland and concerning this Agreement has not been effected then the Reprocessor, or the Company, shall have the option to void this Agreement within the following 60 days. In the event of exercise of such option all sums paid by the Company to the Reprocessor shall be repaid to the Company except that the Reprocessor will be entitled to retain 25 per cent of the sums paid by the Company under Clause 12.3.3.

Should this option to void this Agreement not be exercised and should the performance of this Agreement be affected at a later stage by a decision of the French or Dutch Government Clauses 18.1.1 and 18.2 would be implemented and the parties shall consult as soon as possible in order to terminate or amend this Agreement.

LAW AND INTERPRETATION

24. 1 This Agreement shall in all respects be construed and operate as an agreement made and performed in France and subject to French Law.
- 24.2 The headings to clauses are inserted for convenience only and shall have no effect on the interpretation thereof.
- 24.3 In the event of conflict between the provisions of the clauses and the provisions of the Appendices hereof, the provisions of the clauses shall prevail.

EARLY TERMINATION

25.1 In the event that any governmental authority (other than the Government of Nederland or France) having jurisdiction transmits a notification to the Company stating that the transport and REPROCESSING of all or any FUEL hereunder will not be permitted, or if any such notification is submitted to any other Dutch BASE LOAD CUSTOMER in respect of all or part of that customer's fuel, and the Company also has FUEL over which the said authority has jurisdiction, then the parties shall consult together in order to terminate their respective rights and obligations in respect of that part of the FUEL hereunder over which the said authority has jurisdiction.

Subject to Clause 25.2, the Reprocessor shall endeavour to find an alternative customer at the most favourable conditions to take over the capacity lost as a result of such termination and if such customer can be found the provisions of clause 10.7 mutatis mutandis shall apply relating to such capacity (in respect of STORAGE and REPROCESSING to the extent that the Reprocessor shall be refinanced by the said customer), otherwise the provisions of Clause 18.2.1 shall apply to the whole of this Agreement.

25.2 If an alternative customer can be found, any sum paid by the Company to the Reprocessor under Clause 12.3.3 which relates to terminated quantity and not offset at the time of termination shall be repaid by the Reprocessor as soon as an equal amount is paid by the alternative customer. If an alternative customer cannot be found, of all of the sum so paid under Clause 12.3.3 and not offset or repaid at the time of termination shall be retained by the Reprocessor.

25.3 The Company shall have the right to terminate the deposit under Clause 12.3.3 which shall be void at no cost to the parties.

CLAUSE 26

ARBITRATION

All disputes arising in connection with the present Agreement shall be finally settled in Paris under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

IN WITNESS WHEREOF the duly authorized representatives of the parties hereto have executed this Agreement this day and year first above written.

SIGNED BY

for and on behalf of
COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

SIGNED BY

for and on behalf of
N.V. PROVINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ

APPENDIX 1
(referred to in Clause 2.4)

SPECIFICATION OF FUEL ASSEMBLIES

The Reprocessor expects to be able to accept for REPROCESSING all BWR and PWR fuel designs. However, it is not possible to guarantee that the facilities currently being designed will be capable of REPROCESSING all such fuel designs. The Reprocessor therefore reserves the right to reject FUEL that in the Reprocessor's opinion is to a design that will present extraordinary technical difficulties. Notwithstanding this and in the event that the Reprocessor considers that any FUEL is unacceptable on technical grounds the parties shall consult together with a view to AGREEING special measures for STORAGE and REPROCESSING of such FUEL where practicable.

The fuel assemblies shall conform to the specification set out below:

1. General Specification

- I.1 Unless otherwise AGREED the fuel assemblies shall consist of an assembly of fuel pins, grids, spacers and end fittings. Unless otherwise AGREED the materials of construction of the fuel assembly shall be restricted to zircaloy and or stainless steel and/or Inconel. Additional components such as shrouds, burnable poison rods, plugging devices etc, shall be such that they are capable of being removed from the fuel assemblies, at the reactor site, before any fuel assemblies are MADE AVAILABLE by the Company to the Reprocessor.
- 1.2 The fuel pins shall contain uranium dioxide pellets, which unless otherwise AGREED prior to irradiation do not contain any plutonium.
- 1.3 Each fuel assembly shall be identified in a unique manner by means of a

1 of 12

maximum overall length of fuel assembly	XJ00 millimetres
minimum overall length of fuel assembly	1900 millimetres
maximum overall cross section (square section)	250 millimetres
minimum overall cross section (square section)	100 millimetres
maximum enrichment level before irradiation in any fuel assembly	3, 5 % U 235 in any pellet
maximum burn up of any fuel assembly	40 000 MWD/t U
maximum uranium 232 content	0,110 ppm UZ32 with respect to uranium 235
minimum cooling time at DELIVERY	210 days
fuel rod (cladding material of the uranium dioxide pellets)	Zircaloy exclusively

The above values for the maximum enrichment before irradiation and the maximum burnup after irradiation reflect the maximum nominal values as specified in the UP3-A Safety Analysis Report, however on a case by case basis, in exceptional circumstances, the Reprocessor will as far as practicable endeavour to accept for REPROCESSING fuel assemblies with :

a maximum enrichment level before irradiation of 3,5 % U235 as an average and

ii maximum burn up 45 000 MWD/t U as

2 Actual fuel specification

- 2.1 Any FUEL complying with the drawings and the list of materials attached to this Appendix are accepted by the Reprocessor.
- 2.2 To the extent that no other materials are used in the FUEL and no major changes in the dimensions will occur the FUEL will be accepted by the Reprocessor.
- 2.3 As soon as practicable after the Company has received details of the design of the FUEL, such details shall be submitted by the Company to the Reprocessor. Should these details show any other deviation than those referred to in Paragraph 2.2 above or if the FUEL does not comply with the general specification as set out in Paragraph I above, then the parties shall consult together in order to determine the conditions under which the FUEL could still be accepted for transport, STORAGE and REPROCESSING under this Agreement.
- 2.4 The Reprocessor ensures the Company that no use will be made of any information about the FUEL received under this Agreement for any purpose other than transport, STORAGE and REPROCESSING.
- 2.5 After irradiation each fuel assembly shall be free from removable deposits or free from visible or detectable damages to the cladding or to the structure which might, in the Reprocessor's opinion, prohibit transport and/or STORAGE and/or REPROCESSING.
- 2.6 Fuel assemblies may contain limited quantities of stainless steel pieces that, after irradiation, could be partially or totally dissolved in the dissolver ; this would result in increase of the volume of highly active liquid concentrates. Variable costs as described in Appendix 16, Paragraph C 2 b will depend of the quantity of dissolvable iron contained in the fuel assemblies as determined by the Reprocessor after analysis pursuant to the provisions of Appendix 4, Paragraph Ii.

ANNEX TO APPENDIX

LIST OF MATERIALS CONSTITUTING (Reactor name) TYPE FUEL

Designation	Number of pieces	Weight per unit (kg)	Total weight (kg)	Materials (specimen)
FUEL				uo
				2
EUEL ROD +)				Zry - 4
UPPER PIECE				1. 4541
LO'WER PIECE				1. 4541
SPACER GRID				1. 4541
				Inc 718
SPACER GRID				
				Inc 718
RETENTION BOLT				Inc x 750
SPRING				Inc x 75
SPRING PLATE				1.4541
HULLS				1. 4541
QUENCHING SCREW				1. 45 71
PLATES				1. 4541
SCREWS				1. 4541
HULLS				1. 4541
FUELS RODS SPRING				1. 4541
FUEL ROD SPRING				1. 4568
INSULATING PELLETT				Al a
				2 3
SUPPORTING TUBE				1. 4541

+) including plugs

Materials	Total weight (kg)
uo	
2	
Zry - 4	
Inc 718	
Inc X 750	
1.4541	
1.4568	
1.4571	

~:TSL'2f'.MXrEP.ll;.l.S CONSTITlfi'LING

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	pieces	Weight per unit (kg)	Total weight (kg)
Flft:L	205	1,744	357,52
FliEL HOD +)	205	0,453	92,865
Ui PER PIECE 1		13,4	13,4
!,(J;H.: R PIECE		9,9	9,9
	2	0,85	1,7
	5	0,88	4,4
	8	0,285	2,28
	8	0,221	1,768
:,JP!<ING PLA'rE	8	0,026	0,200
l!Ul .LS	20	0,044	0,88
c;:iuc:r;c.lnNG scru-:w	20	0,003	0,06
Pl ,f'i'F: S			
	20	0,35	7,0
FUFT.S RODS Sl'!U NG			
'Uc:L ROD SPRING	205	0,016	3,28
I NSULfcrING I'ELLETT	410	0,0025	1,025
	205	0,013	2,665

+) :including plugs

uo	357,52
2	
.zry - 4	92,865
Inc 718	6,1
In.: x 750	4,048
l. 4 541	33,525
l; 4568	3,28
l.4571	0,06
.Al 2o 3	: ,025

Following drawings are deemed to be attached to this Agreement

KWU RB 21 E- 44 - 13 710

KW U 4 B - B - 1 160

KW U 4 B - B - 1 159

KW U RB 22 E - 33 - 3 005 a

in which sign

refers to first core

refers to reloads

86 bis 2/2

APPENDIX 2
(referred to in Clause 3)

DELIVERY OF IRRADIATED FUEL ASSEMBLIES
INFORMATION TO BE PROVIDED

Part A. FUEL Expected to be MADE AVAILABLE

The following information shall be provided by the Company to the Reprocessor :

- AI Type of FUEL and point of DELIVERY
- A2 the quantity of FUEL (tonnes U) expected to be MADE AVAILABLE from the reactor on a YEAR by YEAR basis.

Part B. Provisional Quantity of FUEL

The following information shall be provided by the Company to the Reprocessor in respect of fuel assemblies provisionally scheduled to be MADE AVAILABLE :

- B1 Type of FUEL and point of DELIVERY
- B2 the quantity of FUEL (tonnes U) and approximate number of fuel assemblies programmed to be MADE AVAILABLE from the reactor and the expected dates that each quantity will be MADE AVAILABLE.
- B3 the expected dates of discharge.

Part C. Provisional Delivery Programme

The following information shall be provided by the Reprocessor to the Company:

- CI Name of reactor ;
- C2 numbers and types of flasks to be transported to the reactor ;
- C3 number of fuel assemblies to be DELIVERED in each flask;
- C1/ the approximate date of DELIVERY of each flask of FUEL;

Part D. Firm Quantity

The following information shall be provided by the Reprocessor to the Company in respect of fuel assemblies to be MADE AVAILABLE :

- D1 the quantity of fuel assemblies to be MADE AVAILABLE and the serial number-
or other identifying marks on each of such fuel assemblies ;
- D2 the date on which each of the fuel assemblies was disdlarged ;
- DJ the total weight of uranium and the weight of u235 isotopes of uranium in
each of the fuel assemblies before irradiation ;
- D4 the estimated average level of irradiation attained by the fuel assemblies and
the estimated maximum level of irradiation attained by any one of them,
expressed in megawatt-days per tonne ;
- D5 the estimated average heat rating of the consignment of fuel assemblies and
the estimated maximum heat rating of any one of them, expressed in
megawatts per tonne ;
- 06 the weights of uranium and plutonium and fissile isotopes thereof estimated to
be contained in each of the fuel assemblies after irradiation ;
- 07 the serial number or other identifying marks on each of the fuel assemblies
which is known or suspected by the Company to be punctured or otherwise
damaged;
- 08 the nature of undertaking related to safeguarding procedures in the relevant
contract for the supply of fissile material and/or resulting from appropriate
intergovernmental or international Agreements.

Part E. For Transporting to the Reprocessing Plant

The Company shall provide to the Reprocessor such information as is necessary for
the safe receipt and unloading of the flasks by the Reprocessor ; such information
shall include :

- E1 The serial number or other identifying marks on each fuel assembly contained
in the flask ;
- E2 the location of each fuel assembly in the flask.

APPENDIX 3

(referred to in Clause 3.6)

SPECIAL REGISTER

1. The Special Register provided for under Clause 3.6 records information relevant to the share of capacity contracted by the Company and other BASELOAD CUSTOMERS, together with information relevant to the quantities of FUEL delivered by the Company and other BASELOAD CUSTOMERS so as to establish an order of priority for receipt into STORAGE of FUEL, REPROCESSING and the MAKING AVAILABLE of uranium and plutonium at the REPROCESSING PLANT, in accordance with the provisions of Clause 7 and Appendix 5.

2. The Register of Agreements with BASELOAD CUSTOMERS will follow the specimen entry in Table I attached. Agreements will be listed in order of date of signature or, if later, entry into effect.

3. The Register of fuel deliveries will follow the specimen entry in Table 2 attached.

APPENDIX 3
TABLE 1
SPECIAL REGISTER-LIST OF AGREEMENTS

Agreement Number	Date of Signature	Customer	Reactors	Capacity Contracted t U in fuel before. Irradiation
B1	1.1.77	Customer A	Reactor A1	100
B2	1.4.77	CustomerB	Reactor B1, B2	250
B3	1.5.77	CustomerC	Reactor C1, C2,C3	400
B4	1.5.77	CustomerD	Reactor D1	100
		etc.	etc.	
			Total	6000

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Date of

Agreement

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Of Fuel

Reference

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B3

C2

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Customer

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(referred to in Clause 5)

ASSESSMENT OF THE WEIGHTS OF UR1\NIUM,
PLUTONIUM AND FISSILE ISOTOPES THEREOF IN
THE FUEL ASSEMBLIES

1 Right Granted by the Reprocessor to the Company

- I. I The Reprocessor shall grant to representatives of the Company right of access to the REPROCESSING PLANT in accordance with Appendix 15 for the purpose of, witnessing the taking of samples of dissolver liquor by the Reprocessor, the methods used by the Reprocessor in the analysis of samples and the analysis of samples taken from the Company's FUEL. In addition the Company shall have the right to require the Reprocessor to take additional samples and to require the Reprocessor to carry out further analysis of the additional samples in accordance with this Appendix.
- 1.2 The Company undertake not to make unreasonable demands for additional analysis to be carried out by the Reprocessor.
1. 3 The Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. In the case of any

2 Preparation of Dissolver Liquor

The uranium and plutonium contained in the FUEL shall be leached out and the resultant liquor thoroughly mixed according to a defined procedure communicated to the Company on request.

3 Sampling

3.1 The Reprocessor shall give to the Company not less than six weeks' notice of the date when sampling of the dissolver liquor is due to commence and within 8 days after the date of the said notice the Company shall inform the Reprocessor if they intend to exercise the first or alternatively both of the following options :

3.1.1 to witness the taking of samples by the Reprocessor, to observe the methods used by the Reprocessor in the analysis of samples, including if the Company wish, the analysis of samples taken from the Company's FUEL.

3.1.2 to require the Reprocessor to take two additional samples for possible further analysis in accordance with the provision of Paragraph 3.3 of this Appendix.

3.2 If the Company do not exercise the option given in Paragraph 3.1.1, one sample shall be taken from each batch of homogenised dissolver liquor for the purposes of Paragraphs ti and 5 of this Appendix.

3.3 If the Company elect to exercise the options given in Paragraph 3.1.1 and Paragraph 3.1.2, three approximately equal samples shall be taken from each batch of homogenised dissolver liquor ; the samples shall, if possible, be taken in the presence of the Company. The first sample shall be used by the Reprocessor for the purposes of Paragraphs ti and 5 of this Appendix. If required the second and third samples shall be used for the purposes of Paragraphs ti and 5 of this Appendi:, in accordance with the provisions of paragraphs 9 and JO of this Appendix.

4 Determination of weight

The weights of uranium and plutonium contained in the fuel assemblies from which the said liquor has been derived shall be assessed by means of one of the methods listed in paragraphs 4.1, 4.2 and 4.3.

The weight of iron present in the liquor will also be determined (paragraph 4.4).

4.1 Method 1 - Uranium/Plutonium radio method

weight of uranium $\frac{C}{1+A+Y}$; and

weight of plutonium $\frac{CA}{1+A+Y}$

where:

A represents the plutonium/uranium weight ratio as determined by analysis ;

C represents the weight of uranium contained in the relevant fuel assemblies before irradiation ; and

Y represents a correction for burn-up which may be either the quotient of the ratio of the weights, as determined by analysis, of a specified fission product and uranium, and a constant specific to the reactor or the specified fission product, or alternatively, determined by such other method as may be notified.

A further correction to the weights of uranium and plutonium so obtained may apply to take account of possible systematic errors (including possible errors on C).

Such correction shall be made by using the method (concentration method) for the whole quantity of uranium and plutonium contained in the fuel assemblies REPROCESSED during a given period of time immediately following or preceding the REPROCESSING of the relevant fuel assemblies. 2

4.2 Method 2 - Volume concentration method

weight of uranium = V.U
weight of plutonium = .weight of uranium

W
u

Where :

V represents the volume of the liquor as measured in a precalibrated tank;

U represents the uranium concentration in the liquor as determined by analysis ; and

W represents the plutonium concentration in the liquor as determined by analysis.

4.3 Method 3 - Spike method

weight of uranium = B.S
weight of plutonium = weight of uranium

B c

Where :

B represents the uranium spike weight ratio as determined by analysis ;

c represents the plutonium spike weight ratio as determined by analysis ; and

S ,.- represents the weight of the spike liquor.

Ii.Ii The weight of iron present in the liquor derived from the fuel assemblies shall also be determined by the Reprocessor for the purposes of calculation of the variable costs.

Determination of Isotopic Composition

- 5 The isotopic composition of the sample shall be determined by analysis and the weight of fissile isotopes in the relevant fuel assemblies shall be assessed by applying the results of the analysis to the weights of uranium and plutonium assessed under Paragraph 4. Fissile isotopes means in respect of plutonium : plutonium 239 and 241, excluding any other plutonium isotopes, and in respect of uranium : uranium 235 excluding any other uranium isotopes.

Analytical Procedures

- 6 Details of analytical procedures used by the Reprocessor are described in the United Reprocessors Analytical Manual which manual will be updated from time to time.

Results of Analysis

- 7 If the Company do not exercise the option in Paragraph 3.1.1, the results of the analysis on the one sample from each homogenised volume shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as relevant data are available.

- & If the Company exercise the option in Paragraph 3.1.1 and 3.1.2, the results of the analysis on the first sample from each homogenised volume shall be given by the Reprocessor; or to the Company's representative at the REPROCESSING PLANT as soon as all relevant data on each sample are available. The Company's representative shall within seven days of being provided with the results of each analysis notify the Reprocessor if the Company wish the analysis to be repeated on a second sample. If no request is received, the results of the analysis on the one sample shall be final and binding. The second and third samples shall be disposed of by the Reprocessor.
- 9 If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as all relevant data are available. If the results of the first two assessments of the weight of uranium or plutonium or fissile isotopes therein in the fuel assemblies differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of uranium or plutonium or fissile isotopes thereof in the fuel assemblies, and shall be final and binding . The third sample shall be disposed of by the Re processor.
- 10 If the results of the first two assessments of the weight of uranium or plutonium or fissile isotopes therein in the fuel assemblies differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such analysis as is necessary on the third sample and shall inform the Company of the results of the analysis as soon as all relevant data are available. The mean of the two assessments which are closest to each other shall be taken as the weight of the uranium, or plutonium or fissile isotopes thereof in the fuel assemblies, however, if any disagreement cannot be resolved., the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

11 Notwithstanding the foregoing provision, the analysis of the second and third samples shall only be carried out if, having regard to the time interval between sampling and analysis, meaningful analysis can be carried out.

Cost of Analysis

12 The expenses of all analysis required by the Company shall be performed at their expense except analysis performed under the above paragraphs 8, 9 and 10 which shall be considered as normal operation COSTS.

(referred to in Clause 6)

PRIORITY RULES FOR STORAGE OF FUEL ASSEMBLIES
AND MAKING AVAILABLE OF URANIUM AND PLUTONIUM

Without derogation to the other provisions of this Agreement, this appendix sets down priority rules to apply among the BASELOAD CUSTOMERS for taking of DELIVERY of FUEL, STORAGE of FUEL and MAKING AVAILABLE of uranium and plutonium by the REPROCESSOR.

These rules are primarily settled to specify priorities for the MAKING AVAILABLE of uranium and plutonium arising from REPROCESSING and are also established to govern priorities in abnormal circumstances namely :

for taking of DELIVERY of FUEL and STORAGE of FUEL: circumstances in which the Reprocessor is not in a position to take DELIVERY and/or to accept for STORAGE the fuel of all BASELOAD CUSTOMERS according to the provisions of the respective Service Agreements it being agreed that in such events no priority for transport and STORAGE in UPJ-A facilities shall be given to non BASELOAD CUSTOMERS fuel; and

for REPROCESSING and/or MAKING AVAILABLE of uranium and plutonium : delay following French Government instructions as referred to in Clause 6.3 or other circumstances under which higher priority for REPROCESSING may be given to non BASELOAD CUSTOMERS's fuel according to the provisions of paragraphs 3.3 and 5 of this Appendix.

2 fuel to be REPROCESSED at the REPROCESSING SITE during the duration of this Agreement shall fall within the following categories:

2.1 Fuel falling within the scope of this Agreement and other similar Service Agreements ;

2.2 fuel delivered under contracts between the Reprocessor and French generating Boards for REPROCESSING in other facilities than UP3 A ;

2.3 fuel delivered to the Reprocessor, either directly or on a sub-contract basis under Agreements with non French customers concluded before the date of signature of this Agreement ;

2.11 Fuel delivered to the Reprocessor, either directly or on a sub-contract basis, under Agreements to be concluded for fuel discharged from European reactors before 31 December 1979 ; and

2.5 Fuel falling under other arrangements.

3 Priority for STORAGE of fuel and REPROCESSING in UP3-A facilities shall be given to BASELOAD CUSTOMERS. Priority as between fuel falling within this paragraph shall be as follows :

3.1 In the event that there is a need for the Reprocessor to allocate priority for transport and STORAGE among the BASELOAD CUSTOMERS, the Reprocessor shall undertake to consult all BASELOAD CUSTOMERS involved in order to determine the best course of action to be taken by the Reprocessor for taking DELIVERY of FUEL. Should an AGREEMENT not be reached on the programme to be followed then, after due consideration of the COOLING time of the FUEL, priority for acceptance of fuel for STORAGE prior to REPROCESSING shall be governed by the date of

3.2 Priority for MAKING AVAILABLE of uranium and plutonium in each YEAR shall be discussed with all BASELOAD CUSTOMERS within the Joint Committee and shall be determined by the Reprocessor not later than 1 January of that YEAR by reference to the provisional quantity of fuel expected to be REPROCESSED in that YEAR. The Reprocessor shall notify the Company of the MAKING AVAILABLE of uranium and plutonium according to the provisions of Clause 7.

Allocation of the expected REPROCESSING capacity in each YEAR among all individual BASELOAD CUSTOMERS shall, in so far as possible, be proposed pro rata to the quantity of fuel of each BASELOAD CUSTOMER deemed to be STORED as defined below at the REPROCESSING PLANT at the end of the previous YEAR:
fuel deemed to be STORED shall consist of all fuel already DELIVERED to the Reprocessor and for which, at the end of the previous YEAR, uranium and plutonium have not been MADE AVAILABLE by the Reprocessor except fuel corresponding to modified Service Agreements.

Within any YEAR the definition of the order of REPROCESSING by the Reprocessor shall, in so far as possible, take account of BASELOAD CUSTOMERS requirements as expressed during the discussion within the Joint Committee.

Any arrangements under this paragraph will be concluded so as to take account as necessary of fuel scheduled to be REPROCESSED under the provisional programme for the previous YEAR and not so REPROCESSED.

3.3 The parties recognize that fuel discharged from European reactors before 31 December 1979 and falling within the category described in Paragraph 2.4 above may, at the Reprocessor's option, be treated on the same basis of priority as fuel delivered by BASELOAD CUSTOMER for REPROCESSING or MAKING AVAILABLE of uranium and plutonium.

I/ Priority for STORAGE of fuel AND REPROCESSING in facilities other than UP3-A shall not be given to BASELOAD CUSTOMERS.

5 Notwithstanding the provisions of Paragraph 3, the parties recognize that the Reprocessor has already made or will make arrangements listed under Paragraphs 2.2, 2.3 and 2.4 above under which the Reprocessor is or will be committed to REPROCESS oxide fuel before fuel falling within the scope of the said Paragraph 3 PROVIDED THAT in any YEAR not more than 50 % of the then expected plant capacity for that year will be reserved for such oxide fuel and THAT such reservation will only be made if the Reprocessor has not sufficient REPROCESSING capacities in UP2 facilities.

After completion of UP.3-B facilities and PROVIDED THAT UP2 facilities are still in operation the right of access to UP.3-A for non-BASELOAD CUSTOMERS shall in any YEAR be reduced from 50 % to 25 %. However priority among non French BASELOAD CUSTOMERS shall be determined after due consideration of the date of signature of the Service Agreement.

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APPENDIX 6
(referred to in Clause 12)

FEE AND CONDITIONS RELATING
TO FEE REDUCTION

1. The fee will consist of. two components :

1st component : the fee on construction COSTS (hereinafter called the capital fee), payable from completion of each facility according to the performance of services (availability of fuel STORAGE capacity, REPROCESSING conversion of WASTE) up to 6000.te U of BASELOAD CUSTOMERS' fuel in the said facility and to the utilisation of STORAGE tanks for highly radioactive liquid WASTE.

2nd component : the fee on operation COSTS, excluding depreciation component (hereinafter called the operation fee) payable during the operation period of each facility (i.e. when relevant facility is COMPLETED) until completion of the performance of services in respect of 6000 te U of BASE LOAD CUSTOMERS fuel

2. Capital fee

2. 1 Amrunt

Subject to the variations defined below in Paragraph 2.4 the amount of the capital fee shall be of the total construction COSTS of each facility.

2.2 Payments

Provided that the relevant facility is COMPLETED, payments of the

{i) for a STORAGE facility the proportion $\frac{Y}{Z}$ of the amount of the capital fee for that STORAGE facility where:

Y represents the tonnage of U due to be delivered by the Company during that YEAR according to the FIXED SCHEDULE and,

Z represents 6000 tonnes of BASELOAD CUSTOMERS' fuel or such other quantity as may be appropriate when the facility is not wholly or partially used in common between all BASE LOAD CUSTOMERS;

However in the event that, in any YEAR, any delays in the construction of the STORAGE facilities shall cause delays to the acceptance of FUEL under the programme set out in the FIXED SCHEDULE, the obligation for the Company to pay to the Reprocessor the capital fee relevant to that STORAGE facility shall be put back accordingly.

{ii) for a REPROCESSING facility the proportion $\frac{Yz}{Z}$ of the amount of the capital fee for that REPROCESSING facility where :

Y2 represents the quantity of U equivalent to the quantity of U MADE AVAILABLE in that YEAR on behalf of the Company;

(iii) for a conversion facility the proportion $\frac{Y}{Z}$ of the amount of the fee on capital of that conversion facility where :

Y3 represents the tonnage of U equivalent to the quantity of WASTE actually converted in that YEAR on behalf of the Company;

- (iv) for a facility utilised for STORAGE of highly radioactive WASTE as liquids the proportion of the capital fee for that, STORAGE facility corresponding to the proportion of the relevant capacity filled in during a given YEAR with solutions arising from fuel REPROCESSED or deemed to be REPROCESSED on behalf of the Company during that YEAR.

23 Retrospection

The capital fee shall be charged on an estimated capital expenditure where the appropriate facility is operated prior to COMPLETION of expenditure. An appropriate adjustment to the amount charged on an estimated basis shall be made as soon as the actual expenditure becomes known.

24 Variations

The amount of the capital fee (capital COSTS) shall be subject to variations associated with cost over-turn in the following circumstances and in accordance with the following provisions.

2.4.1 The variation of the capital fee related to capital COSTS shall be derived from the difference between the actual capital COSTS and the capital COSTS in the CAPITAL ESTIMATE approved for the construction of the appropriate part or parts of each facility. The CAPITAL ESTIMATE is the formal estimate of capital COSTS, (including design costs and the appropriate design contingencies) of the projected facility submitted to and approved by the appropriate sanctioning authority of the Reprocessor and thereafter notified to the Company. Before the beginning of the construction works of the said part(s) of each facility on the REPROCESSING SITE, the relevant CAPITAL ESTIMATE shall be notified to the Company.

2.4.2 After the CAPITAL ESTIMATE and the detail basis of the

Capital fee shall be used on the basis for costs of that

and for any reduction of the fee on capital relevant to that facility.

2.4.3 The capital fee related to each facility shall not be reduced if the recorded costs of the said facility is higher than the CAPITAL ESTIMATE for any of the following reasons:

changes in money values from the assumptions stated in the CAPITAL ESTIMATE,

changes in scope and specification at the request of or by AGREEMENT with the Company,

additional safety requirements imposed upon the Reprocessor by licensing authorities except for any reason falling within the provision of Paragraph 2.4.5.

2.4.4 In the event that for any facility the actual recorded capital and design costs incurred by the Reprocessor are higher than the estimates in the relevant CAPITAL ESTIMATE for reasons other than those attributable to the provisions of Paragraph 2.4.3 above, it is agreed that no capital fee shall be due and payable by the Company on the net increase, where applicable, resultant thereon other than as provided for in Paragraph 2.4.5.

In the event that actual recorded capital and design cost incurred by the Reprocessor are lower than or equal to the relevant CAPITAL ESTIMATE then it is agreed that the Company shall pay a capital fee computed on the basis of the recorded actual costs.

therefrom shall be

3. The capital fee: will be charged on actual costs and will not be escalated to reflect changes in money values following completion of capital expenditure on each facility.

4. Operation fee

4.1 Amount

Subject to variations defined below in paragraph 4.3 the amount of the operation fee shall be _____ of the total operation costs (excluding depreciation) of each facility relevant to each type of services (FUEL SERVICES, RESIDUE SERVICES or ADDITIONAL SERVICES), and shall be payable in all cases unless the facility fails to operate for reasons attributable to the Reprocessor or operates for reasons attributable to BASELOAD CUSTOMERS fuel. In such events the operation fee shall be reduced to _____ where the period of non-operation for BASELOAD CUSTOMERS in any such YEAR exceeds 6 months and to _____ where the period of operation for the BASE LOAD CUSTOMERS in any such YEAR is greater than three but less than six months.

4.2 Payments

Payments of the operation fee in any YEAR shall be made according to Clauses 12.1 and 12.15.

4.3 Variations of the amount of operation fee associated with cost outturn.

Pursuant to Clause 12.10 of the Service Agreement during each YEAR of the agreement the Reprocessor shall notify the Company after consultation as appropriate with the Joint Committee the estimated operating costs of each relevant facility for the next succeeding YEAR. In the event that the actual costs, excluding depreciation, differ from the estimated costs excluding depreciation notified to the Company pursuant to Clause 12.10.2 for reasons other than:

- (a) the Reprocessor has failed to comply with its obligations under the Service Agreement;
- (b) the Reprocessor has failed to comply with its obligations under the Joint Committee's recommendations;
- (c) the Reprocessor has failed to comply with its obligations under the terms of the Service Agreement;
- (d) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (e) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (f) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (g) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (h) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (i) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;
- (j) the Reprocessor has failed to comply with its obligations under the terms of the Joint Committee's recommendations;

if

changes in money values,

changes in scope and specifications at the request or by agreement with the Company, or

additional safety requirements imposed upon the Reprocessor by licensing authorities,

no fee shall be payable on any increase in operation costs (excluding depreciation) except where such increase is attributable to additional safety requirements imposed upon the Reprocessor other than by licensing authorities in which case fee to charge on the increase resulting therefrom shall be in lieu of

- 4.4 For the purpose of the paragraph 4.1 the REPROCESSING PLANT will be deemed to operate if the dissolution of fuel on behalf of BASELOAD CUSTOMERS is not interrupted.

(referred to in Clause 7)

SPECIFICATION OF URANYL NITRATE

1 - Scope

This specification covers aqueous uranyl nitrate solution obtained by separation from plutonium and fission products, during the REPROCESSING of irradiated uranium oxide fuel assemblies from thermal reactors.

2- Concentration

The concentration of uranium in the solution shall be between 200 and 12,00 grammes per litre.

3- Acidity

The free nitric acid shall be not more than one molar.

4 - Impurities

The following impurities shall not exceed the limits stated:

Chromium
Iron
Nickel
Total Halides

Total Halides means chlorine plus bromine plus iodine (expressed as chlorine equivalent) plus fluorine.

- 5 . When heated to dryness and ignited in air at 850° C for two hours the ignited residue shall contain not more than 3000 ppm of non-volatile oxides excluding uranium oxide calculated from the following formula:

$$M \cdot \left(\frac{A}{B} \right)^{1/6} \cdot xw \quad \text{ppm}$$

Where:

- M represents the non-volatile oxides excluding uranium oxide ;
A represents the percentage uranium as determined in the ignited residue ; and
B represents the factor to convert uranium (U) to triuranium octoxide (u 3 0 8) according to the uranium (U) atomic weight of the material.

6 - Boron equivalent

The equivalent boron content as calculated from the determined contents of the following impurities multiplied by the boron equivalent factors shown shall not exceed 8 ppm :

Boron	1,0000
Cadmium	0,3104
Cobalt	0,0090
Dysprosium	0,0815
Europium	0,4124
Gadolinium	1!,4380
Iron	0,0007
Lithium	0,1 1157
Samarium	0,5513

When an element is present below the analytical limit of detection a figure of one third of such limit shall be used for this computation.

7 - Fission Products

The content of the following isotopes shall not exceed a total of 0,5 _microcuri per gramme of uranium.

Zirconium	95
Niobium	95
Ruthenium	103
Ruthenium	106
Caesium	137
Cerium	11111

8 - Non uranic alpha activity

The content of the following elements shall not exceed an alpha activity of 15000 dpm per gramme of uranium.

I
I

Americium
Curium
Neptunium
Plutonium.

I I I

(referred to in Clause 7)

QUANTITY OF URANYL NITRATE

- I. The total uranium content and the mean enrichment level of the uranium (to the nearest 0,001 % ^{235}U) contained in each batch of fuel assemblies shall be assessed at the dissolver stage in accordance with the provisions of Appendix 4.

2. The value of uranium in any chemical form shall be obtained by addition of the value of the separative work contained in the material and the value of the corresponding natural uranium feed content.
 - 2.1 Separative work unit content and natural uranium feed content in the material shall be determined by use of the standard SWU and feed factors for enriched uranium and the tails assay effective in USERDA "long term fixed commitments type contracts" and in force 12 months before the scheduled date of REPROCESSING of each batch ; the factors for a tails assay of 0,20 % ^{235}U are given in Table I as an example.
 - 2.2 The factors for separative work unit and natural uranium content shall be calculated with linear interpolation if necessary. Such interpolation shall be calculated to the nearest thousandth.
 - 2.3 Unless otherwise AGREED the value of the separative work unit will be the price effective in USERDA "long term fixed commitments type contracts" and in force 12 months before the scheduled date of REPROCESSING of each batch.

2.4 The value for natural uranium shall be notified by the Company not later than 12 months before the scheduled date of REPROCESSING of each batch of fuel assemblies.

3. The value of the uranium maintained in the fuel assemblies (K) shall be calculated from the following formula :

$$K = (1 - Z) AB \times$$

Where

Z is the modified level of process losses and separative work losses arising from blending applicable at that time;

A is the total weight of uranium contained in the batch of fuel assemblies as determined at the dissolver stage in accordance with Paragraph 1 ;

x is the mean enrichment level of the uranium contained in the batch of fuel assemblies as determined at the dissolver stage in accordance with Paragraph 1 ;

Bx is the value of the uranium at the enrichment level as determined according to the provisions of above Paragraph 2.

4. The Reprocessor shall MAKE AVAILABLE at the REPROCESSING PLANT a quantity of uranium in the form of uranyl nitrate such that its value shall be calculated from the following formula:

$$L = CD y$$

(\

I
,

111

Where

C is the weight of uranium contained in the uranyl nitrate MADE AVAILABLE to the Company;

y is the enrichment level of the uranyl nitrate MADE AVAILABLE at the REPROCESSING PLANT ; and

D is the value of the uranium at the enrichment level -y determined
y according to the provisions of Paragraph 2.

5. The quantity of uranium as uranyl nitrate shall be chosen so as to approximate to :

K L

6. The value of the process loss and separative work losses arising from blending ("2" referred to in Paragraph 3) cannot be defined with any certainty at the time of signature of this Agreement. Existing processes at La Hague result in a value of 2,0 % and the Reprocessor will endeavour to achieve actual values as targets for the REPROCESSING PLANT below 2,0 %

TABLE 1

SWU AND FEED FACTORS FOR ENRICHED URANIUM

BASED ON A TAILS ASSAY OF 01 20 %

Enrichment weight 3 U	Natural uranium con tent Kg/Kg enriched uranium	Separative work unit per Kg enriched U
0,40	0, 391	-- 0,0, 173 198
0, 50	0, 587	
0,60	0, 783	- 0,107
0, 711	.1, 000	0..
0, 80	I, 174	0, 104
0, 90	I, 370	0, 236
1 ! 00	1,566	0, 380
1, I 0	1, 761	0, 535
1, 20	1' 957	0,698
1, 30	2, 1 53	0,868
1, 40	2, 348	1, 045
I, 50	2,544	1, 22 7
. 1, 60	2, 740	1' 413
1, 70	2,935	I, 603
1, 80	3, 131	I, 7 97
1, 90	3, 327	I, 994
2,00	3, 523	2,194
. 2, 2.0	3, 914	2,602
2,40	4, 305	3,018
2 1 60	4,697	3,441
2, 80	s, 088	3, 8 71
3, 00	5, 479	4,306

(referred to in Clause 7)

OUTPUT DETERMINATION OF URANYL NITRATE

1. Right Granted by the Reprocessor to the Company

- 1.1 The Reprocessor shall grant to representatives of the Company right of access to the REPROCESSING PLANT in accordance with Appendix 15 for the purpose of witnessing the taking of samples of uranyl nitrate by the Reprocessor, the methods used by the Reprocessor in the analysis of samples taken from the uranyl nitrate. In addition the Company shall have the right to require the Reprocessor to take additional samples and to require the Reprocessor to carry out further analysis of the additional samples in accordance with this Appendix.
- 1.2 The Company undertake not to make unreasonable demands for additional analysis to be carried out by the Reprocessor.
- 1.3 The Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. Except as provided for below, the results of such analysis shall be final and binding on the Company.

2. Preparation of Uranyl Nitrate

Batches containing uranyl nitrate shall consist of lots mixed to ensure homogeneity, each lot bearing a different number.

3. Weighing and sampling

3.1 The Reprocessor shall give to the Company not less than six weeks' notice of the date when sampling of the uranyl nitrate is due to commence and not more than two weeks after the date of the said notice, the Company shall inform the Reprocessor if they wish to exercise the first or alternative both of the following options : -

3.1.1 to witness the taking of samples by the Reprocessor, to observe methods used by the Reprocessor in the analysis of samples, including if the Company wish, the analysis of samples taken from the Company's uranium.

3.1.2 to require the Reprocessor to take two additional samples for possible further analysis in accordance with the provisions of Paragraph 3.3 of this Appendix.

3.2 If the Company do not exercise the option given in Paragraph 3.1.2, one sample shall be taken from each batch of homogenised uranyl nitrate for the purposes of Paragraphs 3 and 4 of this Appendix.

3.3 If the Company elect to exercise the option given in Paragraph 3.1.2, three approximately equal samples shall be taken from each batch of homogenised uranyl nitrate. The samples shall, if possible, be taken in the presence of the Company. The first sample shall be used by the Reprocessor for the purposes of Paragraphs 3 and 4 of this Appendix. If required the second and third samples shall be used for the purposes of Paragraphs 3 and 4 of this Appendix in accordance with the provisions of Paragraphs 6.2.1.2, 6.2.1.3 and 6.2.2.2 of this Appendix. On request of the Company the third sample may also be used for an umpire analysis to be performed in the REPROCESSING PLANT.

3.4 Each representative sample shall be placed inside a previously weighed container. The difference between the two weights shall be the weight of the representative sample.

- 3.5 After the taking of the samples the remainder of the batch shall be transferred into previously weighed containers. The containers shall then be reweighed, the difference between the two weights shall give the weight of the uranyl nitrate in the containers.
- 3.6 The weights referred to in 3.1f shall be determined to an accuracy of $\pm 0,01\%$ and the weights referred to in 3.5 shall be determined to an accuracy of $\pm 0,1\%$. The weight of the uranyl nitrate in the batch deemed by the Reprocessor to have been MADE AVAILABLE to the Company shall be calculated by adding together the weights of the uranyl nitrate in the containers and the weight of the representative sample or samples.

1f. Assay

The uranium content and the isotopic composition of the representative sample shall be determined by analysis and the weight of fissile isotopes in the uranyl nitrate shall be assessed by applying the results of the analysis to the weight of uranyl nitrate determined under Paragraph 3 of this Appendix, by means of the following expression, or such other method as may be notified after consultation with the Company:

$$\begin{aligned}
 \text{U total uranium content} &= \frac{A}{100} \times \frac{B}{c} \times D \\
 \text{U 235 content of the batch} &= \frac{A}{100} \times \frac{B}{c} \times D \times \frac{E}{100}
 \end{aligned}$$

Where:

A represents the percentage of uranium in the representative sample ;

B represents the weight of the representative sample as measured before any portion thereof is removed for any purpose and immediately before the uranium content referred to in this paragraph is determined;

- C represents the weight of the representative sample as measured accordance with Paragraph 3.4;
- D represents the weight of uranyl nitrate in the batch as calculated in accordance with Paragraph 3.5; and
- E represents the weight percentage of fissile isotopes.

5 Analytical Procedures

Details of analytical procedures used by the Reprocessor are described in the United Reprocessors Analytical Manual which manual will be updated from time to time.

6. Results of Analysis

6.1 If the Company do not exercise the option in Paragraph 3.1 I ; the results of the analysis on the one sample from each batch of uranyl nitrate shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as practicable.

6.2 If the Company exercise the option in Paragraphs 3.1 and 3.1.2, the following procedure shall be followed :

6.2.1 Assay
6.2.1.1

The results of the assay analysis on the first sample from each batch of uranyl nitrate shall be notified by the Reprocessor to the Company's representative at the REPROCESSING PLANT (or, in the event that the Company have not exercised the option given in 3.1 I notified to the Company) as soon as all relevant data such as sample are available. The Company's representative (or the Company as appropriate) shall within seven days of being provided with the results o

each analysis n: > !ify the Reprocessor if the Company wish the analysis to be repeated on a second sample. If nb request is received the results of the analysis on the first sample shall be final and binding. Subject to the provisions of Paragraph 6.2.2.2 the second and third samples shall be disposed of by the Reprocessor.

6.2.L2 If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as practicable. If the results of the two assessments of the weight of uranium or the fissile isotope content of the uranyl nitrate differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of uranium or fissile isotope content of the uranyl nitrate in the batch and shall be final and binding. Subject to the provisions of Paragraph 6.2 2.2, the third sample shall be disposed of by the Reprocessor. (the

6.2.1.3 If the results of the tw_o assessments of the weight of uranium or fissile isotope content of the uranyl nitrate differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such analysis as is necessary on the third sample and shall inform the Company of the results of the analysis as soon as practicable. The mean of the two assessments which are closest to each other shall be taken as the weight of the uranium, or fissile isotope content of the uranyl nitrate in the batch, however, if any disagreement cannot be resolved, the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

6.2.2 Specification

6.2.2.1 If the results of the analysis by the Re processor on the first sample confirm conformity to the specification, the batch of uranyl nitrate shall be accepted by the Company subject to Paragraphs 6.2.1.2 and 6.2.1.3 the second and third samples shall be disposed of by the Reprocessor.

6.2.2.2 If the results of the analysis by the Reprocessor on the first sample fail to confirm conformity to the specification the Reprocessor and the Company shall consult together and the Company shall decide which of the following courses of action shall be pursued : The batch of uranyl nitrate shall be accepted by the Company, or the Reprocessor shall carry out necessary analysis on the second sample ;

6.2.2.3 If the results of analysis by the Reprocessor on the second sample confirm conformity to the specification, the batch of uranyl nitrate shall be accepted by the Company.

6.2.2.1/ If the results of analysis by the Reprocessor on the second sample fail to confirm conformity to the specification, the Reprocessor and the Company shall consult together and the Company shall decide which of the following courses of action shall be pursued : - the batch of uranyl nitrate will be accepted by the Company, or

the batch of uranyl nitrate shall be rejected.

6.2.2.5 If a batch of uranyl nitrate fails to meet the specification and if the Company reject the batch of uranyl nitrate under the provision of Paragraph 6.2.2.4, the Reprocessor shall as soon as is practicable thereafter supply to the Company a quantity of uranyl nitrate equivalent to that quantity of uranyl nitrate from which the said samples were taken in compliance with the specifications.

7. Cost of Analysis

The expenses of all analysis required by the Company shall be performed at their expense except analysis performed under the above paragraph 6.2.J.J. which shall be considered as 'normal operation COSTS.

APPENDIX JO
(referred to in Clause 7)

SPECIFICATION OF PLUTONIUM DIOXIDE

1. Scope

This specification covers plutonium dioxide presently obtained "by the oxalate precipitation route, and calcined at a furnace temperature above 500° C. The plutonium oxalate is obtained from plutonium nitrate solution which is obtained by separation from uranium and fission products, during the REPROCESSING of irradiated fuel.

2. Appearance and Particle Size.

The plutonium dioxide shall be free from visible fragments of foreign matter. All the plutonium dioxide powder shall be capable of passing a 700 micron sieve, and 95 % of the powder by weight shall be capable of passing a 41J micron sieve.

J. Surface Area

The surface area shall be not less than 5 m²/g and not greater than 30 m²/g based on a BET absorption method. In any one batch, the surface area determined on any one lot shall not exceed the surface area determined on any of the other lots by more than a factor of two.

4. Plutonium Content

The plutonium content of the material as sampled by weight.

s/be.
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5. Impurities

The following impurities after heating the powder in air at 950° C for four hours shall not exceed the limits stated :

Aluminium	150 ppm with respect to plutonium
Calcium	250 ppm with respect to plutonium
Carbon	150 ppm with respect to plutonium
Chromium	200 ppm with respect to plutonium
Iron	500 ppm with respect to plutonium
Nickel	200 ppm with respect to plutonium
Nitrogen	150 ppm with respect to plutonium
Silicon	200 ppm with respect to plutonium
Thorium	200 ppm with respect to plutonium
Titanium	300 ppm with respect to plutonium
Chlorine	500 ppm with respect to plutonium
Fluorine	500 ppm with respect to plutonium
Total halides	150 ppm with respect to plutonium

Total halides means chlorine plus bromine plus iodine (expressed as chlorine equivalent) plus fluorine. Before heating the powder the total amount for chlorine and fluorine should not exceed 1000 ppm with respect to plutonium.

When ignited in air at 950° C for four hours the ignited residue shall contain not more than 6000 ppm of non-volatile oxides excluding plutonium and americium oxides calculated from the following formula :

$$M = \frac{A \times B}{100} \times 10^6 \text{ ppm}$$

Where:

M denotes the non-volatile oxides excluding plutonium and americium oxides ;

A\ denotes the percentage of residue ;

B denotes the factor to convert plutonium ($J; > u$) to plutonium dioxide (Pu_{0-1}) according to the plutonium (Pu) atomic weight of the material; and

c denotes the percentage of americium dioxide as calculated following determination in accordance with Appendix 12.

6. Boron Equivalent

The equivalent boron content as calculated from the determined contents of the following impurities multiplied by the boron equivalent factors shown shall not exceed 10 ppm :

Boron	1.0000
Cadmium	0,3104
Chromium	0,0008
Cobalt	0,0090
Dysprosium	0,0815
Europium	0,4124
Gadolinium	4,4380
Iron	0,0007
Lithium	0,1457
Nickel	0,0011
Samarium	0,5513
Silver	0,0084
Titanium	0,0018

When an element is present below the analytical limit of detection a figure of one third of such limit shall be used for this computation. The boron equivalent factors are taken from BNL 325 as amended by Supplements and will be further amended as subsequent Supplements are issued.

7. Americium Content

The americium content of the material as sampled shall be less than 5000 ppm with respect to plutonium.

8. Fission Products

The content of the following isotopes shall not exceed a total of eight microcuries par gramme of plutonium !

Zirconium	95
Niobium	95
Ruthenium	103
Ruthenium	106
Caesium	137
Cerium	11(.1(.

(referred to in Clause 7)

QUANTITY OF PLUTONIUM DIOXIDE

J. The total plutonium content and the concentration of each isotope of plutonium contained in the fuel assemblies shall be assessed at the dissolver stage in accordance with the provisions of Appendix 4. The total weight of fissile isotopes of plutonium contained in the fuel assemblies shall thereby be determined.

2. In ascertaining the quantity of plutonium in the form of plutonium dioxide to be MADE AVAILABLE to the Company by the Reprocessor, the total weight of fissile isotopes so determined shall be reduced to a value given by the following formula :

$$(1-Z) \left(A'''' - \frac{A''''}{7500} \right)$$

where

A is the total weight of plutonium 239 contained in the fuel assemblies as determined at the dissolver stage in accordance with Paragraph I ;

'i t is the number of days between the date of completion of the dissolver analysis and the date of completion of the plutonium dioxide isotopic analysis ;

e is the exponential function;

Z is the notified figure for process losses applicable at that time; and

7500 is taken as a nominal value to reflect the range between 13,20 and 15,16 quoted in the literature, for the half life of Pu 241.

3. The value of the process loss "Z" referred to in Paragraph 2 cannot be defined with any certainty at the time of signature of this Agreement. Existing processes at La Hague result in a value of 3 % and the Reprocessor will endeavour to achieve actual value as a target for the REPROCESSING PLANT below 3 %.

OUTPUT DETERMINATION OF PLUTONIUM DIOXIDE

1. Right Granted by the Reprocessor to the Company
1.1

The Reprocessor shall grant to the Company right of access to the REPROCESSING PLANT in accordance with Appendix 15 for the purpose of witnessing the taking of samples of plutonium dioxide by the Reprocessor using the methods used by the Reprocessor in the analysis of samples and the analysis of samples taken from the plutonium dioxide. In addition the Company shall have the right to require the Reprocessor to take additional samples and to require the Reprocessor to carry out further analysis of additional samples in accordance with this Appendix.

1.2 The Company undertake not to make unreasonable demands for additional analysis to be carried out by the Reprocessor.

1.3 The Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. Except as provided below, the results of such analysis shall be final and binding on the Company.

2. Preparation of the Plutonium Dioxide

Batches of plutonium dioxide shall consist of lots normally not less than 1 kg Pu (total isotopes) mixed to ensure homogeneity, each lot bearing a different number.

3. Weighing and sampling

3.1 The Reprocessor shall give to the Company not less than six weeks' notice of the date when sampling of the plutonium dioxide is due to commence and not more than two weeks after the date of the said notice if the

Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. Except as provided below, the results of such analysis shall be final and binding on the Company. Alternatively both of the following options:

3. I. 1 to witness the taking of samples by the Reprocessor, to observe the methods used by the Reprocessor in the analysis of samples, including if the Company wish, the analysis of samples taken from the Company's plutonium.

3.1.2 to require the Reprocessor to take two additional samples for possible further analysis in accordance with the provision of Paragraph 3.3 of this Appendix.

3.2 If the Company do not exercise the option given in Paragraph 3.1.1 one sample shall be taken from each batch of homogeneous plutonium dioxide for the purposes of Paragraphs 3 and I/ of this Appendix.

3.3 If the Company elect to exercise the options given in Paragraph 3.1.1, and Paragraph 3.1.2, three approximately equal samples shall be taken from each batch of homogeneous plutonium dioxide ; the said samples shall, if possible, be taken in the presence of the Company. The first sample shall be used by the Reprocessor for the purposes of Paragraphs 3 and ti of this Appendix. If required the second and third samples shall be used for the purposes of Paragraphs 3 and I/ of this Appendix in accordance with the provisions of Paragraphs 6.2.1.2. 6.2.1.3 and 6.2.2.2 of this Appendix. On request of the Company the third sample may also be used for an umpire analysis to be performed in the REPROCESSING PLANT.

3.1/ Each representative sample shall be placed inside a previously weighed container which shall be weighed together with the representative sample. The difference between the two weights shall give the weight of the representative sample.

3.5 After the taking of the samples, the remainder of the batch shall be transferred into previously weighed containers. The containers shall then be reweighed, the difference between the two weights shall give the weight of the plutonium dioxide in the containers.

3.6 The weights referred to in 3.1f shall be determined to an accuracy of + or - 0,01 % and the weights referred to in 3.5 shall be determined to an accuracy of +or - 0,1 % the weight of the plutonium dioxide in the batch

4. Assay

The plutonium content and the isotopic composition of the representative sample shall be determined by analysis and the weight of fissile isotopes in the plutonium dioxide shall be assessed by applying the results of the analysis to the weight of plutonium dioxide determined under Paragraph 3 of this Appendix by means of the following expression, or such other method as may be notified after consultation with the Company;

$$\begin{array}{rcccccc}
 & & A & & & & \\
 \text{total plutonium content} & & & & & & \\
 & & 100 & \times & C & \times & D \\
 & & & & B & & E \\
 \text{fissile plutonium content} & & & \times & & & \\
 & & & & C & \times & D \times & E \\
 & & & & & & & 100
 \end{array}$$

Where:

- A represents the percentage of plutonium in the representative sample;
- B represents the weight of the representative sample as measured before any portion thereof is removed for any purpose and immediately before the plutonium content referred to in this paragraph is determined;
- C represents the weight of the representative sample as measured in accordance with Paragraph 3.4 ;
- D represents the weight of plutonium dioxide in the batch as calculated in accordance with Paragraph 3.5 ; and
- E represents the weight percentage of fissile isotopes.

5. Analytical Procedures

Details of analytical procedures used by the Reprocessor are described in the United Reprocessors Analytical Manual which manual shall be updated from time to time.

6. Results of Analysis

6.1 If the Company do not exercise the option in Paragraph 3.1.1, the results of the analysis on the one sample from each batch of plutonium dioxide shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as practicable.

6.2 If the Company exercise the option in Paragraphs J.t.! and 3.1.2 the following procedure shall be followed :

6.2.1 Assay

6.2.1.J The results of the assay analysis on the first sample from each batch of plutonium dioxide shall be given by the Reprocessor to the Company's representative at the REPROCESSING PLANT as soon as all relevant data on such sample are available. The Company's representative shall within seven days of be provided with the results of each analysis notify the Reprocessor if the Company wish the analysis to be repeated on a second sample. If no request is received the results of the analysis on the first sample shall be final and binding. Subject to the provisions Paragraph 6.2.2.2 the second and third samples shall be disposed of by the Reprocessor.

6.2.J.2

If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as practicable.

If the results of the two assessments of the weight of plutonium or the fissile isotope content of plutonium dioxide differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of plutonium or fissile isotope content of the plutonium dioxide in the batch and shall be final and binding subject to the provision of Paragraph 6.2.2.2. The third sample shall be disposed of by the Reprocessor.

6.2.1.3 If the results of the two assessments of the weight of plutonium or fissile isotope content of the plutonium dioxide differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such analysis as is necessary on the third sample and shall inform the Company" of the results of the analysis as soon as practicable.

The mean of the two assessments which are closest to

each other shall be taken as the weight of the plutonium, or fissile isotope content of the plutonium dioxide in the batch, however, if any disagreement cannot be resolved, the assessment retained by the

appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

6.2.2 Specification

6.2.2.1 If the results of the analysis by the Reprocessor on the first sample confirm conformity to the specification, the batch of plutonium dioxide shall be accepted by the Company and subject to Paragraph 6.2.1.2 and 6.2.1.3 the second and third samples shall be disposed of by the Reprocessor.

6.2.2.2 If the results of the analysis by the Reprocessor on the first sample fail to confirm conformity to the specification the Reprocessor and the Company shall consult together and the Company will decide which of the following courses of action shall be pursued : the batch of plutonium dioxide will be accepted by the Company, or the Reprocessor shall carry out necessary analysis on the second sample.

6.2.2.3

6.2.2.4 If the results of analysis by the Reprocessor on the second sample fail to confirm conformity to the specification, the Reprocessor shall consult together with the Company and the Company will decide which

of the following courses of action shall be pursued :

The batch of plutonium dioxide will be accepted by the

6.2.2.5

Company, or

The batch of plutonium dioxide shall be rejected.

If a batch of plutonium dioxide fails to meet' the

specification and if the Company reject the batch of plutonium dioxide under the provisions of Paragraph 6.2.2.4, the Reprocessor shall as soon as is practicable thereafter supply to the Company a quantity of plutonium dioxide from which the said samples were taken in compliance with the specifications.

7. Cost of Analysis

The expenses of all analysis required by the Company shall be performed at their expense except analysis performed under the above paragraph 6.2.LI. which shall be considered as normal operation COSTS.

FINANCIAL SETTLEMENT IN RESPECT OF RETURN OF
URANIUM AND PLUTONIUM

I. Clause I 1.2 and Clause 11.3 recognise that situations will arise when the quantity of uranium and/or plutonium actually MADE AVAILABLE by the Reprocessor to the Company will be different from the quantity contractually due to be MADE AVAILABLE to the Company. Clause I 1.3 provides for any necessary adjustment to be made on the quantity of uranium and plutonium to be MADE AVAILABLE in subsequent campaigns.

2. Clause 11.3 recognises that in the case of the last campaign, it will not thereafter be possible or convenient to make a subsequent quantity adjustment and that a financial settlement will be made.

) 3. This Appendix defines the procedures to be followed in making the financial settlement

3. I. The provisions of Clause 7 will result in the Reprocessor defining on 31 July each YEAR the PROVISIONAL AVAILABILITY PROGRAMME for the 24 months period commencing on the 1 January, next following. The programme will define the position of the Company in the said programme for MAKING AVAILABLE uranium and plutonium.

3.2 For the case of the PROVISIONAL AVAILABILITY PROGRAMME which

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when the Reprocessor is scheduled to MAKE AVAILABLE to the Company uranium as uranyl nitrate and plutonium as plutonium dioxide. notify the Reprocessor the price for natural uranium and plutonium to be used in calculating the settlement

- 1f, In the event that the Company have not nominated prices in accordance with the provisions of Paragraph 3 above the Reprocessor shall nominate the relevant prices after taking into consideration the result of the discussion with the BASELOAD CUSTOMERS referred to in Paragraph 3 2 above.

- 5, The prices as determined above shall be used in calculating the financial settlement, such settlement will be made when all relevant data are available.

to the Company and unable to be converted and/or transported
a Series of cumulative running accounts of the various
RESIDUES apportionments made by the Reprocessor in
compliance with the rules set out in Part A of this Appendix.

2.2 In respect of any addition to a running account of a designated
RESIDUE there shall be made a corresponding deduction to an
appropriate running account of a corresponding WASTE.

2.3 Any return to the Company of a quantity of a designated
RESIDUE shall result in a reduction by a quantity equal to the
said return of the running account of the appropriate RESIDUE.

C. Any allocation of WASTE shall be non discriminatory as to quantity, radioactivity
and type of material as between the customers whose fuel is REPROCESSED by
the Reprocessor.

RIGHT OF ACCESS TO THE REPROCESSING PLANT

- I. The Reprocessor shall arrange for representatives of the Company to have access to the REPROCESSING PLANT for the purpose of exercising the first or both of the options given in

Paragraph 3.1 of Appendix 4,
Paragraph 3.1 of Appendix 9 and
Paragraph 3.1 of Appendix 12.

In the event of the Company on any occasion failing to exercise their right of access under this paragraph or if they exercise only the first option under Paragraph 3.1 of each Appendix, in such case, they shall not, in respect of such occasion, thereafter challenge the weights of samples and bulk material and the relevant samples taken and the analyses thereof made by the Reprocessor.

2. The Company shall provide the Reprocessor with the name and such other information regarding each representative as the Reprocessor may reasonably require, at least 14 days before the date of his first visit to the REPROCESSING PLANT.
3. The Reprocessor reserves the right to object to the nomination of any particular representative and to deny access to the REPROCESSING PLANT to any particular representative, which right shall not be unreasonably exercised.

4. Not more than three representatives of the Company shall be present at the REPROCESSING PLANT at any one time, for the purposes of the above paragraph I of this Appendix.
5. Each representative shall comply with the disciplinary codes and all relevant site and plant instructions in force at the REPROCESSING PLANT.
6. A representative shall not be permitted to be present at any time in any part of the REPROCESSING PLANT unless accompanied by a representative of the Reprocessor.
7. The Company shall fully indemnify the Reprocessor against all claims and proceedings made or brought against the Reprocessor in respect of any personal injury (including injury resulting in death) or loss of or damage to property suffered by any representative while on any premises occupied by the Reprocessor and against any costs reasonably incurred in connection with any claim or proceedings as aforesaid PROVIDED THAT this indemnity shall not apply to the extent that the said injury, loss or damage was caused by the emission of ionising radiations or by the neglect or default of the Reprocessor or any servant or agent of the Reprocessor.
8. For the purpose of this Appendix, the REPROCESSING PLANT shall include the Analytical Laboratories in which the weighing, sampling and analysis of samples are carried out.

APPENDIX 16
(referred to in Clause 12)

11

COSTING AND PRICING PROCEDURES

A Capital Expenditure Costing Procedure

The Reprocessor records capital expenditure on a normal job costing basis; whereby the whole project of investment is analysed into a number of component parts in order that expenditure may be appropriately recorded and controlled against a sanctioned estimate.

For the purpose of the UP3-A project the cost of the associated RESEARCH AND DEVELOPMENT programme and the cost of plant commissioning will be regarded as capital expenditure.

On completion of construction of each particular facility constituting the project (e.g. storage ponds, REPROCESSING PLANT, uranium/plutonium conversion plants, HAL storage plants) the recorded costs are cumulated and charged to operation costs by way of depreciation.

B Costing Procedures

The Reprocessor operates a process costing system which embodies absorption costing principles. The main features are :

I. Cost collection

Costs are analysed subjectively (e.g. wages, salaries, materials) and objectively (e.g. repairs and maintenance). All costs are collected by cost centres each of which is a defined area of managerial responsibility as follows :

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Process centres

These relate to appropriate stages of each production process.

Process services centres

These relate to ancillary processes or operations supporting main process centres as above.

Maintenance and supply centres

These relate to maintenance services and supply/distribution of steam, water and power for the site as a whole.

Overhead centres

These relate to administration and financial services for the site as a whole.

The costs of process service, maintenance and supply, overhead centres are subsequently allocated to process centres so that the total works process centre costs comprise the total expenditure incurred in undertaking the relevant process.

2. Cost Allocation

The costs allocated to process cost centres are of two types :

directly allocated costs being mainly labour and materials employed directly on a process ; and
indirectly allocated costs including expenditure on supporting process services, maintenance services, supplies of steam and power etc.

Charges for de predation and overheads are allocated only to process cost centres. Depreciation includes a direct element in respect of assets purchased for use on the specified process, and an indirect element based on a pro rata share of the depreciation appropriate to specified S<~porting services.

Overheads are allocated to process centres pro-rata to direct and indirect manpower.

3. End Levies

Total Works Process Costs are supplemented in respect of:

- {a) Company overheads (i.e. proportion of Headquarters Costs together with appropriate royalties other than royalties due to Commissariat a l'Energie Atomique);
- (b) Interest on any capital employed in respect of Agreements which has to be serviced by the Reprocessor (this will be allocated specifically to the contracts concerned) ;

- {c) RESEARCH AND DEVELOPMENT expenditure; and

- (d) All taxes of whatever nature (except taxes levied on the Reprocessor profit> and the corresponding taxation allowances including investment and similar grants). Any new taxes imposed after the date of signature of this Agreement will be advised to the Joint Committee and unless otherwise AGREED will not be subject to fee.

q. Losses or Gains on Currency Exchanges

Where by separate agreement the Reprocessor agrees to accept loans/advances expressed in a currency other than French Francs with a consequent repayment of the amount advanced in the same currency, then:

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- (a) amount advanced in the foreign currency will be determined by conversion of the requirement in French Francs at the rate of exchange prevailing at the time of each quarterly advance ;
- (b) any variance between the amount due for repayment in French Francs when converted into the relevant foreign currency at the exchange rate prevailing at the date of repayment and the amount due for repayment as determined by the original amount advanced in foreign currency will be treated as a profit or loss in French Francs for the account of the Company and recovered as an increase or reduction in the quarterly charge for the appropriate service. The amount of such increase or reduction will not be subject to fee.

C Pricing Procedures

1. Fuel Receipt and STORAGE of FUEL

- (a) The cost of specialised inlet and receipt facilities will be allocated to appropriate customers to the extent that those facilities will be used by the corresponding customers.
- (b) the balance of costs will be consolidated with the fixed costs of plant operation as dealt with in C2 below except the expenditure prior to the period in which the REPROCESSING PLANT comes into operation will be recovered by separate charge on an annual basis.

2. Reprocessing Plant

- (a) Fixed costs will be allocated to BASELOAD CUSTOMERS pro rata to the total quantities of fuel covered by each Agreement. Such fixed costs will be recovered on an annual basis until such time as the total quantity of FUEL concerned has been REPROCESSED.

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(b) variable costs will be allocated for recovery from relevant customers in accordance with actual annual throughputs. Such costs will include process service charges in respect of high activity liquid WASTE STORAGE but will not include costs for conversion of WASTE which will be recovered separately pursuant to the provisions of paragraph 3 hereunder.

J. Plant(s) for the conversion of WASTE

The costs will be allocated to BASELOAD CUSTOMERS pro rata to the total quantities of fuel covered by each Agreement however in the event that, after request of or agreement with the Company, specification of the converted WASTE or RESIDUES have to be adapted for the Company, the Company shall bear an appropriate proportion of such costs.

The said costs will be recovered on an annual basis over either the 10 years period of plant amortization or until such time as the total quantity of WASTE concerned has been converted, whichever is the longer period.

APPENDIX 17
(referred to in Clause 12)

AUDITORS' CERTIFICATE

Subject to such amendments as may be AGREED in the light of experience the form of Auditor's Certificate will be as follows :-

"Based on the tests of the books and records whidl we have carried out in accordance with the provisions of Clause 12 of the Agreement dated between COMPAGNIE GENERALE DES MATIERES NUCLEAIRES arid the Company we confirm that :-

1. In our opinion costs have been properly calculated in accordance with the provisions of the aforesaid Agreement and with established accounting principles ; and
2. There has been no dlange in the accounting principles described in Appendix 16 of the Agreement (except as specified below) during the period 1 January to 31 December as compared with previous accounting period."

TERMS OF REFERENCE FOR THE JOINT COMMITTEE

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The text of this Appendix shall enter into force only if and when the BASELOAD CUSTOMERS who have already signed Service Agreements prior to the Service Agreement hereof have accepted the terms and conditions of this Appendix 18. Should the said BASELOAD CUSTOMERS not agree to such terms and conditions, the attached text (Annex to Appendix 18) shall be binding.

1. ORGANISATION OF THE JOINT COMMITTEE

I.1 The Joint Committee will consist of :
not more than two representatives for each country in which utilities have entered into one or more Service Agreements
However should the BASELOAD CUSTOMERS not agree on the nomination of their national representatives each BASELOAD CUSTOMER shall have a right to be represented by one Representative of his choice.
three to six Representatives of the Reprocessor together with not more than two coopted experts.
one observer from BNFL.
not more than an additional two experts nominated by the BASELOAD CUSTOMERS and AGREED by the Reprocessor.

1.2 The Chairman of the Joint Committee shall be a Representative of the Reprocessor.

The Chairman shall designate a Secretary of the Joint Committee.

1.3 The Joint Committee shall meet twice a year at dates and places decided by the Chairman, after consultation of the Representatives. However each Representative shall be entitled to ask the Chairman extraordinary meetings but, as a rule, not more than two extraordinary meetings asked for by BASELOAD CUSTOMERS should take place in any YEAR.

The Chairman shall convene the Joint Committee by telex confirmed by a letter not less than thirty days in advance. In urgent cases, this period may be reduced to seven days. An agenda for such meetings shall be distributed at the time of notification.

The Joint Committee shall have a quorum when not less than fifty per cent of the Representatives of the BASELOAD CUSTOMERS and fifty per cent of the Representatives of the Reprocessor are present.

2. MANAGEMENT

Management responsibility and decision shall rest solely with the Reprocessor but the Joint Committee shall always be consulted on matters which in the Reprocessor's opinion are likely to significantly affect the performance of the Agreement and the views of the non-French BASELOAD CUSTOMERS' representatives will be given due consideration in arriving at an appropriate course of action. Notwithstanding the Reprocessor's sole discretion in management matters, the BASELOAD CUSTOMERS' Representatives shall at all times have the right to request the Reprocessor to provide information or explanations concerning the manner in which the contractual requirements have been or are to be met.

3. FUNCTIONS OF THE JOINT COMMITTEE

3.1 The Joint Committee shall be entitled to :

receive information in relation to the performance of the Agreement,

dis.a.iss any matter in relation to the performance of the Agreement,

give advice to the Reprocessor relating to the proper performance of the Agreement,

make recommendations to the Reprocessor.

3.2 It being understood that its functions shall be adapted from time to time to the existing circumstances, the Joint Committee shall in particular be entitled to :

3.2.1 Receive explanations of variances from estimates and to engage independent consultants acceptable to both the Reprocessor and the BASELOAD CUSTOMERS to evaluate industrial options and financial aspects of the project insofar as this is permitted or permissible under the regulations.

Be informed and dis.a.iss the timing of the contribution of funds.

Be informed and dis.a.iss of the draw-down of funds and make recommendations on the draw-down schedule.

Discuss the updating of estimated charges and be informed, discuss of investments during the operational phase of the plant and advise the sharing of facilities.

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Discuss the need for and financing of any RE-INVESTMENT.

Discuss of the selection by the BASELOAD CUSTOMERS of the Auditor or Aud.Hor organisation.

Discuss any point reported in the Auditor's report concerning the accuracy of costs.

- 3.2.2 Discuss the surplus capacities as defined in Clause 2.3 and recommend to the Reprocessor an appropriate course of action.

Discuss the terms to be offered for new business under Clauses 2.3.1 and 2.3.2.

- 3.2.3 Discuss of the construction progress, be informed of the technical conditions envisaged by the Reprocessor and recommend to the Chairman any change in these conditions that it considers to be necessary.

Discuss at different milestones of the decisions to be taken with respect to the construction of the REPROCESSING and STORAGE facilities.

Be informed of delays and of whether any breakdown or halt is permanent or not and therefore if a fee is due or not to the Reprocessor.

- 3.2.4 Co-operate with the Reprocessor in order to cope with the specifications of RESIDUES.

Co-operate with the Reprocessor on decisions regarding insurance, transportation and other incidental aspects of the project.

3.3 The Joint Committee shall furthermore :

According to the rules settled in Clause 6 and Appendix 5 decide of the implementation of the priority rules for STORAGE of FUEL.

According to the rules settled in Clauses 6, 7 and 21 and Appendix 5, decide of the allocation of uranium and plutonium MADE AVAILABLE to the BASELOAD CUSTOMERS.

4. ADDITIONAL CONSULTATION

In case of disagreement between the Representatives of the BASE LOAD CUSTOMERS and the Representatives of the Reprocessor, the Chairman shall endeavour to make proposals acceptable to both parties.

Should the Chairman attempt be unsuccessful, the Chairman shall decide of the course of action to be taken. In no case a conflict between the Reprocessor and the BASELOAD CUSTOMERS shall delay the course of action the Reprocessor deems to be necessary.

Should the Representatives of the BASELOAD CUSTOMERS decide among themselves within eight days from notification of the Chairman's decision that such a decision is unacceptable they shall have the possibility to designate among themselves a representative or representatives who will be commissioned to meet the President of COGEMA. The representative(s) shall within ten days from notification of the Chairman's decision require a meeting with the President of COGEMA. Such a meeting shall take place within twenty days from notification of the Chairman's decision at COGEMA's head office or such other place as may be

agreed. Time shall be of the essence with respect to settlement of the dispute. The Chairman shall be empowered to refer the dispute to arbitration if the parties do not agree within the time specified in the preceding paragraph. The arbitration shall be conducted in accordance with the rules of the International Chamber of Commerce (ICC) or such other arbitration rules as may be agreed between the parties. The arbitration shall be final and binding on the parties. The arbitration shall be conducted in the language of the contract. The arbitration shall be held in the city of Paris. The arbitration shall be conducted in accordance with the rules of the International Chamber of Commerce (ICC) or such other arbitration rules as may be agreed between the parties. The arbitration shall be final and binding on the parties. The arbitration shall be conducted in the language of the contract. The arbitration shall be held in the city of Paris.

The Representatives of the BASELOAD CUSTOMERS and the President of COGEMA shall endeavour to find a solution acceptable to both the BASELOAD CUSTOMERS and the Reprocessor. Should no agreement be found the President of COGEMA shall take a decision which shall be final and binding on all the parties, except that it shall not derogate to their right to arbitration as set out in Clause 26 hereunder.

TERMS OF REFERENCE FOR THE JOINT COMMITTEE

- I. The Joint Committee to be established in pursuance of Clause 2 hereof shall be comprised of representatives from the Reprocessor and from oon French BASELOAD CUSTOMERS. The Chairman of the Joint Committee shall be a representative of the Reprocessor.

2. The terms of reference of the Joint Committee shall be reviewed each YEAR in the light of circumstances which can be expected to dlange over the period of the Agreement. Its primary function will be to serve as a forum for the explanation and discussion of matters affecting the performance and financial outturn of the Agreement, and in particular :
 - (a) to monitor the construction, development and operating programmes for the Reprocessor oxide REPROCESSING project and to compare performance against estimates in physical and financial terms;
 - (b) to receive explanation of variances from estimates :
 - (c) to discuss the Lpdating of estimated charges for STORAGE and REPROCESSING for the purpose of computing advance payments ;
 - (d) to consider the scope for utilisation of excess capacity in plants underwritten by BASELOAD CUSTOMERS and the prevailing market conditions ;
 - (e) to monitor the progress on the development of processes for conversion of WASTE to RESIDUES.

3. Management responsibility and decision shall rest solely with the Reprocessor but the Joint Committee shall always be consulted on matters which in the Reprocessor's opinion are likely to significantly affect the performance of the Agreement and the views of non French BASELOAD CUSTOMERS' representatives will be given due consideration in arriving at an appropriate course of action. Notwithstanding the Reprocessor's role discretion in management matters, customers' representatives shall at all times have the right to require the Reprocessor to provide information or explanations concerning the manner in which the contractual requirements have been or are to be met and furthermore any BASELOAD CUSTOMER shall have the right to require the Reprocessor to convene a meeting of the Joint Committee.

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APPENDIX 19
(referred to in Clause 12)

FUND REQUIREMENT SCHEDULE

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The estimated fund requirement of the Reprocessor in respect of the design, procurement and commissioning of the nominated STORAGE and REPROCESSING facilities expressed in July 1977 money values ls as follows :

YEAR	SUM OF MONEY (FF Millions)
1977	
1978	
1979	
1980	
1981	
1982	
1983	
1981/	
1985	
1986	
1987	
1988	
1989	
1990	

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SPECIMEN FORM OF LETTERS OF CREDIT TO BE
ISSUED BY THE COMPANY IN FAVOUR OF COGEMA
FROM THE COMPANY'S BANK

BANQUE NATIONALE DE PARIS
7, Place Vendôme 75021

PARIS CEDEX 01
(COGEMA ACCOUNT N° 211 66266)

I. WE request you to advise Compagnie Generale des Matieres Nucleaires
(COGEMA) that we have opened our irrevocable
N° :..... in their favour for the account
Company) for a sum mt exceeding a total of
French Francs representing the first (see note 1) instalment of 50 per cent of the
operation costs (excluding depreciation) of the nuclear fuel services (see note 2)
for the irradiated fuel delivered on the day of..... of 19.. pursuant to
the provisions of the Service Agreement for the reprocessing of irradiated oxide
fuel dated 1978 between COGEMA and
Company} ("The Agreement").

2. This credit is available against their draft(s) at sight drawn on Banque Nationale
de Paris, Paris for 50 per cent of the invoice value payable on or after the last
working day of the beneficiary's financial year in which the services have been or

- (a) a receipt, in duplicate, for the monies payable hereunder, signed COGEMA;
- (b) commercial invoice in five (5) copies rendered pursuant to Clause the Agreement ;
- (c) statements in five (5) copies issued by (the Company) certifying relevant services described therein have been or have deemed to have been performed during the financial year to which the statement re

3. Partial drawings are permitted.

4. The period of validity of this credit shall be 20 years from the date hereof.

5. All drafts drawn hereunder must be marked "Drawn under (see note 3), Irrevocable credit N°
dated

6. We engage with the drawers, endorsers and bona fide holders of drafts drawn under and in compliance with the terms of the credit that the same shall be duly honoured on due presentatiOll and delivery of documents as specified herein to the drawee.

7.

Note 1 insert "first", "second", "third", or "fourth" as appropriate.

Note 2 or residue services relating to such fuel, as appropriate.

Note 3 such Bank as may be AGREED.

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REPROCESSING PLANT DESCRIPTION AND PRELIMINARY COSTS ANALYSIS

The present Appendix consists of :

a general outline specification of the REPROCESSING PLANT ; and

the October 1977 COSTS estimate of the REPROCESSING PLANT and estimated charges for FUEL SERVICES presented in a form which represents

the model of the part (related to the COSTS) of the financial document, which document shall be updated throughout the duration of this Agreement not later than three months before the commencement of each YEAR.

1. General outline specification of the REPROCESSING PLANT

1.1 General

The REPROCESSING PLANT (UP3-A) will be built on the REPROCESSING SITE (LA HAGUE). The plant will have a design capacity of 2,6 t U per day and will be designed and constructed to be able to REPROCESS not less than 6000 tonnes u and shall normally REPROCESS solely oxide fuel discharged from BWR or PWR power reactors.

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The REPROCESSING PLANT will include STORAGE of FUEL facilities (four ponds and corresponding flasks and fuel handling facilities), REPROCESSING facilities and other facilities such as conversion facilities for the conversion of WASTE into RESIDUES.,,{

providing facilities for the conversion of WASTE into RESIDUES.,,{
specified in the financial estimate hereof). S.c'.i,

1.2 REPROCESSING PLANT description
The fuel will be transported from the power stations or from Cherbourg port to La Hague either by road or by rail. The transport flask will be off loaded from the vehicle in the fuel receipt building and the fuel removed from the flask in one or the other of two unloading facilities. The fuel will then be placed into racks for transfer to the storage ponds. A number of ponds will be provided each having a capacity of about 1000 tonnes of fuel. The ponds will be covered and will be provided with water treatment and cooling plants.

The REPROCESSING PLANT will comprise:

- (i) A head-end treatment plant,
- (ii) A solvent extraction plant,
- (iii) A plutonium oxide conversion plant,
- (iv) A uranium conversion plant,
- (v) Associated WASTE treatment plants and facilities for conversion of WASTE into RESIDUES, and all necessary ancillary active and inactive support,
- (vi) Interim storage facilities for plutonium oxide,
- (vii) Interim storage facilities for WASTE.

1.3 Process

I A shear/leach process will be adopted for head-end treatment followed by solvent extraction for separating the plutonium, uranium and fission products. The plutonium will be converted to oxide and uranium would normally be converted to a suitable form depending of the then prevailing circumstances and of the customers requirement (it is currently assumed that uranyl nitrate will be considered as a suitable form). The highly active fission WASTE will be evaporated and stored as liquid concentrates pending the introduction of a glassification process. Other active liquid WASTE will be treated before they are discharged to the sea. Solid active WASTE will be stored in such a way as to permit retrieval at a future date for disposal. The separation process will use TBP/OK as the solvent and the detailed process flowsheet will be established following active pilot plant runs.

During corning years and all along the construction full scale inactive units or pieces will be operated mainly at Marcoule to provide the design data. This work will be undertaken in a workshop devoted to technological development.

The solvent extraction plant will use both (Xlised columns and mixer settlers depending of the results of R and D works to be undertaken at Marcoule m full scale prototypes and on inactive materials. The experience of existing and operating plants at Marcoule and La Hague will contribute to the definition of the general design data te be adopted. Adequate information is already available from these plants for the design of the' finishing and conversion processes and waste treatment plants.

Construction of the Marcoule glassification plant (main plant to glassify high active fission products concentrates) is presently under completion and active trials will start shortly so that the Reprocessor will be in a position to precise conditions of adoption of such a process before the end of the seventies.

To achieve efficient operation of all facilities of the REPROCESSING PLANT all the plants within the REPROCESSING PLANT other than High Active and Medium Active liquid storage will be built in the same part of the REPROCESSING SITE. There will be extensive duplication equipment in order to provide the best possible safeguarfr for the continued operation of the plant in the event of the failure of some of the components.

I.I/. Assumed composition and conditioning of the WASTE

- 1.//.1 The composition given hereunder is derived from the present experience of the Reprocessor in the field of oxide fuel REPROCESSING. Such composition will be revised in light of the actual production of WASTE arising from REPROCESSING as soon as sufficient experience will have been gained by the Reprocessor in the existing plants.

1.4.2 Type of WASTE
The WASTE deriving from the REPROCESSING of irradiated fuel fall into different categories according to the likelihood to have them returned to the Customer for final disposal and according to the need to have them converted into another form suitable for transport before any return to the Customer.

1.4.3 Lump amounts of WASTE
J. WASTE not able of transport before conversion to a form suitable for transport.

J. I Process WASTE

Liquid WASTE

Acid liquors

- 500 litres per tonne U REPROCESSED of so called fission products concentrates (Stainless steel STORAGE tanks).
- 80 litres per kilogramme of iron present in the REPROCESSED fuel and put into solution during the leaching of the fuel (SS STORAGE tanks).
- 12,5 litres of active solvent cruds per tonne of U REPROCESSED (SS STORAGE tanks).

Basic liquors

- 20 litres per tonne U REPROCESSED (Silo tanks).

Degradated solvent

- 10 litres per tonne U REPROCESSED (tanks).

Solid WASTE

- Ion exchangers - 150 litres per tonne U REPROCESSED (mode of conditioning not specified).
- Active filtration -20 litres per tonne U REPROCESSED (conditioning is not specified).
- Zeolithes, lead iodide : no yet specified (in

- Muds arising from LLW and M

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- Hulls (cladding) and fuel structure : 4-00 litres per tonne U REPROCESSED (Bulk STORAGE in Silo under water).
- Undissolved fines (water with 5 % solids particles} : 150 litres per tonne U REPROCESSED (conditioning mode not yet defined}.

1. 2 Technological WASTE

Various WASTE arising from maintenance, repairs, decontamination and cleaning operation in m³/tonne U REPROCESSED (in principle STORAGE will be made in drums).

Classification of technological WASTE will be defined according to O₆ and F₁ classes as defined by waste management authorities.

Part of the technological WASTE will be compactable.

2. WASTE not requiring any conversion before transport

2. 1 Concrete blocks of 55 tonnes : 0,03 block per tonne U

2.2 Concrete drums of 200 litres: 5 drums per tonne U REPROCESSED.

3. WASTE which are unlikely to be transported.

Various waste put in the earth: 0.5 cubic metre per tonne U REPROCESSED

1.5 Preliminary cost estimate

The breakdown of expenditures on UP3-A on which the attached economic outline (part. 2 of this Appendix 21) is based is a preliminary cost estimate for a 6000 t U REPROCESSING plant to be built on the La Hague

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irradiated oxide fuel DELIVERED in standard COGEMA type
flasks,
end-products: Pu oxide, uranyl nitrate,
no other WASTE conditioning than specified in the above
paragraph 1.~.3,
safety requirements as imposed by authorities on 1.1.76.
and as described by C. JOUANNAUD in a paper presented at
Salzburg Conference (1 977).

The assumption is that the construction of the UP3-A REPROCESSING
PLANT will need adjustments and adaptations of existing facilities and
equipment at La Hague :

General equipment of the site, .
Production and supply of various utilities (water, compressed air,
steam, chilled water),
Energy production and supply,
General nuclear supply - health physics,
- treatment of various effluents,
- decontamination,
- maintenance,
- general environmental observations and
measures,
Non-nuclear supply - safety, security
- medical
- various accomodations
- administration.

This preliminary rost estimate @.,, not take into account new
investments such as :
a second dam for water reserve
a rail connection,

which might nevertheless be needed.

2. Financial estimate and estimated charges for FUEL SERVICES

The present financial document consists of the following tables and graphs.

TABLE 1	GENERAL PROGRAMME OF CONSTRUCTION OF-UP3-A
TABLE 2	UP3-A PROGRAMMES
TABLE 3 A	BREAKDOWN OF EXPENDITURES ON UP3~A
TABLE 3 B	BREAKDOWN OF EXPENDITURES ON UP3-A
TABLES 4 A AND 4 B	UP3 - OPERATING COSTS
TABLE5A	SPENDINGS ON UP3-A (constant FF as of 1. 1.77).
TABLE 5 B	SPENDINGS ON UP3-A (current money and prices)
TABLE 6	-ECONOMICAL DATA AND KEY DATES
TABLE 7	INVESTMENT SCHEDULE
TABLE &	DETERMINATION OF OPERATING COSTS
TABLE 9	DETERMINATION OF THE COSTS
TABLE 10	DETERMINATION OF UPDATED ESTIMATED COST ON FUEL COLLECTION
TABLE 11	NET FUND REQUIREMENTS DETERMINATION
GRAPH 1	GROSS FUND REQUIREMENTS (constant money)
GRAPH 2	GROSS FUND REQUIREMENTS (current money).

1976 1977 1978 1979 1980 1981

F\1;:} receipt and gtoraoe

Const:ruction

Buil~in9 and f

Ir.stdllation

I
Hephanical, Electrical an
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Co!l\ffiissioning (completion
dates)

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Reprocessing plant

Site ~rtparation

Excavation and digging

Plant constructlo~

I
Building and civil

Installation

Mechanilal, Elec~

	1981	1982	1983	
I Fuel deliveries tes U/yr*	380	480	520	7
I FLel dissolution tes U/yr				

I
I
I

i Total deliveries on mid-year	190	620	1120	1
I Total dissolutions on mid-year				
I' p~ \ st.ocks	190	620	1120	1

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1. 1 design

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NOTES ON OPERATING COSTS

- (1) Direct labour wages and salaries of industrial and non industrial personnel, including annuities and national insurance. super
- (2) Direct material costs of materials and chemicals used directly in the operation of the centre.
- (3) Supply and service supply services e.g. electricity, analytical services, and process services e.g. change room services.
- (If) Insurance insurance cover extends to material damage of the facility and work in progress and third party nuclear risks.
- (5) Overheads comprise a pro rata share of both works and company costs of administration.
- (6) Repairs and maintenance costs of repairs and maintenance incurred by the centre.
- (7) Local rates taxes (or Patente) levied by the local government based generally on the economic value of the facilities.
- (8) Variable costs costs of direct materials and supply service which vary directly with the level of production.

	Before 1. 1. 78	1978			1979			Total, 1979
		1	2	3	4	1	2	
1 STORAGE								
1. 1 pond 1								
1. 2 pond 2								
1. 3 ponds 3 and 4								
2 REPROCESSING								
2. 1 design								
2. 2 head end								
2. 3 chemical plant								
2. 4 effluents								
2. 5 miscellaneous								
J HAW (liquids)								
3. 1 design								
3. 2 construction								
4 GLASSIFICATION								
5 GENERAL SUPPORT								
5. 1 design								
5. 2 site preparation								
5. 3 general arrangements								
5. 4 inactive services and supply								
5. 5 active services and supply								
5. 6 effluents								
5. 7 miscellaneous								
6 COMMISSIONING								
7 RAN D								
TOTAL MFF								

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			1	9	7	8	
	Before						
I.	1.	78	1		2		3
							4
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- 1 STORAGE
 - 1. 1 pond 1
 - 1. 2 pond 2
 - 1. 3 ponds 3 and 4

- 2 REPROCESSING
 - 2. 1 design
 - 2. 2 head-end
 - 2. 3 chemical plant
 - 2. 4 effluents
 - 2. 5 miscellaneous

- 3 ~ (liquids)
 - 3. 1 design
 - 3. 2 construction

~ CLASSIFICATION

- 5 GENERAL SUPPORT
 - 5. 1 design
 - 5. 2 site preparation
 - 5. 3 general arrangements
 - 5. 4 inactive services and supply
 - 5. 5 active services and supply
 - 5. 6 effluents
 - 5. 7 miscellaneous

6 COMMISSIONING

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TOTAL MFF

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1.	Inflation rates adopted to compute current money and current prices	
	- from January 1977 to July 1977	: 4,3 %
	- from July 1977 to July 1978	: 9,0 % per year
	- from July 1978	: 6,0 % per year
	Differential escalation rates :	
	- all investments	: 3,0 % per year
	- operating costs	
	. pond storage	: 3,0 % per year
	. Reproc. + Waste (maintenance)	: 3,0 % per year
	. Reproc. + Waste (variable cost)	: 0,0 % per year
	. Reproc. + Waste (local rates)	: 3,0 % per year
	. others reproc. + waste	: 5,0 % per year
2.	Completion of the first individual pond	1980
	Beginning of fuel collection	1981
	Completion of the reprocessing facilities	J 984
	Beginning of reprocessing operation	1985
	End of waste storage	1991

NOTES:

Throughout this economic document the following expressions have the following meanings:

- Waste means high active fission products concentrates in a liquid form
- Waste storage means either investment of corresponding storage tanks, or depreciation of corresponding storage tanks, or operating costs of corresponding storage tanks.
- Operating costs means

END OF REPHOCESSING PLANT CONSTRUCTION'
START OF REPROCESSING

1986
198S

CURRENCY'

CONSTANTH PRICES IN CONSTANT HONEY

TOTAL 1977 1978 1979

-ESTIMATE

- , PON[1 1
- .POND 2
- .POND 3
- , PON[I 4
- .REPROCESS.PLANT
- .WASTE STORAGE

1988 1989 1990

"
"'

-ESTIMATE

- .POND 1
- .POND 2
- .POND 3
- .POND 4
- .REPROCESS.PLANT
- . \JASTE STORAGE

CURRENT PRICES

IN

CU fl RENT MONEY

TOTAL 1977 1978 1979

1988 1989 1990

.POND 4
 .REPROCESS.PLANT
 -' . - ~ , ; :- , , - . ; : - ct : "

DETERMINATION OF OPERATING COSTS

END OF REPROCESSING PLANT CONSTRUCTION:
 START OF REPROCESSING

1986
 1985

CURRENCY:

-T U. PER YEAR

	TOTAL	1981	1982	1983	1984	1985	1986	19
COLLECTION POND-STORAGE REPROCESSING WASTE-STORAGE								
		1992	1993	1994	DISCOUNTED ON			
COLLECTION POND-STORAGE REPROCESSING WASTE-STORAGE								
CONSTANT PRICES IN CONSTANT MONETARY 7. 1977 E.C.								
TOTAL		1981	1982	1983	1984	1985	1986	19
		1992	1993	1994	DISCOUNTED ON			

DETERMINATION OF OPERATING COSTS

CURRENT PRICES IN CURRENT MONEY

	TOTAL	1981	1982	1983	198~	1985	1986	19
-OPERATING COSTS								
PONDS								
FIXED COSTS								
LOCAL RATES								
- REPROCESS,+WASTE								
FIXED COSTS								
VARIABLE COSTS								
L.OCAL RATES	' . . . ,							
		1992	1993	199~		DISCOUNTED ON 7.1977 AT		
						.00 .05 ,07 .1		

DETERMINATION OF THE COSTS

END OF REPROCESSING PLANT CONSTRUCTION:		1986					
START OF REPROCESSING		1985					
CURRENCY: MFF							
CURRENT PRICES IN CURRENT MONEY							
	TOTAL	1991	1982	1983	198'+	1985	1
-COSTS							
, DEPRECIATIONS							
POND 1							
POND 2							
POND 3							
POND '+							
	, ' (. . .						
REPROCES. PLANT							h
WASTE STORAGE							
.OPERATING COSTS							
		1992	1993	199'+		DISCOUNTED ON 7.1977	
						.00 .05	
		.u	.u	. .			

DETERMINATION OF UP-DATED ESTIMATED COST OH FUEL COLLEC

END OF REPROCESSING PLANT COHSTRUCTIONo 1986
 START OF REPROCESSING 1985

CURRENCY · MFF

197710 1977 1978 1979 1980 1981 1982

-INVESTMENT COMPONENT

.CUMULATED ¿
 .BALANCE " *
 BALANCE ***

-OPERATING COST COMPONENT

.CUMULATED ¿
 .BALANCE * *
 .PONDS
 FIXED COSTS
 LOCAL RATES
 .REPROCESS.+WASTE
 FIX[[1 COSTS
 VARIABLE COSTS
 LOCAL ·RATES

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DETERMINATION OF UP-DATED ESTIMATED COST ON FUEL COLLECT

END OF REPROCESSING PLANT CONSTRUCTION'	1986			
START OF REPROCESSING	1985			
CURRENCY' MFF				
	1987	1988	1989	1990
-INVESTMENT COMPONENT				
.CUMULATE[! ¿				
.BALANCE ¿¿				
BALANCE ***				
-OPERATING COST COMPONENT				
.CUMULATUr ¿				
.BALANCE **				
.PONDS				
FIXE[1 COSTS				
LOCAL RATES				
.REPROCESS.+WASTE	,,,			
FIXED COSTS				
VARIABLE COSTS				
LOCAL RATES				
.BALANCE n**				
.PONDS				
FIXED COSTS				
LOCAL RATES				
.REPROCESS.+WASTE				
FIXED COSTS				
VARIABLE COSTS				
LOCAL RATES				
			"¿'.J ¿	

¿ CUMULATED EXPENSES TO 7.I IN CURRENT HONEY
 ** BALANCE TO EXPENSES ON 7,I AT 7.I EC.
 *** BALANCE TO EXPENSES ON 7.I AT 7.1977 E.C.

NET FUND REQUIREMENTS
DETERMINATION

C:ND 01~ REPROCC:SSING PL.ANT CONST RU CTI ON: 1986
START Cl F. REPROCESSING 1985

CURRFNC:Y: MFT

	TOTAL.	1977	1978	1979	1980	1981
-ANNUAL. GROSS FUND RFQ, . INVESTMENTS . OPERATING COSTS						
		1988	1989	1990	1991	1992
-ANNUAL. GROSS FUND REQ . . INVESTMENTS . OPERATING COSTS						
		1977	1978	1979	1980	1981
		1988	1989	1990	1991	1992

NET FUND REQUIREMENTS
DETERMINATION

END OF REPROCESSING PLANT
START OF REPROCESSING CONSTRUCTION: 1986
CURRENCY' MFF 1985

	TOTAL	1977	1978	1979	1980	1981	1982	1983
-ANNUAL GROSS FUND REQ. . INVESTMENTS	p -.- .							
. OPERATING COSTS								
		1988	1989	1990	1991	1992	1993	199'+
-ANNUAL GROSS FUND REQ . . INVESTMENTS . OPERATING COSTS								
\		1977	1978	1,979	1980	1981	1982	1983
		1988	1989	1990	1991	1992	1993	199'+

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

and

N.Y. PROVINCIALE ZEEUWSE ENERGIEMAATSCHAPPIJ

AMENDMENT N° 1 TO THE SERVICE AGREEMENT

This Amendment is made this 26th day of October
One thousand nine hundred and seventy nine between
COMPAGNIE GENERALE DES MATIERES NUCLEAIRES
having their registered office at 31-33 rue de ta Federation, Paris 15e (hereinafter called "Reprocessor") of the one part and
N.V. PROYINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ

having their registered office at Middelburg, Nederland

(hereinafter called "The Company") of the other part.

WHEREAS an agreement for the reprocessing of FUEL (hereinafter called the Service Agreement) was signed between the Reprocessor and the Company on 20 March 1978

WHEREAS Clause 2-I0-1 of such Service Agreement provides that the Reprocessor shall not later than 31-12-1978 submit an offer for the transport of FUEL from the point of DELIVERY to the REPROCESSING PLANT,

WHEREAS the Reprocessor has submitted such offer on December 28th 1978 and the Company have accepted it on 3rd May 1979

NOW THEREFORE, IT IS HEREBY AGREED AS FOLLOWS:

CLAUSE 1

SCOPE OF AMENDMENT

The Reprocessor shall transport from the point of DELIVERY at the Reactor to the REPROCESSING PLANT the quantities of FUEL corresponding to the FIXED SCHEDULE defined in Clause 2-1 and according to the rights of the Company as set out in Clause 2-2 of the Service Agreement.

CLAUSE 2

SCOPE OF SERVICES

The services provided by the Reprocessor shall include :

- 2.1 Making available flasks, transport vehicles, support frames for the transport flasks and all other facilities required for transport, which transport vehicles and support frame shall be of such dimensions and weights as will assist their handling and be compatible with the loading facilities at the Reactor ;
- 2.2 Transport to the point of DELIVERY at the Reactor of flasks suitable for the transport of FUEL and compatible with the facilities at the Reactor together with all necessary transport equipment ;
- 2.3 Transport of flasks from the point of DELIVERY at the Reactor to the REPROCESSING PLANT ;
- 2.4 Routine and extraordinary maintenance of the flasks and their associated equipments, changing and preparation of internal equipment at the end of the transport campaigns and flushing operations whenever it is necessary to allow immediate loading at the Reactor but at least at the end of the transport campaigns;
- 2.5 Taking the necessary steps to secure all licences required for the transport arrangements and drawing up all safety reports required for this purpose, together with payment of any fees and charges to be paid therefor, including

Procurement of the transport approval from the competent authority of the country of origin of the shipment,

Validation by the competent authority of France and any intermediate countries of the transport approval of the originating country; and

Procurement of exceptional load transport approvals for terminal transport between rail siding and reactor.

It is however recognized that the Reprocessor will not be liable for the possible delays arising from the competent authorities to deliver the necessary licences, it being understood that the Reprocessor shall do its best endeavours to minimize the consequences of such delays.

2.6 Compliance with all relevant national and international regulations and contractual requirements during transport ;

2.7 Arranging required insurance cover (including such insurance cover as may by statute or governmental regulation be required in respect of nuclear incidents) including payment of all premiums, in respect of:

Any loss of or damage to any FUEL during its transport on the basis of a FUEL value of per kg of uranium,

Any injury (including injury resulting in death) damage or loss which may be sustained by any person during the transport of any FUEL or of empty transport flasks and which may be attributed wholly or partially to such FUEL, transport flasks or the arrangements under which the said FUEL or transport flasks is or are transported ;

2.8 Administration and control of transport arrangements including:

of

The design and provision of multi-lingual documentation to cover all aspects of transport and loading controls,

Provision of information concerning the transports to all authorities in accordance with regulatory requirements;

2.9 Arrangements of escorts to suit regulatory requirements;

2.10 Advice to the Reactor operator on all questions relating to the handling and operation of flasks including advice on handling equipment, cooling and drying plant for the flasks, testing equipment, contamination protection ;

2.11 Sending representatives to the Reactor to identify and qualify the condition of the FUEL to be transported in accordance with methods to be agreed and to examine the Reactor records of FUEL examination for the purpose of verifying the soundness of the fuel elements and ensuring compliance with the Reprocessor fuel acceptance criteria ;

2.12 Sending representatives of the Reprocessor to the Reactor for the

Technical assistance during loading of the flasks, it being understood that according to Clause 11.1.2 of the Service Agreement the Company shall remain responsible for the loading of the flask and will take all necessary decisions,

Verification of the loading positions of the fuel elements in the flask,

Verification of leak tightness controls and contamination and radiation measurements ;

2.13 Co-ordination of transport including:

Detailed planning of the full route from the point of DELIVERY to the REPROCESSING PLANT including arrangements for a secure site for any change in transport method such as transfer from road to rail vehicle,

Agreement with the Reactor operator on the transport programme in accordance with a centralized programme covering all fuel reception at La Hague.

CLAUSE 3

SERVICES TO BE PERFORMED BY THE COMPANY

- 3.1 In addition to the responsibilities defined in Clause 4-1-2 of the Service Agreement the Company shall provide any handling equipment permanently required at the Reactor.
- 3.2 The Company will grant to representatives of the Reprocessor a right of access to the Reactor facilities to such extent as necessary to exercise any of all services listed in Clause 2 above.

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4. 1 Liabilities

4.1.1 Notwithstanding the provisions of Clause 1/.2.4 of the Service Agreement, in t event of failure by the Reprocessor to exercise its rights under Clauses 2.11 2.12 the Company shall be deemed to have complied with the procedures.

4.1.2 With respect to damaged FUEL, the Reprocessor waives to implement Clause 4.2.3.2 of the Service Agreement if the flask is loaded in accordance with the agreed procedures. This waiver does not concern FUEL which fails to meet. the specifications.

4.2 ~of flask

4.2.1 , The type of flask used for :he transport will be NTL 8 unle otherwise AGREED or dictated by the circumstances.

The NTL 8 type flask will be normally capable t transpoM.ing 3 fu asse"Tiblies.

4.2.2 It is rnderlined that this flask is outside of the Acceptance Criteria for Discharge at La Hague Plant of LWR Fuel Element Transport Packagings and that it must be anticipated that, before the completioo of transports relevant this Amendment, this flask will have to be replaced. COG EMA will undertake to inform the Company of the need to replace the flasks as soon as possible and, a far as possible, not later than 2 years before the date at which replacement wi have to be effected.

4.3 Partially loaded flasks

FUEL shall be transported in full flask loads. Flasks which are not filled, for reasons due to the Company, may be transported under terms and conditions to be AGREED.

4.4 Failed fuel elements

Transport of failed fuel is outside the scope of this Amendment.

CHARGES

5.1

5.1.1 The FUEL shall be transported from the point of DELIVERY to the REPROCESSING PLANT for a price of French Francs per irradiated fuel assembly.

5.1.2 This price is based on the anticipation of a flask turn-around time of three days at the Reactor from the time of arrival at the Reactor site on the basis of a week of seven 24 hour days and on the assumption that the Company will accept flasks for loading during a period of not less than 300 days per year.

Should flasks remain at the Reactor more than three days between the time of DELIVERY of the empty flask and the time of DELIVERY of the FUEL, the Company shall pay to the Reprocessor a price of French Francs per extra day or part of an extra day provided that the Company was not advised otherwise by the Representative of the Reprocessor and provided that the flasks will be made available at the Reactor in such a condition as to allow immediate loading.

5.2 Price variation

The prices contained in this Amendment are based on costs ruling in December 1978 and shall be subject to % escalation from that date in accordance with the following formula:

$$P = P_0 (0,10 + 0,55 \frac{S}{S_0} + 0,08 \frac{P_{SciBo}}{P_{SciBo_0}} + 0,10 \frac{A_{icc}}{A_{icc_0}})$$

where:

p =escalated prices

Po = prices specified in paragraph .5.1 above

So = "indice dJ cout re la main doevre (Industries Mecaniques et Electriques)" published in the "Bulletin Mensue! des Statistiques de l'Institut National de la Statistique et des Etudes Economiques (INSEE)" for December 197&, i.e 241,9. ç.

PsdBo = "indice des prix des produits et services divers B" published in the "Bulletin Officiel des Services des prix (BOSP) "for December 197&, i.e 349.

Aia::o = "indice des prix des t'Oles chaud Z 2 CN 18-10 11 published in the "BOSP" for December 197&, i.e 215. a

Eo = price for "electricite haute tension, heures pleines mean price for 197&" published in "INSEE", i.e 0,1855 FF.

Go = "ind ice des prix de gros du gas-oil a !'hectolitre" published in th for December 1978, i.e 154,46.

Wo = "indice des prix de gros des vehicules utilitaires" published in the INSEE for December 1978, i.e 296,l.

S, PsdB, Aicc, G, W = same indices for the month of invoices.

E = same price as Eo for the year preceding the year of transport.

As the relevant indices for escalation are not available at the time an invoice is submitted the Reprocessor shall calculate sums due using the latest available indices and shall make the necessary adjustments at a later date when the relevant indices become available.

/

5.3 Price adjustment

The above mentioned prices shall be adjusted only when substantiated by proper evidence on six months' notice in the following cases :

change in any law or regulation applicable to transport,

drastic change in the transportation mode retained, such as the impossibility - in the case of road transport - to use the road or the impossibility - in the case of rail transport - for the Reprocessor to use the existing railway terminal at Equeurdreville,

variation in some price components which are not covered by the escalation formula,

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necessity to replace important pieces of equipment (flask, vehicle, basket) before their normal obsolescence.

5.4 Price review

The prices contained in this Amendment shall be valid according to the above mentioned reservations for the duration of the transports to be performed. However the parties shall have the right to ask for a review of such prices as of January 1986. In such a case this prices will then be reviewed in an equitable and non discriminatory way.

5.5 Consequences of delay

Should the Company delay the delivery of fuel with respect to the FIXED SCHEDULE or to any other AGREED schedule the Company shall pay to the Reprocessor an amount of money corresponding to the extra direct costs the Reprocessor shall demonstrate to have borne for the period of delay.

CLAUSE 6

PAYMENT

- 6.1 On the date of signature of this Amendment, the Reprocessor shall invoice to the Company a sum corresponding to % of the total estimated amount corresponding to the total quantity of FUEL to be transported under the Service Agreement.
- 6.2 On July 1st 1980 , the Reprocessor shall invoice to the Company a sum corresponding to 96 of the total estimated amount corresponding to the total quantity of FUEL to be transported under the Service Agreement.
- 6.3 The total estimated amount referred to in paragraphs 6.1 and 6.2 above will be calculated by multiplying the total expected quantity of fuel assemblies to be transported by the price referred to in Clause 5.1.1 and escalated in accordance with Clause 5.2. The total expected quantity of fuel assemblies will be determined taking into account an average weight per fuel assembly of 300 kg. Should the expected quantity of fuel assemblies differ from the quantity actually transported, Clause 6.5 shall apply.
- 6.IJ. Not earlier than two months before delivery of each consignment of FUEL the Reprocessor shall invoice to the Company a sum corresponding to of the price corresponding to the quantity of FUEL in the consignment.
- 6.5 Any adjustment arising from the implementation of Clauses 5.3 and 6.3 shall result in an invoice or a credit note, as the case may be, as soon as the amount of the adjustment is known.
- 6.6 Payments shall be effected not later than 60 days of invoicing but, for the payment under paragraph 6.1, not earlier than DELIVERY of FUEL.

TERMINATION

7 .I This Amendment shall remain in force until all the FUEL under the Service Agreement has been transported.

7.2 Notwithstanding the provisions of the above Paragraph, either party shall have the right to terminate this Amendment after 12 months' notice thereof has been sent to the other party if the other party has continually failed to perform its obligations under this Amendment.

Termination under this paragraph shall be without prejudice to the settlement of any rights which may have arisen hereunder before the date from which the termination shall be effective. Should termination take place, the Company shall keep their right to deliver FUEL to the Reprocessor within the framework of the principles of Clause 2.I0.2 of the Service Agreement and of COGEMA's Letter n° 78-1025 bis of 28th December 1978.

CONSULTATION

The Reprocessor shall consult the Company to contribute to the efficient performance of transport and more particularly in the field of investments. The decision shall however rest solely with the Reprocessor.

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CONFIDENTIALITY

- 9.1 The terms and conditions of this Amendment and all information and drawings provided by me party to the other under this Amendment shall be confidential. Neither party shall, without the prior written permission of the other, disclose such terms and conditions or information or drawings received from the said other party to any third party, except to such extent as may be required by relevant government authorities or other authorities having due legal competence or as may be necessary for the proper performance of this Amendment.
- 9.2 When the parties disclose any of the documents referred to in the above Clause JO.I they shall draw attention of the third party to whom the documents are disclosed to the fact that these documents are confidential and, as far as practicable they will endeavour to commit the said third party to keep the documents confidential.

VALIDITY OF THE SERVICE AGREEMENT

All terms and conditions of the Service Agreement which are not contradictory to this Amendment shall remain in force.

SIGNED BY

G. Besse

260CU979

for on behalf of

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

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SIGNED BY

If. M:D. Dalebout

for and on behalf of

N. V. PROVINCIALE ZEEUWSE ENERGIE-MAI\ TSCHAPPIJ

COMPAGNIE GENERALE DE;S MATIERES NUCLEAIRES

N.V. PROVINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ

AMENDMENT N° 2 TO THE SERVICE AGREEMENT

This Amendment is made this 18th day of August
One thousand nine hundred and eighty nine between

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

having their registered office at 2, rue Paul Dautier, F - 78140 VELIZY
VILLACOUBLAY (hereinafter called the "REPROCESSOR") on the one part and

N.V. PROVINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ

having their registered office at Middelburg, Nederland (hereinafter called the
"COMPANY") on the other part.

WHEREAS an agreement for the reprocessing of FUEL (hereinafter called the
SERVICE AGREEMENT) was signed between the REPROCESSOR and the COMPANY on 20
March 1978,

WHEREAS an amendment N" 1 to the Service Agreement fixing the transport
conditions was signed on 26 October 1979,

WHEREAS the quantities to be DELIVERED under the Service Agreement are increased
by 20 tonnes of uranium, and,

WHEREAS an Amendment n' 1 to the Contract URG NL.B0.15A for the transport of 5.9
extra tonnes of uranium was signed on November 18th, 1988,

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CLAUSE 1 - SCOPE OF THIS AMENDMENT

The scope of this Amendment is, on the one hand, to increase the quantities of FUEL to be transported by the REPROCESSOR from the point of DELIVERY at the reactor to the REPROCESSING PLANT from 120 tonnes of uranium (pursuant to Clause 1 of the Amendment n' 1) to 145.90 tonnes of uranium and, on the other hand, to modify the transport price.

CLAUSE 2 - QUANTITY

The additional quantities to be transported consist of 25.90 tonnes of uranium composed as follows :

20 tonnes of uranium due to the increase from 6000 to 7000 tonnes of UP3-A's capacity,

5.90 tonnes of uranium in the framework of Amendment N" 1 to the Contrat URG NL.B0.15A signed on 18 November 1988,

The schedule is the following, in tonnes

1991	1992	1993
11.7	12.3	1.9

CLAUSE 3 - CHARGES

- 3.1 The FUEL shall be transported from the point of DELIVERY to the REPROCF..SSING PLANT for a price of French Francs per irradiated fuel assembly, this price is applicable as from transport n ; 88-01.
- 3.2 The price is based on the anticipation of a flask turn-around time of three days at the reactor from the time of arrival at the reactor site on the basis of a week of seven 24 hour days and on the assumption that the COMPANY will accept flasks for loading during a period of not less than 300 days per year.

Should a flask remain at the reactor more than three days between the time of DELIVERY of the empty flask and the time of DELIVERY of the FUEL, the COMPANY shall pay to the REPROCESSOR a price of French Francs per extra day or part of an extra day provided that the COMPA!\Y was not advised otherwise by the representative of t.he REPROCESSOR and provided that th.3 flasks will be made available at the reactor in such a cong_i-tiOQ.,.as to allow immediate loading.

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This Amendment is made this 18th day of August
One thousand nine hundred and eighty nine between

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

having their registered office at 2, rue Paul Dautier, F - 78140 VELIZY
VILLACOUBLAY (hereinafter called the "REPROCESSOR") on the one part and

N.V. PROVINCIJILE ZE. bll'i/SE ENERGIE-MAA'ISCHAPPIJ

having their registered office at Middelburg, Nederland {hereinafter called the
"COMPANY") on the other part.

WHEREAS an agreement for the reprocessing of FUEL (hereinafter called the
SERVICE AGREEMENT) was signed between the REPROCESSOR and the COMPANY on 20
March 1978,

WHEREAS an amendment N^o 1 to the Service Agreement fixing the transport
conditions was signed on 26 October 1979.

WHEREAS the quantities to be DELIVERED under the Service Agreement are increased
by 20 tonnes of uranium, and,

WHEREAS an Amendment n^o 1 to the Contract URG NL.B0.15A for the transport of 5.9
extra tonnes of uranium was signed on November 18th, 1988,

NOW THEREFORE, IT IS HEREBY AGREED AS FOLLOWS

3.3 Price variation

The prices contained in this Amendment are based on costs ruling in January 1986 and shall be subject to escalation from that date in accordance with the following formula :

$$p = (0.10 + 0.55 + 0.08 \frac{\text{PsdB}}{\text{PsdBo}} + 0.10 \frac{\text{Aicc}}{\text{Aicco}} + 0.08 \frac{\sim}{\text{Eo}} + 0.011 \frac{Q}{\text{Go}} +$$

where

P = escalated prices.

Po = new basic prices specified in paragraph 1 above.

So = "indice du coat de la main d'oeuvre (industries mecaniques et electriques)" published in the "Bulletin Mensuel de Statistique de l'Insti tut National de la Statistique et des Etudes Economiques (INSEE)" for January 1986, i.e. 563.3.

PsdBo = "indices des prix des produits et services divers B" published in the "'Bulletin Officiel des Services et des Prix (BOSP)" for January 1986, i.e. 724.0.

Aicco = "indice des prix des toles LAC Z2 CN 18-10" published in the "BOSP" for January 1986, i.e. 347.0.

Eo = "indice de prix de vente a la production de l'electricite distribuee, haute et tres haute tension, corrige des variations saisonnieres (CVS)" published by INSEE for January 1986, i.e. 163.0.

Go = "indice mensuel du prix a la consommation du gazole" published by INSEE for January 1986, i.e. 164.1.

Wo = "indice des prix des automobiles (ensemble)" published by INSEE for January 1986, i.e. 129.0.

S, PsdB, Aicc, E, G, W : same indices for the month of transport.

As the relevant indices for escalation are not available at the time an invoice is submitted, the sums due shall be calculated using the latest available indices. These sums shall be adjusted at a later date when the relevant indices become available.

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CLAUSE 4 - VALIDITY OF THE SERVICE AGREEMENT AND AMENDMENT N°1
The wording of the clauses 5.1 and 5.2 of the Amendment No. 1 to the Service Agreement is superseded by the terms of this Amendment No. 2. All terms and conditions of the Service Agreement and Amendment N° 1 which are not contradictory to this Amendment shall remain in force.

SIGNED BY Mr J. SYROTA

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for and on behalf of

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

SIGNED BY

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..~a on behalf of

..~--
N. V. PROVINCIALE ZELFSTANDE ENERGIEMAATSCHAPPIJ

COMPAGNIE GENERALE DES MATIERES

NUCLEAIRES

and

N.V. ELEKTRICITEITS · -

PRODUK'FIEMAATSCHAPPIJ ZUID -

Nederland

E.P .Z.

AMENDMENT N° 3

to the

SERVICE AGREEMENT

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Nederland E.P.Z.

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Produktiemaatschappij Zuid · Nederland E.P.Z.

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MATIERES NUCLEAIRES and/or N.V. , , i . ~ ¿ ~ · "'iti" Jteits-
Produktiemaatschappij Zuid - Nederland E.P.Z. ·1> '·\him.

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This Amendment is made this ' :) ' ~ day of
One thousand nine hundred and ninety three between

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COMPAGNIE GENERALE DES MATIERES NUCLEAIRES
having its registered office at 2, rue Paul Dautier,
78140 Velizy-Villacoublay
FRANCE

(hereinafter called "the Reprocessor") of the one part

AND

N. V. Elektriciteits - Produktiemaatschappij Zuid - Nederland E P Z
having their registered office at
De Blecourtstraat I
5652.GB EINDHOVEN
NETHERLANDS

(hereinafter called "the Company") of the other part.

The Reprocessor and the Company being from time to time in this
Amendment referred to as "the Parties".

'WHEREAS the Reprocessor and N.V. PZEM signed on March 20th 1978 a
Service Agreement ("the Service Agreement") for the REPROCESSING of
. FUEL arising from the POWER STATION,

AND WHEREAS the Service Agreement was amended by Amendments
n° 1 and n° 2 and Amendment A,

AND \WHEREAS all the rights and obligations of N.V. PZEM were
transferred to the Company,

AND WHEREAS Clause 2.3 of the Service Agreement provides that the Reprocessor is committed to offer a supplementary capacity in the REPROCESSING PLANT,

AND WHEREAS the Company wish to extend the Service Agreement to the scheduled final operating date of the POWER STATION i.e. December 31st 2003,

AND WHEREAS the Reprocessor is prepared to extend the Service Agreement to FUEL discharged until December 31st 2004, with an additional option until December 31st 2015,

AND WHEREAS the Reprocessor and the Company intend to consequently amend the Service Agreement,

NOW THEREFORE, IT IS HEREBY AGREED AS FOLLOWS

CLAUSE I
DEFINITIONS

In this Amendment and the Appendices hereto the expressions shall, unless the context otherwise requires, following meanings respectively (with the singular including and verb tenses being changed as the context may require) , following have the the plural that is to say :

"AGREED"

means agreed in writing between the parties ;

"AVAILABILITY PROGRAMME"

means the programme which shall specify the estimated dates when quantities of uranyl nitrate and plutonium dioxide shall be MADE AVAILABLE to the Company at the REPROCESSING SITE;

"CONSIGNMENT"

means

- (a) in respect of FUEL, the quantity of FUEL delivered at one time and shall consist of at least one full or partially full transport FLASK ;
- (b) in respect of uranium and plutonium, the quantity transported at one time ;
- (c) in respect of RESIDUES, the quantity transported at one time to a particular REPOSITORY;

"COOLED"

means stored after discharge from the reactor, for such period of time as shall permit transportation of the FUEL, or REPROCESSING of the FUEL, as the case may be;

"COVRA"

means "Centrale Organisatie voor Radioactief Afval B.V."

"DELIVERY"

means

(a) in respect of FUEL transport :

(1) in respect of the empty (i.e. free of FUEL) FLASK : the unloading of the FLASK from the transport vehicle at the installation where the FUEL is stored by the Company;

(2) in respect of FUEL : the loading of the FLASK containing the FUEL onto the transport vehicle at the installation where the FUEL is stored by the Company ;

(b) in respect of uranium and plutonium : the meaning ascribed thereto in Clause 6. 7 ;

(c) in respect of RESIDUES : the meaning ascribed thereto in Clause 8. 7

(d) in case of return of FUEL according to Clause 9.1.8.2 : where and when the FLASK and/or the FUEL are physically handed over ;

"DELIVERY PROGRAMME"

means the programme for the DELIVERY of FUEL during one calendar year ;

"FACILITY"

means a part of the REPROCESSING PLANT, directly needed for the operations defined in this Amendment. A list of these FACILITIES is attached to this Amendment as Appendix 16. (Capital estimates 1 through 17 of the initial investment of UP3-A) ;

"FIRM QUANTITY"

means the firm quantity of FUEL notified by the Company as being available for DELIVERY;

"FLASK"

means container suitable for the transport of FUEL or of RESIDUES

"FUEL"

means fuel assemblies irradiated in the POWER STATION;

"FUEL DUE FOR REPROCESSING"

means all the FUEL discharged from the POWER STATION until December 31st, 2004, after deduction of the FUEL under the Service Agreement ;

HEAVY METAL'' or ''HM''

means all the isotopes of uranium and plutonium contained in the FUEL before irradiation ;

"HIGH BURN-UP FUEL"

means uranium FUEL as described in Appendix 1 for which FUEL the Reprocessor reserves the right to have it REPROCESSED in UP2-PLANT as a result of burn-up limits applicable in UP3-A :

"MADE AVAILABLE"

means

- (a) in respect of FUEL, FUEL acceptable to the Reprocessor pursuant to Clause 4.3.2 and which has been declared by the Company as being available for DELIVERY;
- (b) In respect of uranium and plutonium, uranium and plutonium which has been declared by the Reprocessor to be available for collection by the Company from the REPROCESSING SITE.

"MONTH"

means any period of thirty days in successwn

"MOX FUEL"

means FUEL as described in Appendix 1 which prior to irradiation contains plutonium and which the Reprocessor reserves the right to have REPROCESSED in UP2-PLANT :

"NOTIFIED DATE"

means in respect of uranyl nitrate and plutonium dioxide the date notified by the Reprocessor to the Company under the AVAILABILITY PROGRAMME when such products are estimated to be MADE AVAILABLE ac the REPROCESSING SITE;

"POWER STATION"

means unit 30 of the nuclear power plant in BORSSELE, Netherlands

"PROVISIONAL DELIVERY PROGRAMME"

means the programme for the expected DELIVERY of FUEL to the Reprocessor during a period of two consecutive YEARS ;

"PROVISIONAL QUANTITY"

means the quantity of FUEL expected to be MADE AVAILABLE for transport, STORAGE and REPROCESSING;

"REPOSITORY"

means a site or facility wherein the Company shall arrange for storage of RESIDUES relevant to the Company's FUEL ;

"REPROCESSING"

means the separation of the plutonium, uranium and fission products contained in the FUEL including the conversion of plutonium into plutonium dioxide and the conversion of WASTE into RESIDUES ;

"REPROCESSING PLANT"

means the LJP3-A REPROCESSING facilities ;

"REPROCESSING SITE"

means the site of the establishment at La Hague, Manche ;

"RESIDUES"

means all such WASTE as defined below which is in a form suitable for transportation and return to the Company pursuant to the provisions of Clause 8 hereof ;

II SEP"

means "N. V. Samenwerkende elektriciteits-produktiebedrijven";

"STORAGE"

means

- (a) in respect of FUEL : the storage of FUEL in the ponds prior to REPROCESSING at the REPROCESSING SITE ;
- (b) in respect of uranium and plutonium, the storage of uranium and plutonium after the date on which the same are 1\FADE AVAILABLE and prior to the collection of the same from the REPROCESSING SITE ;
- (c) in respect of WASTE, the interim storage of WASTE prior to conversion into RESIDUES ;
- (d) in respect of RESIDUES, the storage of any such RESIDUES by the Reprocessor until DELIVERY thereof to the Company ;

II SWU"

means Separative Work Unit ;

"UP2-PLANT"

means the REPROCESSING facilities other than the REPROCESSING PLANT located on the REPROCESSING SITE;

"WASTE"

means and includes any radioactive item falling within the description of "waste" as described in paragraph i of Part A of Appendix 13 hereof when such items have not been converted into RESIDUES ; it being understood that any item shall be considered as radioactive following the instructions imposed by the French safety authorities.

"YEAR"

means a calendar year.

.SCOPE OF AMEND:\1ENT

2 .1 The Company shall, during the period from January 1st 1993 to 31st December 2005, MAKE AVAILABLE to the Reprocessor and the Reprocessor shall accept from the Company for transport, STORAGE and REPROCESSING under the terms of this Amendment the FUEL DUE FOR REPROCESSING arising from the POWER STATION. The quantity of such FUEL is estimated to represent 167,7 tonnes of HEAVY METAL to be discharged and REPROCESSED in accordance with the tentative schedule set out below:

POWER STATION	YEAR OF DISCHARGE FROM THE	NUMBER OF ASSEMBLIES DISCHARGED	QUANTITY (of heavy metal) CONTAINED IN FUEL ASSEMBLIES BEFORE IRRADIATION		YEAR OF DISSOLUTION
			ANNUAL	CUMULATED	
	1992	12	3,8	3,8	2001
	1993	36	11,4	15,2	2001
	1994	36	11,4	26,6	2001
	1995	36	11,4	38	2002
	1996	36	11,4	49,4	2002
	1997	36	11,4	60,8	2003
	1998	36	11,4	72,2	2003
	1999	36	11,4	83,6	2004
	2000	36	11,4	95	2005
	2001	36	11,4	106,4	2006
	2002	36	11,4	117,8	2007
	2003	36	11,4	129,2	2008
	2004	121	38,5	167,7	2008

Should the lifetime of the POWER STATION be extended after December 31st 2003, the quantity estimated to be discharged in 2004 would be reduced to 11,4 t HM.

The above tentative schedule represents the best estimate of the Parties on the date of signature hereof. The Parties shall update such tentative schedule not later than October 31st in each YEAR, the first such update to be given in October 1993.

The Company shall inform the Reprocessor of their FUEL arisings. In order to discuss the actual FUEL discharges from the POWER STATION, the Reprocessor may require all necessary information from the Company including their notifications to the appropriate safeguardings authorities. The Parties shall .then AGREE on the FUEL DUE FOR REPROCESSING and MADE AVAILABLE for transport, it being agreed that all the FUEL MADE AVAILABLE will be REPROCESSED.

2. 2 The Parties AGREE that by entering into this Amendment, the Reprocessor is discharged from its obligations under Clauses 2.3.3 and 2.3.4 of the Service Agreement and that the Company keep all their rights under Clause 2.3.2 of the Service Agreement. If the situation occurs that the Company have the right and use such right in pursuance of Clause 2.3.2 of the Service Agreement to have more FUEL REPROCESSED than the 140 tonnes now foreseen in the 7.000 tonnes to be REPROCESSED in the first ten years, this FUEL if foreseen in the schedule for this Amendment will be reallocated to the Service Agreement.

The provisions of Clause 9.1.8.1 will not apply to the reallocated FUEL. Payments already made by the Company with respect to the quantities reallocated to the Service Agreement, concerning the down payment on fuel delivery in pursuance of Clause 9.2.2.1 and concerning the extension of storage in pursuance of Clause 9.2.2.3, shall be deemed to have been made with respect to the same quantities next to be delivered. No further escalation shall apply to those payments.

2.3

BASELOAD CUSTOMERS (according

for in the. Service Agreement) in the framework of the Reprocessor's standard terms and conditions during the period defined in Clause 2.3.3 of the Service Agreement will not be lower than the price defined in this Amendment divided by 0;85 and escalated according to Appendix 14 to the same economical conditions.

If the Reprocessor fails to fulfill this guarantee, the REPROCESSING price in this Amendment will be adjusted in order to reflect a discount of % with respect to the price applying to the non BASELOAD CUSTOMERS.

Such adjustment shall be annually determined from the time such a lower price has been granted to a non BASELOAD CUSTOMER and shall be limited to a quantity of FUEL corresponding to the rights of the Company resulting from the implementation of Clause 2.3.3 of the Service Agreement, Le.

120

of the annual capacity expected to be available.

12000

2. 4 The Reprocessor guarantees that the price for REPROCESSING of fuel of a similar type in the REPROCESSING PLANT, at the standard . terms and conditions applying to customers other than BASELOAD CUSTOMERS (according to the definition provided for in the Service Agreement) during the period defined in Clause 2.3.4 of the Service Agreement will not be lower than the price defined in this Amendment as escalated according to Appendix 14 to the same economical conditions ..

If the Reprocessor fails to fulfill this guarantee, the REPROCESSING price in this Amendment will be adjusted in order to reflect the standard terms and conditions applying to the non B\SELOAD CUSTDMERS ..

Such adjustment shall be annually determined from the time such a lower price has been granted to a non BASELOAD CUSTOMER and shall be limited to a quantity of FUEL corresponding to the rights of the Company resulting from the implementation of Clause 2.3.4 of the Service Agreement, i.e.
120

of the annual capacity expected to be available.
6000

2. 5 In addition to the provisions of Clause 2.1 herein, the Company have an option to require the Reprocessor to accept for transport, STORAGE and REPROCESSING the FUEL discharged from the POWER STATION after December 31st 2004 and until December 31st 2015 under the terms and conditions of this Amendment. Such option will have to be exercised not later than December 31st 2000.

It is however AGREED that if the Reprocessor can demonstrate between January 1st 1998 and December 31st 1999 the existence of a concrete sales possibility which would affect the STORAGE and/or REPROCESSING capacities kept available for the option, the Parties shall consult together. The Company shall decide, within 6 MONTHS following such consultation if they elect to exercise or to waive all or part of the option.

The Parties may also AGREE to postpone all or part of the option.

Should the Company consider not to exercise the option for economical reasons, they will inform the Reprocessor and ask the Reprocessor for an alternative proposal. At the final decision, the Company will take into account their long term cooperation with the Reprocessor.

Should the Company elect to exercise the option referred to hereabove, the definition of FUEL DUE FOR REPROCESSING shall be extended to FUEL discharged until December

2. 6 Should the Reprocessor determine that the REPROCESSING PLANT will still be in working condition after December 31st 2015 and should the POWER STATION be still in operation, extra quantities will, after consultation with the Company, be accepted for REPROCESSING for the expected life-time of the REPROCESSING PLANT, subject to an agreement of the Parties on the REPROCESSING charges and other charges to be reached not later than two YEARS before the expected date for the last DELIVERY of FUEL under this Amendment, as entered into under the above Clause 2.1.
2. 7 The Company may DELIVER MOX FUEL and HIGH BURN-UP FUEL subject to the provisions of Appendix 1 herein.
2. 8 The FUEL shall conform to the relevant specifications set out in Appendix 1 hereto, or to such other specifications as may be AGREED.
2. 9 The Reprocessor. will accept damaged FUEL subject to specific conditions to be AGREED.
- 2 .10 The Company may terminate this Amendment at any time for reasons other than Force Majeure subject to the provisions of Clause 9.1.8.1.
2. 11 Following REPROCESSING, the Reprocessor shall recover uranium and plutonium. Unless otherwise AGREED, WASTE shall be STORED by the Reprocessor prior to conversion into RESIDUES. At all times, FUEL, uranium, plutonium, WASTE and RESIDUES derived or. deemed to be derived from such FUEL shall never be the property of the Reprocessor unless otherwise AGREED.
2. 1 2 Should REPROCESSING be suspended the REPROCESSING PLANT, the Reprocessor shall performed in the UP2-PLANT.

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- 2 .13 Should the Reprocessor, for reasons other than Force Majeure, not be in a position to REPROCESS in any YEAR the relevant quantities provided for under the above Clause 2 .1, it shall MAKE AVAILABLE to the Company, on request of the Company, substitute quantities of uranium and/or plutonium corresponding to the quantities of FUEL which should have been REPROCESSED.
2. 14 The Reprocessor is prepared to store uranium recovered from REPROCESSING under a form and conditions to be AGREED.
- 2 .15 The representatives sent by the Reprocessor to the POWER STATION will be accepted subject to all applicable rules. it being AGREED that Appendix 15 will apply mutatis mutandis.

CLAUSE 3

SCOPE OF SERVICES

The Reprocessor shall provide services for which it is firmly committed and shall also provide services at the Company's option.

3.1 Firm commitments

The Reprocessor is firmly committed for the following services

transport of FUEL,

unloading of FUEL from the transport flasks,

STORAGE of FUEL for a maximum period of 2 YEARS before dissolution which takes place when the sheared FUEL comes into the dissolver,

REPROCESSING of FUEL including STORAGE of WASTE,

STORAGE of uranyl nitrate for a maximum period of 91 days,

STORAGE of plutonium dioxide for a maximum period of 2 YEARS,

STORAGE of RESIDUES for a maximum period of 3 YEARS.

3.2 Additional service

3. 3 Optional commitments

The Reprocessor shall provide or arrange the making available of the following services subject to prior AGREEMENT on the terms and conditions with the Company :

STORAGE of plutonium dioxide for more than two YEARS,

STORAGE of uranyl nitrate for more than 91 days,

transport of plutonium dioxide to the place designated by the Company,

transport of uranyl nitrate to the place designated by the Company,

long term STORAGE of uranium in a form to be AGREED,

transport of RESIDUES,

conversion of uranyl nitrate to another form.

re-enrichment of the recovered uranium,

providing advice and design information to the Company relevant to storage of RESIDUES at the REPOSITORY.

supply of MOX FUEL.

CLAUSE 4

DELIVERY AND TRANSPORT OF FUEL

4 .1 PROGRAMMES

The Parties shall AGREE on the DELIVERY PROGRAMME of FUEL which is to be DELIVERED by the Company according to the provisions of Appendix 2. Such programme shall take into account the requirements of the POWER STATION.

4. 2 DELIVERY AND TRANSPORT OF FUEL

4.2.1 RESPONSIBILITIES

4. 2 .1.1 The Reprocessor shall be responsible for transporting each CONSIGNMENT from the point of DELIVERY to the REPROCESSING SITE. More particularly, the Reprocessor shall

- - make available at the POWER STATION the flasks together With the ancillary equipment and the transport means,

take the necessary steps to secure all licences required,

arrange all the necessary insurance covers,

send representatives to the POWER STATION m order to give advice on the flasks handling and

that all transport matters shall as far as practicable be arranged in accordance with the Company's wishes.

4. 2 .1. 2 The Company shall be responsible for :

- accepting the empty FLASK at the point of DELIVERY;
- unloading the FLASK from the transport vehicle ;
- loading the FUEL into the FLASK ; decontaminating the loaded FLASK
- loading the loaded FLASK onto the transport vehicle ; providing the equipment permanently required at the POWER STATION.

4.2.1.3 The Company shall use its best endeavours to ensure that DELIVERY to the Reprocessor of each CONSIGNMENT is completed in accordance with the DELIVERY PROGRAMME referred to in Appendix. 2. If the Company foresee that, through any cause attributable to the Company there is any likelihood of delay in DELIVERY of a CONSIGNMENT, they shall give notice to the Reprocessor and the Parties shall consult together with a view to reaching an AGREEMENT on the course of action to be taken in the circumstances.

4.2.1.4 If DELIVERY of a CONSIGNMENT is not completed

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- arrange for the departure of the transport vehicle to be delayed until DELIVERY has been completed, or
- arrange for the departure of the transport vehicle without delay notwithstanding the fact that DELIVERY of a full FLASK has not been effected.

4. 3 SPECIFICATIONS REGARDING TRANSPORT

4.3.1 FLASKS

.The FUEL shall be transported in FLASKS which shall be to a design and specification which shall be specified by the Reprocessor or after consultation with the Company. The FLASKS and any internal support material shall be provided by the Reprocessor and shall be DELIVERED to the Company at the point of DELIVERY.

Such FLASKS shall comply with the regulations referred to in Clause 4.3.6 below.

The Reprocessor shall DELIVER to the Company the empty FLASKS in such conditions as to allow immediate loading.

4.3.2 Fuel cooling time

The Reprocessor shall accept DELIVERY of FUEL which has between the date of discharge from the reactor and the date of DELIVERY to the Reprocessor been COOLED for at least a period defined as may be AGREED.

In addition to the foregoing, on a case by case basis, the Reprocessor will use reasonable efforts to assist the Company to overcome problems if any. caused by limitations of cooling pond capacity at the POWER STATION and licensing restrictions. In such cases the acceptance of DELIVERY of FUEL which has been COOLED for a shorter period than that defined in the above paragraph shall be granted, provided this is technically feasible.

4.3.3 Damaged FUEL and FUEL outside specifications

4. 3. 3 .1 The Company shall when the information set out in Appendix 3 Part D is provided to the Reprocessor also notify the Reprocessor if they know or suspect that any of the FUEL which they wish to send to the Reprocessor, is damaged or otherwise fails to meet the specifications set out in Appendix 1.

Following such notification the Reprocessor shall undertake to accept such FUEL and if the Reprocessor shall then be able to accept such FUEL, the Parties shall consult together to determine under which conditions such FUEL may be DELIVERED to the Reprocessor.

4. 3. 3. 2 In the event a CONSIGNMENT is found after arrival at the REPROCESSING SITE to include any FUEL which fails to meet the specifications set out in Appendix I and in respect of which the Company had not previously notified the Reprocessor in pursuance of Clause 4.3.3.1 the Reprocessor shall may be deemed necessary, acting as a operator.

In the event such measures are found to be necessary, the Reprocessor will endeavour to notify the Company of the nature of the damage or failure as aforesaid and of the action taken or to be taken in respect thereof, if possible before such action is taken and in any event thereafter provided always that such notification shall in no way limit or derogate from the Reprocessor's discretion to take such special measures. The costs of such special measures will be invoiced to the Company as provided for under Clause 9.1.4 hereto, if the failure to meet the specifications set out in Appendix I is not due to the transport of the FUEL.

4.3.4 Procedures

Before the DELIVERY of each CONSIGNMENT of FUEL to the Reprocessor, the Company shall ensure that each of the fuel assemblies has been packed in accordance with procedures to be specified by the Reprocessor after consultation with the Company. Representatives of the Reprocessor shall have the right to witness the performance of those procedures. In the event of the exercise by the Reprocessor of :

the foregoing right revealing non compliance by the Company with any of the requirements of the said procedures or non-compliance with the specifications set out in Appendix I, and/or

the right to inspect the fuel assemblies which shall have been stored in a FLASK for periods in excess of 15 days.

the Company shall take such measures as may, in the opinion of the Reprocessor acting as a prudent and reasonable operator, be necessary to ensure compliance with the said requirements.

A consignor's certificate shall be completed by the Company in respect of each FLASK delivered to the Reprocessor together with a loading chart showing the position of each fuel assembly in the FLASK. Without prejudice to the provisions of this Amendment, the Reprocessor shall, without extra charge to the Company, have the right to provide the Company at the point of DELIVERY either by attendance of a technical officer or by other means, with advice on the handling of FLASKS, on the decontamination of filled FLASKS and on the general co-ordination at the point of DELIVERY of the responsibilities of the Company listed in Clause 4.2.1.2.

4.3.5 Regulations applicable at the reactor site

In due time when required by the Reprocessor the Company shall notify the Reprocessor of the regulations which are applicable within the site of the POWER STATION referred to in this Amendment. The Reprocessor will comply with these regulations.

4.3.6 Radiation and contamination = regulations for transport

The Company shall, on DELIVERY to the Reprocessor of each FLASK containing FOEL, ensure that it complies in respect of radiation and contamination with limits set out in the Regulations for the Safe Transport of Radioactive Materials (J 985 Edition) published by the International

such other authorities.

CLAUSE 5

STORAGE OF FUEL AND REPROCESSING

5. 1 After transport of each CONSIGNMENT of FUEL to the REPROCESSING SITE the Reprocessor shall STORE such FUEL until such time as the same is REPROCESSED hereunder.

5. 2 After consultation of the Company, the REPROCESSING programmes will be established by the Reprocessor on a non discriminatory basis between all the customers, according to the best technical advantage of the REPROCESSING PLANT, it being AGREED that the Reprocessor has to take into account the needs of the Company inasmuch as they do not hinder the rights of the other customers and the optimization of operation of the REPROCESSING PLANT.

When establishing the REPROCESSING programmes, the Reprocessor will take into account the COOLING period of the fuel assemblies before dissolution according to their burn-up as indicated hereafter :

Average burn-up per fuel assembly MWD/t HM	up to	35 001	47 501	up to
	35 000	to	to	52 000
		47 500	60 000	
	for Uranium FUEL	for Uranium FUEL	for Uranium FUEL	for MOX FUEL

COOLING (years)	3	4
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5. 3 When the Company's FUEL is actually dissolved for REPROCESSING, the Reprocessor shall determine the weights of uranium, plutonium and fissile isotopes thereof in accordance with the provisions of Appendix 4 and as soon as practicable after the results are available, the Reprocessor shall notify the same to the Company.
5. 4 After the samples have been taken from the FUEL in accordance with Appendix 4, the solutions derived from the FUEL may at the Reprocessor's discretion be physically and chemically mixed during REPROCESSING with solutions derived from other fuel in accordance with normal operational requirements.
5. 5 The Reprocessor shall, following REPROCESSING of quantities of FUEL, recover quantities of uranium and plutonium which the Reprocessor shall subsequently allocate to the Company. It is recognized that operation requirements may demand that the Reprocessor allocates to the Company uranium or plutonium not actually derived from the Company's FUEL.
5. 6 The REPROCESSING of HIGH BURN-UP FUEL and of MOX FUEL is subject to the following conditions
5. 6.1 The Company - whether or not they intend to DELIVER MOX FUEL - accept that the Reprocessor shall have the right to mix the Company's FUEL - whether uranium or MOX FUEL - with uranium or MOX FUEL of any other customers.
5. 6. 2 The Reprocessor may REPROCESS HIGH BURN-UP FUEL and MOX FUEL in the UP2-PLANT. Such a decision shall

such assignment will require

between UP2 and UP3 customers including the Company and the parties AGREE that such swaps will be coordinated by the Reprocessor and that the Company will not object to such swaps and will accept to assist the Reprocessor for all the administrative arrangements which might then be needed.

5. 6. 3 MOX FUEL will be accepted by the Re processor if the following conditions are fulfilled in addition to the conditions of Clauses 5.6.1 and 5.6.2 hereof :

5. 6. 3 .1 If the Company commit themselves to DELIVER in a given YEAR or in the YEARS next following quantities of uranium FUEL at least three times larger than the quantities of MOX FUEL still to be DELIVERED, the Reprocessor shall accept all such MOX FUEL without reservations,

5. 6. 3. 2 If the Company wish to DELIVER a proportion of MOX FUEL higher than that determined under Clause 5.6.3.1, the Reprocessor shall accept these extra quantities of MOX FUEL if the relevant necessary quantities of uranium FUEL not already committed for the REPROCESSING of other MOX FUEL DELIVERED or still to be DELIVERED can be found by the Reprocessor among other customers.

CLAUSE 6

URANIUM AND PLUTONIUM

All the provisions of this Clause are subject to Clause 21.1, 21.2.2. and 21.2.3. of the SERVICE AGREEMENT:

6 .1 PROGRAMMES FOR MAKING AVAILABLE URANIUM AND PLUTONIUM

The programmes for the MAKING AVAILABLE of uranium and plutonium are set out in Appendix 5 hereof.

6. 2 AVAILABILITY OF URANIUM

6.2.1 Uranium MADE AVAILABLE shall be in the form of uranyl nitrate to the specifications set out in Appendix 6, or any specifications accepted by the European uranium converters.

6. 2. 2 The quantity of uranium as uranyl nitrate to be MADE AVAILABLE shall be in accordance with the provisions of Appendix 7.

6.2.3 Before the uranium as uranyl nitrate is MADE AVAILABLE, the Reprocessor shall carry out the output determination in accordance with the provisions of Appendix 8.

6. 2.4 The Company have the option either to arrange for collection of uranyl nitrate or to request the Reprocessor to arrange the transport of the uranyl nitrate. Upon request of the Company the Reprocessor shall submit to the Company the terms and conditions of such transport services two YEARS in advance of the expected date of the transport. Within six the Company shall decision.

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6.2.4.1 In case the Company decide to arrange for collection they shall not later than forty two days before the NOTIFIED DA TES referred to in Appendix 5 arrange to make available to the Reprocessor at the REPROCESSING SITE containers for the uranyl nitrate solution and not later than three MONTHS after the uranyl nitrate is MADE AVAILABLE arrange to collect and transport the uranyl nitrate containers from the REPROCESSING SITE.

6. 2. 4. 2 In case the Company decide to request the Reprocessor to arrange the transport of uranyl nitrate, the Reprocessor shall provide such transport at the then AGREED terms and conditions.

6.2.5 If, for any reason, the Company have failed to provide containers for the uranyl nitrate within a period of three MONTHS after it has been MADE AVAILABLE or to collect the loaded uranyl nitrate containers, the Reprocessor may after consultation with the Company convert the uranyl nitrate to another chemical form at the expense of the Company.

6. 2. 6 The Company have the right to request the Reprocessor to arrange the STORAGE of uranyl nitrate for more than 91 days in the Reprocessor's facilities. The Company shall indicate their requirement for each such STORAGE to be provided by the Reprocessor two YEARS in advance and the Reprocessor will inform the Company about the terms and conditions of STORAGE 18 MONTHS in advance of the STORAGE of uranyl nitrate. obliged to undertake STORAGE and conditions.

- 6.3.1 Plutonium MADE AVAILABLE shall be in the form of plutonium dioxide to the specifications set out in Appendix 9, or any specifications accepted by the European fuel fabricators.
- 6.3.2 The quantity of plutonium dioxide to be MADE AVAILABLE shall be in accordance with the provisions of Appendix 10.
- 6. 3. 3 Before the plutonium dioxide is MADE AVAILABLE the weights of plutonium and fissile isotopes thereof shall be determined in accordance with Appendix 11.
- 6. 3. 4 If the Company do not expect to be in a position to remove plutonium dioxide from the REPROCESSING SITE within two YEARS after it has been MADE AVAILABLE, they may request the Reprocessor to extend the STORAGE of such plutonium dioxide in the Reprocessor's facilities. The Company shall indicate their requirement for each such additional STORAGE to be provided by the Reprocessor two YEARS in advance and the Reprocessor will inform the Company about the terms and conditions of additional STORAGE 18 MONTHS in advance of the additional STORAGE of plutonium dioxide. The maximum period of time for such additional STORAGE will be AGREED on a case by case basis taking into account the requirements of the Company and the available STORAGE capacities.
- 6. 3. S After STORAGE the plutonium dioxide shall be transported to an AGREED destination in accordance with a schedule and provisions to be AGREED.

6. 4 In the event that the quantity of uranium and/or plutonium as the case may be actually MADE AVAILABLE is bigger or smaller than the quantity due to be MADE AVAILABLE pursuant to Appendices 7 or 10 hereof an adjustment shall be made between the Parties as follows :

6.4.1 Whenever possible the Reprocessor shall adjust differences in such quantities by an appropriate quantity adjustment to the quantity of uranium and/or plutonium to be MADE AVAILABLE subsequently ; and

6.4.2 in cases not covered by the provisions of Clause 6.4.1 above and when all FUEL DELIVERED by the Company hereunder has been REPROCESSED and all relevant data have become available to the Parties a financial settlement shall be made to cover any remaining differences as aforesaid either way pursuant to the provisions of Appendix 12 hereof.

6. 4. 3 If within five YEARS after all the uranium and plutonium owing to the Company have been MADE AVAILABLE the corresponding FUEL has not been REPROCESSED, the determination according to Clause 6.5 hereunder shall be final and all further claims and obligations with respect to such unprocessed FUEL shall cease and, notwithstanding the provisions of Clause 2. 9, property of any such unprocessed FUEL shall pass from the Company to the Re processor.

6. 5 In the event that uranium and plutonium are MADE AVAILABLE to the Company before the date on which the relevant FUEL is actually REPROCESSED, the quantity of uranium and plutonium to be MADE AVAILABLE shall be determined by reference to the data provided by the Company pursuant to Appendix 3 and adjustments shall be Clause 6.4 following Clause 5.3 herein.

6. 6 .1 In the event that the Company wish the Re processor to MAKE AVAILABLE uranium and plutonium in a form other than those specified in Clauses 6. 2 and 6. 3 respectively, the Company shall so notify the Reprocessor and the Parties shall consult with the intent of AGREEING terms and conditions of such further services.

6. 6.2 In particular, should the Company require the Reprocessor to MAKE AVAILABLE the uranium in a form other than uranyl nitrate, the Company shall give the Reprocessor three YEARS'notice of such requirement unless a shorter period is AGREED. Such service shall be prnvided on terms to be AGREED.

6. 7 For the purpose of this Amendment unless otherwise AGREED non-nuclear third party liability for the uranium and plutonium shall pass from the Reprocessor to the Company on physical transfer of the uranium and plutonium to the actual or deemed control of the Company. The point of DELIVERY shall be AGREED between the Company and the Reprocessor.

CLAUSE 7

VARIATION

7. 1\ The Parties recognise that at the date of signature of this Amendment the services to be performed by the Reprocessor hereunder are to be performed in a plant just completed and hence that the operating conditions of such plant cannot yet be fully ascertained, even though based on the Reprocessor's current best estimates of such conditions. It is therefore recognized that changes to the technical conditions of this Amendment may become necessary following the Reprocessor's actual operating experience of the said plant or requirements of the Company. In such circumstances the Reprocessor shall have the option, following consultation with the Company and the Company shall be entitled to require the Reprocessor, to make such changes as may have become necessary as a result of the actual evolution of techniques and plant operating conditions as then ascertained. Such changes shall correspond to the changes in the technical conditions then being applied to services offered to all customers including the French Generating Boards.

Should any change occur, the consequences will be AGREED between the Parties.

7. 2 The implementation of Clause 7. 1 hereof should not, as a rule, have financial consequences. In the event there would be financial consequences, the Parties shall meet together in order to determine the best course of action to minimize such consequences, including the costs, of such implementation and to cause as little inconvenience to them as shall be possible in the circumstances.

However, if no AGREEMENT can be reached, the Company have the right to terminate this Amendment on a six MONTHS' notice if the adjustment of the REPROCESSING price proposed by the Reprocessor results in an increase of more than % of the initial price defined in Clauses 9.1.1.2 and 9.1.3 over. the remaining period of performance of this Amendment.

CLAUSE 8

RETURN OF RESIDUES

The provisions of Clause 9 of the Service Agreement remain in force and apply to this Amendment n° 3.

The conditions . concerning "Waste and allocation and quantity of residues", as laid down in Appendix 14 to the Service Agreement, remain in force and apply to this Amendment 3. These conditions are stated in Appendix 13 to this Amendment 3.

CLAUSE 9

FINANCIAL PROVISIONS

9. 1 PRICES

9. 1.1 Prices for services defined in Clause 3.1

9.1.1. 1 For the transport of FUEL from the POWER STATION to the REPROCESSING SITE according to the provisions of Clause 4 hereof the Company shall pay a price of _____ for each FLASK whether or not this FLASK is fully loaded. This price is based on transport by means of a NTL 8 FLASK, normally capable of transporting 3 fuel assemblies. Should the specifications of the FUEL or the transport regulations impose a modification of the present conditions of transport by means of NTL 8, or a modification of the type of FLASK, the Parties shall consult together with a view to update the transport price.

For the transport of damaged FUEL, the Company shall pay an additional price to be AGREED in due time.

9 .1.1. 2 For the unloading of FUEL, the STORAGE of FUEL for two YEARS, the REPROCESSING of the FUEL to uranium in the form of uranyl nitrate and plutonium in the form of dioxide, the STORAGE of uranium for 91 days, the STORAGE of plutonium for two YEARS, the STORAGE of WASTE, the conversion of WASTE into RESIDUES and the interim STORAGE of the RESIDUES for three

per kg
before irradiation.

This price includes all the possible financial consequences of Clauses 7 and 9.1.7, until the date of signature of this Amendment and the projects relating to discontinuation of bitumen production and AD2 modifications, which are still under discussion between the Reprocessor and UP3 BLCs at the date of signature of this Amendment.

9 .1. 2 Extension of storage

9. 1. 2 .1 For the additional service referred to in Clause 3.2 hereof, the Company shall pay a lump sum of per kg of HM for any supplementary period of STORAGE, exceeding the two YEARS' period provided for in Clause 3.1 with respect to the total quantity of FUEL DELIVERED to the Reprocessor, whatever the actual period of STORAGE of the FUEL may be.

9 .1.2.2 Should an extension of the above mentioned supplementary period of STORAGE result from any delay in the REPROCESSING of FUEL, due to the Company or their Authorities, in respect to the tentative schedule referred to in Clause 2.1, as updated in each YEAR by the Parties, the Company shall pay . per kg of HM for any YEAR of STORAGE directly resulting from such a delay.

9.1.3 Escalation

The price set out in Clause 2.1 on the economical conditions of January

The prices set out in Clauses 2.2 and 2.3 on the economical conditions of July escalated according to the

Should the escalation coefficient resulting from the formulas provided for in Appendix 14 become significantly unrealistic with respect to the actual variation of transport and reprocessing costs resulting

from the economical situation, upon request of one Party, the Parties shall consult together with a view to find a fair arrangement, it being understood that this provision shall not be implemented before December 31 st 1995.

9.1.4 Special measures

For the special measures referred to in Clause 4.3.3.2 hereof the Company shall pay a charge corresponding to the necessary costs incurred by the Reprocessor.

9.1.5 Prices for optional services

9.1.5.1 For the STORAGE of plutonium dioxide for more than two YEARS and the STORAGE of uranyl nitrate for more than 91 days, if requested by the Company, the Reprocessor shall make an offer not later than 31st December 2000.

9.1.5.2 For the transport of plutonium dioxide, uranyl nitrate and RESIDUES, if requested by the Company the Reprocessor shall make an offer within six MONTHS of such request, which shall be made not earlier than three YEARS before the expected date for such transport.

9.1.5.3 For the conversion of form, if requested by the Reprocessor shall make an offer not later than 31st December 1999.

9 .1. 5. 4 For the re-enrichment of recovered uranium, if requested by the Company, the Reprocessor shall make the necessary arrangements not later than four YEARS before the expected YEAR of delivery of enriched uranium.

9.1.5.5 If requested by the Company, the Reprocessor shall make an offer within 6 MONTHS of such request for the provision of advice and design information for REPOSITORY for RESIDUES.

9.1.6 Taxes

The prices specified in this Amendment do not include Value Added Tax. Such tax, if any, will be added to the said prices. All other taxes existing at the date of signature of the present Amendment are included in the prices. Any other tax not existing at the date of signature of the present Amendment that are applicable to the services performed under this Amendment shall be borne by the Company, subject to evidence thereof to be provided by the Reprocessor to the Company.

9.1.7 Adjustment

The price defined in Clauses 9 .1.1. 2 and 9 .1. 3 may be adjusted by the Reprocessor. Such adjustment will have to be AGREED by the Parties taking into consideration the circumstances then prevailing. During the process of consultation the Reprocessor will provide the Company with all necessary information. If after AGREEMENT on adjustment the circumstances which caused such an adjustment change the Parties shall discuss how the adjustment may be reviewed

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Such adjustment will take place only in the cases described below and will be done without discrimination between the customers of the REPROCESSING PLANT, pro rata their expected quantities of fuel still to be dissolved between the time when the Reprocessor notifies the Customer of the need to adjust the price and December 31st 2015, compared with the nominal capacity of the REPROCESSING PLANT, currently estimated at 800 tonnes per YEAR, over the remaining period to December 31st 2015.

9 .1. 7 .1 Modification of the safety regulations and/or instructions, including those concerning decommissioning and regulations imposed on the Reprocessor and concerning the REPROCESSING PLANT and the facilities common to UP2-PLANT and UP3-A Plant, which could not be reasonably envisaged by the Reprocessor at the date of this Amendment.

If such an adjustment results per occurrence in an increase of less than of the initial price defined in Clauses 9.1.1.2 and 9.1.3, it shall not be implemented.

If such an adjustment or the sum of several adjustments result in a total increase of more than of the initial price, defined in Clauses 9. 1.1.2 and 9.1.3, over the remaining period of performance of this Amendment, the Company and the Reprocessor shall consult together to determine the best course of action and if no AGREEMENT can be reached each Party will have the right to terminate this Amendment on 6 MONTHS'notice.

9.1.7.2 Every unpredictable additional work for refurbishing considered by the Reprocessor as necessary for the operation of the REPROCESSING PLANT or the facilities common to UP2 and UP3-A plants exceeding . . . _ _ _ per FACILITY, at July 1989 economic conditions, such amount to be escalated as provided in Appendix (4).

It is understood that any refurbishing which cost exceeds - is considered as unpredictable.

In such events the adjustment to be borne by the Company shall relate to the costs in excess of

If such adjustment or the sum of several adjustments result in a total increase of more than of the initial price, defined in Clauses 9.1.1.2 and 9.1.3, over the remaining period of performance of this Amendment, the Company and the Reprocessor shall consult together to determine the best course of action and if no AGREEMENT can be reached each Party will have the right to terminate this Amendment on 6 MONTHS' notice.

For the implementation of the present Clause it is AGREED that:

any refurbishing will apply to one or several FACILITIES and will not consist of an accumulation

corresponding to REPROCESSOR's internal procedures.

The Reprocessor shall give, on the Company's request, every reasonable information related to such a single project.

9 .1. 7. 3 The consequences of Clauses 9 .1. 7. 1 and 9. I. 7 .2 will result in an increase of the price defined in Clause 9 .1.1.2, which will apply to the quantities of FUEL still to be REPROCESSED.

9.1.7.4 Notwithstanding Clause 9.1.7.3, should the lifetime of the REPROCESSING PLANT exceed 2015, the Re processor shall recover the extra-costs under Clauses 9 .1. 7. 1 and 9 .1. 7 .2 over the remaining expected lifetime of the REPROCESSING PLANT, together with the sums not recovered as a consequence of the implementation of Clause 9.1.7.2 herein.

9.1.8 Non performance

9. 1. 8 .1 Should the Company not MAKE AVAILABLE a quantity of FUEL DUE FOR REPROCESSING for reasons other than Force Majeure, they shall notify the Reprocessor thereof. Un less otherwise AGREED, they shall owe the Reproecessor non performance charges calculated according to the following formula :

cc BPE x P x MQ

where

CC= non performance charges,

BPE price defined in Clause 9.1.1.2 herein as
escalated according to Clause 9.1.3 and Appendix
14 until the date of payment of the non
performance charge,

P percentage whose value varies according to the
date of notification :

Date of notification	Percentage
Until 31.12.1994	%
" " " 1995	%
" " " 1996	%
" " " 1997	%
" " " 1998	%
From 01.01 1999 onwards	%

MQ Missing Quantity i.e. difference between the FUEL
DUE FOR REPROCESSING and the quantity actually
intended to be MADE AVAILABLE.

The provisions of this Clause 9.1.8.1 shall also be
implemented if the Company does not notify the
Reprocessor of their decision not to MAKE AVAILABLE
FUEL DUE FOR REPROCESSING and if within 30 days from
a written reclamation by the Reprocessor the Company
does not MAKE AVAILABLE the remaining quantities of
FUEL DUE FOR REPROCESSING.

Once the Company has paid the relevant non performance charges, this Amendment will be terminated in respect of the so cancelled quantities.

The Company AGREE that the provisions of this Clause 9.1.8.1 do not entitle them to cancel quantities in order to deliver FUEL to another reprocessor.

9.1.8.2 If the Reprocessor is prevented from REPROCESSING for reasons of Force Majeure, the Parties shall consult together in order to mitigate the effects of such situation and shall AGREE on reasonable and fair solutions based on the principles stated herebelow :

9.1.8.2.1 If the Reprocessor is prevented from REPROCESSING by Dutch laws, regulations or -political decisions not being the compulsory implementation of EC regulations the FUEL not yet REPROCESSED shall be returned to the Company, at the Company's expense, not later than five YEARS after the date of applicability of such laws and/or regulations or political decisions. The date of return and point of DELIVERY shall be AGREED between the Company and the Reprocessor.

9.1.8.2.2 If the Reprocessor is prevented from REPROCESSING by French laws, regulations or political decisions not being the compulsory implementation of EC regulations the FUEL not yet REPROCESSED shall be returned to the Company, at the

later than five YEARS after the date of applicability of such laws and/or regulations or political decisions. The date of return and point of DELIVERY shall be AGREED between the Company and the Reprocessor.

9.1.8.2.3 If the Reprocessor is prevented from REPROCESSING for Force Majeure reasons other than those provided for in the above Clauses 9.1.8.2.1 and 9.1.8.2.2, the solutions to such situations shall be based on the provisions of Clauses 16.2 and 15.2 through 15.5 herein.

9.1.8.2.4 In any of the situations occurring in the framework of this Clause 9.1.8.2, this Amendment will be terminated after all uranium, plutonium and RESIDUES arising from the FUEL already REPROCESSED and the FUEL not yet REPROCESSED have been returned to the Company and all the relevant payments made.

9. 2 INVOICING AND PAYMENT

9. 2 .1 Transport of FUEL

Not more than 60 days before the expected date of DELIVERY to the Reprocessor of each CONSIGNMENT of FUEL, the Reprocessor shall submit to the Company an invoice for the price payable by the Company under Clauses 9. 1. 1. 1 and 9.1.3.

Notwithstanding the provisions of Clause 9.2.3 the invoice shall be due and payable not later than 60 days of invoicing but not earlier than DELIVERY of the relevant CONSIGNMENT. Should the actual DELIVERY take place more than 46 days after the date of invoice, such invoice shall be due and payable not later than 14 days after the actual date of DELIVERY.

9.2.2 REPROCESSING of FUEL

9.2.2.1 After DELIVERY to the Reprocessor of each CONSIGNMENT of FUEL, the Reprocessor shall submit to the Company an invoice for a down payment of _____ of the price payable under Clauses 9.1.1.2 and 9.1.3, in respect of the quantity of FUEL in the relevant CONSIGNMENT.

9.2.2.2 Thirty days after dissolution of each batch of FUEL (a batch being the quantity of FUEL dissolved without intercalating fuel from another customer), or thirty days after the end of each MONTH if the dissolution of the batch takes place over a period of more than one MONTH, the Reprocessor shall submit to the Company an invoice for the total price of REPROCESSING payable by the Company under Clauses 9.1.1.2 and 9.1.3 in respect of the quantity of FUEL dissolved for the account of the Company during the said MONTH. The net amount to be paid shall be _____ of the price payable under Clauses 9.1.1.2 and 9.1.3.

9.2.2.3 Extension of storage

After DELIVERY to the Reprocessor of each
CONSIGNMENT of FUEL, the Reprocessor shall
submit to the Company an invoice related to the
sum payable under Clauses 9.1.2.1 and 9.1.3.

For the extension of STORAGE of FUEL, if any,
payable by the Company under Clauses 9.1.2.2
and 9.1.3, the Reprocessor shall submit to the
Company an invoice at the end of each relevant
YEAR or at the date of dissolution of the FUEL, as
the case may be.

9. 2. 2. 4 The Reprocessor shall submit an invoice for the
work performed under Clause 4.3.3.2 herein
when the work is performed.

9.2.2.S The Parties will AGREE on the conditions of
invoicing the sums due by the Company as a
result of the implementation of Clause 9. I. S
when they consult as provided for under this
Clause 9.1.5.

9.2 .2.6 The Reprocessor will be entitled to issue invoices
for the non performance charges referred to in
the above Clause 9.1.8.1 as soon as the Company
notify their cancellation decision or as soon as a
DELIVERY of FUEL can be considered as the last
one, as the case may be.

9. 2 .3 Sums due by the Company to the Reprocessor unless otherwise agreed shall be paid by bank transfer within 60 days of the date of the relevant invoice free of any deduction whatsoever to the account designated on each invoice. The Parties AGREE that due to this extended term of payment with respect to the standard procedures of the Reprocessor, the amount of the invoices as calculated in pursuance of Clause 9.2.2 shall be increased by -
t.

9. 2. 4 Should the period of time between the date on which an invoice is falling due and the date on which it is actually paid exceed 7 days, any Party shall be entitled to ask for interest payment concerning this period.

The interest will be calculated by reference to the day to day money rate published by the "Banque de France" plus
, during the period under review.

THIRD PARTY LIABILITY, INDEMNITIES AND INSURANCE

10.1 Other than in Respect of the Results of a Nuclear Incident.

Notwithstanding Clause 10.3 hereof.

10 .1.1. The Reprocessor shall hold the Company harmless and indemnified against all actions, claims and demands which may be made in respect of any damage to or loss of any property or in respect of any injury (including injury resulting in death) to any third person which may be attributable to :

10.1.1.1. any empty FLASK before DELIVERY thereof to the Company and any FLASK or FUEL after the DELIVERY of the FUEL by the Company to the Reprocessor ; or

10.1.1.2. any plutonium or uranium or container thereof prior to the DELIVERY of the plutonium or uranium by the Reprocessor to the Company ; or

10.1.1.3. any RESIDUES until DELIVERY to the Company
except

(1) when the said damage, injury or loss has been caused by a nuclear incident where the provisions of clause 1 0.2 hereof shall apply ;

(2) m respect of Clause 10.1.1. 1 insofar as the said damage, injury or loss can be demonstrated to have arisen from some condition of the FLASKS or FUEL which the Company were under an obligation to avoid.

10.1.2. The Company shall hold the Reprocessor harmless and indemnified against all actions, claims and demands which may be made in respect of any damage to or loss of any property or in respect of any injury (including injury resulting in death) to any third person which may be attributable to :

1 0. 1. 2 .1. any empty FLASK after DELIVERY thereof to the Company and any FLASK or FUEL prior to the DELIVERY of the FUEL by the Company to the Reprocessor ; or

I 0.1.2.2. any plutonium or uranium or containers thereof after the DELIVERY of the plutonium or uranium by the Reprocessor to the Company.

except

(1) when the said damage, injury or loss has been caused by a nuclear incident where the provisions of clause 10.2. shall apply ; or

(2) in respect of Clause 10 .1. 2 .1. insofar as the said

10. 2 In respect of the results of a Nuclear Incident.

10. 2.1. 1 When transport is carried out by land the Reprocessor shall be liable according to the terms and conditions of the Convention on Third Party liability in the Field of Nuclear Energy signed in Paris on 29 July 1960, for the consequences of a nuclear incident arising from the FLASKS or FUEL after the same have reached the Dutch-Belgian border.

10.2. I. 2 When transport is carried out by sea, the Reprocessor shall be liable for the consequences of a nuclear incident arising from the FLASKS or FUEL outside the territorial limits of the Netherlands, it being agreed that :

the Reprocessor shall hold the Company harmless and indemnified up to a maximum of . . . for all actions, claims and demands against the Company in respect of a nuclear incident,

the Reprocessor shall if it so decides or if required so to do by any national law, purchase nuclear liability insurance or other cover above the limit of . . . from any source whatsoever in which event the indemnity shall be increased accordingly,

in all cases the Company shall hold the Reprocessor harmless and indemnified for all actions, claims and demands against the Reprocessor in respect of a nuclear incident the liability for which is limited by the

limits set out in the two

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10. 2.2 The Re processor shall be responsible for taking all necessary insurances to cover nuclear incidents in transport from the boundary of the site where the FUEL is stored by the Company to the boundary of the REPROCESSING SITE.

I 0. 2. 3 The respective liabilities of the Parties with respect to the return of FUEL, plutonium, uranium and RESIDUES are not within the scope of this Clause and shall be AGREED before any such return transport.

Should no AGREEMENT be reached the provisions of the above mentioned Paris Convention shall apply.

I 0. 2. 4 For the purpose of this clause the term "nuclear incident" shall mean any occurrence or succession of occurrences having the same origin which causes damage, provided that such occurrence or succession of occurrences, or any of the damage caused, arises out of or results from the radioactive properties, or a combination of radioactive properties with toxic, explosive, or other hazardous properties of nuclear fuel or radioactive products or waste or with any of them.

1 0. 3 Risk and Damage

nevertheless use its best endeavours in relation to the physical security thereof in accordance with the rules of the art. If the Company so require any identifiable FUEL, plutonium, uranium or RESIDUES may be insured in the name of the Company at values which the Company may determine. Such insurance shall be obtained by the Reprocessor in which event the premium shall be reimbursed to the Reprocessor together with an overheads percentage of or obtained by the Company at their own expense. Such insurance may alternatively be obtained by the Company through the agency of the Reprocessor in which event the premiums therefor shall be paid by the Company to the Reprocessor but shall not be subject to overheads percentage.

CONFIDENTIALITY

11.1 The terms and conditions of this Amendment and all information and drawings provided by one Party to the other under this Amendment shall be confidential. Neither Party shall, without the prior written permission of the other, disclose such terms and conditions or information or drawings received from the said other Party to any third party, except to such extent as may be required by relevant government authorities or other authorities having due legal competence or as may be necessary for the proper performance of this Amendment. To this extent the Parties hereby agree to disclose this Amendment to SEP and as far as necessary to COVRA for their own purposes such a disclosure being nevertheless subject to the provisions of clause 11 . 3 herebelow.

11. 2 Under this Amendment the Reprocessor shall not be required to transfer any information concerning any of the Re processor's techniques. However upon request of the Company the Reprocessor shall transfer in due time and to the extent such information is needed by the Company for the performance of this Amendment, technical information concerning, more particularly, the transport means and the FLASKS to be used for transport and the return of RESIDUES including the specifications of the said RESIDUES when required by the relevant safety Jnd licensing authorities organisation of the REPOSITORY.

11 . 3 When the Parties disclose any of the documents referred to in the above Clauses 11.1 and 11. 2 they shall draw attention of the third party to whom the documents are disclosed to the fact that these documents are confidential and, as far as practicable, they will endeavour to commit the said third party to keep the documents confidential.

11 . 4 In any case, before disclosing any information to third parties, the Parties shall inform each other with a view to determine the best course of action to be taken in order to minimize, as far as practicable, the risks of public disclosure.

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CLAUSE 12

NOTICES

1 2. 1 Any notice or other communication required to be given by one Party to the other under this Amendment shall be transmitted by hand, mail, telex, telefax. or telegraph to the principal office of the Party concerned. Either Party may by notice to the other Party given in accordance with the provisions of this Clause change the address to which the other Party shall transmit notices or other communications.

12. 2 The addresses to which the aforementioned notices shall be sent are

For the Company

N.V.EPZ

Locatie Zeeland
Wilhelminahofweg 3
4454 PM Borssele

Telex : 55489
Telefax : 01105-2550
Tel. : 01100-21000

Mail address : Postbus 130
4380 AC Ylissingen - NL

Invoices should be sent to

N.Y.EPZ

De Blecourtstraat
5652 GB Eindhoven

Telex : 59491
Telefax. : 040.572200
Tel. : 040.503200

Mail address : Postbus 711
5600 AS Eindhovcn - NETHERLANDS

For the Reprocessor

C O G E M A Compagnie Generale des Matieres
Nucleaires
Branche Retraitement
2, rue Paul Dautier
B.P. 4
78141 VELIZY-VILLACOUBLAY CEDEX

Telex COGEM 697 833
Telefax 33 (I) 39.46.52.05

12. 3 All invoices and notices and communications shall be sent by registered mail. A telex informing the receiving Party that an invoice or such notice or communication has been sent containing a summary of its relevant points shall immediately be dispatched to the receiving Party. The invoice, notice or communication shall be deemed received when the said telex is received.

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CLAUSE 13

ASSIGNMENT

The Parties shall have the right to assign any of their rights or obligations under this Amendment after the written consent of the other Party. This consent will not be unreasonably withheld.

CLAUSE 14

EARLY TERMINATION

- 14 .1 In the event that any governmental authority (other than the Government of the Netherlands or France) having jurisdiction transmits a notification to the Company stating that the transport and/or REPROCESSING of all or any FUEL hereunder will not be permitted and the Company also .have FUEL over which the said authority has jurisiliction, the Parties shall consult together in order to terminate their respective rights and obligations in respect of that part of the FUEL hereunder over which the said authority has jurisdiction.
14. 2 Each Party or both Parties, as the case may be, will be entitled to terminate this Amendment as provided for under Clauses 7. 2, 9.1.7.1, 9.1.7.2, 9.1.8.1, 9.1.8.2.
14. 3 Notwithstanding the foregoing and provided not used inconsiderate, each Party may terminate this Amendment if the other Party does not perform or misperforms its obligations, after notice in writing unless the defaulting Party has cured such non performance or misperformance within 90 days from such notice.
14. 4 In the event of termination of this Amendment in the framework of this Clause 14, it is understood that all the provisions of this Amendment including the financial provisions shall be enforceable in respect of the FUEL already dissolved.

Concerning the FUEL not yet dissolved, the Parties shall consult together in order to determine (if not especially provided for under the provisions of this Amendment) the terms and conditions under which such FUEL could be dissolved at a later stage or returned to the Company.

This Amendment will be terminated after all uranium, plutonium and RESIDUES arising from the FUEL already REPROCESSED and the FUEL not yet REPROCESSED have been returned to the Company and all the relevant payments made.

CLAUSE 15

HARDSHIP

- 15.1 Should the occurrence of events not contemplated by the Parties fundamentally alter the equilibrium of this Amendment, thereby placing an excessive burden on one of the Parties in the performance of its contractual obligations, that Party may proceed as follows.
- 15.2 The Party shall make a request for revision within a reasonable time from the moment it becomes aware of the event and of its effect on the economy of the Amendment. The request shall indicate the grounds on which it is based.
- 15.3 The Parties shall then consult one another with a view to revising the Amendment on an equitable basis, in order to ensure that neither Party suffers excessive prejudice.
- 15.4 The request for revision does not of itself suspend performance of the Amendment.
- 15.5 If the Parties fail to agree on the revision of the Amendment within a period of six months from the above mentioned request which could be extended by mutual AGREEMENT, a settlement will take place in the framework of Clause 26 - "ARBITRATION of the SERVICE AGREEMENT".

FORCE MAJEURE AND CONSEQUENCES THEREOF

16 .1 Neither Party shall be responsible to the other for the financial or other consequences of any failure or delay on its part in fulfilling any of its obligations under this Amendment by reason of Force Majeure. "Force Majeure" shall mean an occurrence beyond the control of a Party, which could not have been reasonably taken into consideration at the time of entering into this Amendment, which causes or results in a failure of such Party to fulfil any obligations under this Amendment, and of which the Party could not have reasonably overcome the effects. Events which, provided they fulfil the requirements stated in the preceding sentence, shall constitute Force Majeure, shall include, but not be limited to acts or restraints of Government, war, revolution, riot, civil commotion, blockage, embargo, strike, lock-out or damage by fire or flood.

16. 2 If the performance of this Amendment or of any obligation thereunder by either Party is prevented or delayed by reason of Force Majeure the Party so affected shall upon giving notice as soon as possible to the other be excused from such prevention or for such delays provided that it shall do its best to avoid or remove or minimize the cause of non-performance or delay.

16. 3 Should the non-performing or delaying cause last over a period of 2 MONTHS following the notice referred to in Clause 16.2, the Parties shall consult each other in order to examine the conditions under which the present Amendment could

In case the Parties do not come to an agreement within such conditions within a period of six months from the above mentioned request which could be extended by mutual AGREEMENT, a settlement will take place in the framework of Clause 26 : "ARBITRATION of the SERVICE AGREEMENT".

SAFEGUARDS, PHYSICAL PROTECTION AND GOVERNMENTAL UNDERTAKINGS

17 .1 Nuclear material transferred under this Amendment and subsequent generation of such material shall be subject to : any

17 .1.1 appropriate International Atomic Energy Agency or EURA TOM safeguarding procedures

17.1.2 any other relevant undertakings and regulations including without limitation those referring to physical protection requirements and conditions for retransfers to countries other than countries of the Parties to this Amendment; and all such nuclear material shall be used for peaceful non-explosive purposes only.

17.2

17 .2 .1 When the plutonium due to the Company has been MADE AVAILABLE it shall be put into STORAGE and STORED for such a period until the plutonium is demonstrated by the Company to be required for fabrication of fuel. The plutonium shall be STORED by the Reprocessor in an appropriate facility which is available.

17.2.2 Plutonium and uranium MADE AVAILABLE to the Company shall be transferred subject to all applicable national and international regulations and any directives or orders of any governmental department having jurisdiction. In particular the uranium and plutonium shall be transported in a form suitable to ensure

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physical protection according to the then/'..Jl~'.1-<1.1..1.1l.!.
regulations of the relevant countries or org, ti.i!1.t>"li!lt--
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CLAUSE 18

VALIDITY OF THE SERVICE AGREEMENT

For the quantities of FUEL covered by the present Amendment, all terms and conditions of the Service Agreement and its Amendments n°

1 and 2 which are specifically not arranged for and which are not contradictory to the provisions set forth in this Amendment 3, remain in force and will apply to this Amendment n° 3 with the exception of certain modifications as far as Clauses 10.4 last paragraph and 10.5 are concerned and some precisions concerning Clause 10.7.

These clauses of the Service Agreement therefor are replaced by the clauses as stated hereafter.

Clause 10.4

"The Reprocessor shall not exercise any rights to modify this Agreement pursuant to Clause 10.3 of the Service Agreement without first consulting with the Company.

In the event that after submission of a specification as provided for in Clause 10.2.1 of the Service Agreement it appears that the specification will not be accepted and if the Company consider that an amended specification would make return of RESIDUES practicable then the Reprocessor shall not exercise its option to modify this Amendment 3 PROVIDED THAT the Reprocessor considers that

- it is possible to develop a process complying with such amended specification, and
 - such amended specification will actually make the return of RESIDUES practicable, and
 - the Company make all reasonable endeavours to have the specification accepted by the Dutch authorities,
- and PROVIDED FURTHER THAT approval of the amended specification by

amendment of the specific conditions on this

11.17

Clause 10.5

"In the event that the Reprocessor exercises the right to modify in pursuance of Clause 10.2 or 10.3, of the Service Agreement, this Amendment 3 shall be modified such that the Reprocessor shall continue to collect, transport and STORE FUEL. The Reprocessor's obligation to accept FUEL shall continue for a period of two YEARS starting from the date the Reprocessor has exercised its right to modify this Amendment 3 and its obligation to STORE FUEL shall continue for a period of seven YEARS starting from the said date.

However in any event the Company shall be obliged to take back all the FUEL before the end of the period of seven YEARS. Upon request of the Reprocessor the Company shall provide appropriate guarantees to this extent."

Clause 10. Z

It is agreed that all sums advanced pursuant to Clause 9.2.2.2 of this Amendment n° 3 other than those already committed by the Reprocessor, shall be repaid by the Reprocessor to the Company. The valuation of these sums and the conditions of repayment shall be on a basis to be agreed.

CLAUSE 19

ENTRY INTO FORCE

The Parties agree that this Amendment shall enter into force after agreement of their respective national and competent authorities in respect of the return of the RESIDUES and after confirmation of the Parties that such an agreement has been obtained.

Should such an agreement not be reached within 180 days from the date of signature of this Amendment, the Reprocessor and the Company shall have the option to void this Amendment, such option to be exercised within 420 days from the date of signature of this Amendment.

SIG1" 'ED BY

J.SYROTA

for and on behalf of
COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

SIGNED BY

HDROOG

for and on behalf of
N. V. ELEKTRICITEITS
NEDERLAND EPZ

SPECIFICATION OF FUEL ASSEMBLIES

The Reprocessor expects to be able to accept for REPROCESSING all BWR and P\VR fuel design. However, it is not possible to guarantee that the UP3-A facilities as designed will be capable of REPROCESSING all such fuel of present and future designs. The Reprocessor therefore reserves the right to reject FUEL that in the Reprocessor's opinion is to a design that will present extraordinary technical difficulties. Notwithstanding this and in the event that the Reprocessor considers that any FUEL is unacceptable on technical grounds, the parties shall consult together with a view to AGREEING special measures for transport, STORAGE and REPROCESSING of such FUEL where practicable.

At the date of signature of this Contract, four categories of fuel have to be considered :

Standard uranium fuel, whose specifications fit the UP3-A plant specifications for REPROCESSING,

- HIGH BURN-UP FUEL, which normally cannot be REPROCESSED in UP3-A but which can be REPROCESSED in UP2,

MOX FUEL, which normally cannot be REPROCESSED in UP3-A but which can be REPROCESSED in UP2,

other fuel types for which technical as well as commercial conditions may have to be defined on a case by case basis.

The fuel assemblies shall conform to the specification set out below in five different sections :

1. Non nuclear specifications - fuel before irradiation
2. Nuclear specifications - fuel before irradiation
3. Non nuclear specifications - irradiated fuel
4. Nuclear specifications - irradiated fuel
5. Information on the FUEL to be provided to the Reprocessor.

Unless otherwise specifically mentioned below, all fuel assemblies must comply upon DELIVERY to the Reprocessor, with all the points listed hereunder.

I. NON NUCLEAR SPECIFICATIONS-FUEL BEFORE IRRADIATION

1. 1 Unless otherwise AGREED the fuel assemblies shall consist of an assembly of fuel rods, grids, spacers, end fittings and guide tubes.

Unless otherwise AGREED the materials of construction of the fuel assembly shall be restricted to zircaloy and/or stainless steel and/or INCONEL.

Additional components such as shrouds, burnable poison rods, plugging devices etc, shall be removed from the fuel assemblies, at the POWER STATION, before DELIVERY of the fuel assemblies by the Company to the Reprocessor.

1. 2 Each fuel assembly shall be identified specifically by means of a readable number or other identifying marks. This identification shall allow to distinguish without any doubt the MOX fuel assemblies from other fuel assemblies and to ascertain without any risk of error the level of uranium enrichment before irradiation.

1. 3 Each fuel assembly shall comply with the following sizes :

maximum overall	length	5000 mm
minimum overall	length	1900 mm
maximum overall {square section}	cross section	250 mm
minimum overall {square section}	cross section	100 mm

1. 4 The cladding material of the oxide pellets shall be made of zircaloy and or zirconium lined zircaloy exclusively.

I. 5 Gadolinium (Gd) oxide may be present in the FUEL as a burnable poison within a maximum of 5 kg Gd per tonne of HEAVY METAL in any fuel assembly.

1. 6 Aluminium (Al) oxide may be present in the FUEL as insulating pellets up to a maximum of 1 kg Al per tonne of HEAVY METAL in any fuel assembly.

Appendix.

1. 8 To the extent that no other materials are used in the fuel assembly and no major changes in the dimensions will occur, the FUEL will be accepted by the Reprocessor.

I. 9 Other fuel types could be accepted by the Reprocessor subject to conditions to be defined by the Reprocessor on a case by case basis.

2. NUCLEAR SPECIFICATIONS - FUEL BEFORE IRRADIATION

2 .1 The fuel rods in uranium assemblies shall contain uranium dioxide pellets, which prior to irradiation do not contain any plutonium.

The average enrichment level before irradiation in any fuel assembly shall not exceed 4,500 % U235.

The maximum enrichment level before irradiation in any pellet shall not exceed 5,000 % U235.

2. 2 The MOX fuel rods in a MOX assembly may contain plutonium dioxide diluted in a matrix of either natural, or enriched, or depleted, or reprocessed uranium dioxide.

The maximum fissile plutonium content in any fuel rod shall be such that the ratio expressed in per cent, between the quantity of fissile plutonium and the sum of the quantities of uranium and plutonium in that rod shall not exceed 6,000 %, at the fabrication date.

The average ratio expressed in per cent between the quantities of plutonium in any MOX fuel assembly and the sum of the quantity of plutonium and uranium in that MOX fuel assembly shall not exceed 8,000 %, at the fabrication date.

The solubility of the MOX FUEL, as determined at the date of fabrication of the fuel assembly, shall comply with the criteria specified in the relevant document as referred to in paragraph 6.

2. 3 Fuel assemblies non complying with the above paragraphs 2. 1 and 2.2 may be accepted by the Reprocessor for REPROCESSING on terms to be AGREED on a case by case basis.

3. NON NUCLEAR SPECIFICATIONS - IRRADIATED FUEL

- 3 .1 After irradiation each fuel assembly shall be free from removable deposits or free from visible or detectable damages to the cladding or to the structure which might, in the Reprocessor's opinion, prohibit transport and/or STORAGE and/or REPROCESSING.

The quality of the fuel assemblies in respect of cleanliness and soundness will be evaluated under the relevant acceptance criteria as referred to in paragraph 6.

3. 2 Damaged fuel assemblies may be accepted by the . Reprocessor for REPROCESSING, subject to compliance with the relevant acceptance criteria referred to in paragraph 6 and subject to other conditions, including commercial conditions, to be proposed by the Reproc:-or to the Company before DELIVERY of the damaged fuel.

3. 3 Fuel assemblies containing limited quantities of materials which have been added to the original assembly at any time before or after irradiation and that could be partially or totally dissolved, could be accepted by the Reprocessor subject to conditions to be defined on a case by case basis.

3. 4 Bundles of fuel rods resulting from consolidation or other mechanical intervention on fuel assemblies, could be accepted by the Reprocessor subject to conditions to be defined on a case by case basis.

3. 5 Fuel assemblies of types other than those belonging to the categories listed in above paragraphs 3.1, 3.2 and 3.3 may be accepted by the Reprocessor for REPROCESSING on a case by case basis.

4. NUCLEAR SPECIFICATIONS

IRRADIATED FUEL

4.1 Burn-up limits of uranium fuel assemblies

COGEMA will accept for REPROCESSING uranium fuel assemblies

with a burn-up over the less irradiated 50 cm of the fuel rods higher than the maximum value defined as Value A in the following table ; and

with an average burn-up of not more than the value defined as Value C in the said table.

As of the date of signature of the present Amendment, it is noted that the REPROCESSING PLANT is designed for fuel

and when needed.

Initial uranium enrichment* % U235	Value A 50 cm less irradiated MWD/t HM	Value B MWD/t HM	Value C MWD/t HM	Remarks
Below 3,500	0	40 000/B 43 000/FA	47 000/B 52 500/FA	
3,500 to 3,750	6 000/FA (one normal fuel cycle)	41 000/B 44 000/FA	50 000/B 54 000/FA	see remark nb 1
3,750 to 4,000	12 000/FA (two normal fuel cycles)	42 000/B 45 000/FA	52 000/B 56 000/FA	see remark nb 2
4,000 to 4,500	24 000/FA (three normal fuel cycles)	45 000/B 48 000/FA	56 000/B 60 000/FA	see remark nb 2

* in any fuel rod
/FA means per fuel assembly
/B means per batch of homogeneous fuel (same irradiation history).

Normal fuel cycle means a cycle of not less than 250 days at full power or any equivalent cycle.

Remark 1 The provisions of paragraph 5.2 of Appendix 1 shall apply.

Remark 2 The provisions of paragraphs 5.2 and 5.3 of Appendix 1 shall apply.

4. 2 Uranium 232 content

The uranium 232 content per FUEL shall not exceed 5 ppb with respect to total uranium at the date of dissolution of the fuel assemblies.

4 .3 Plutonium content

The plutonium content in the FUEL shall not exceed the following values per fuel assembly at the date of DELIVERY :

maximum total Pu content (for U FUEL)	12 kg per tonne uranium
maximum Pu 238 content	4 % with respect to total plutonium

4. 4 Notwithstanding the above, in case of MOX FUEL
 following limitations shall apply :

maximum burn-up of any batch of MOX fuel assemblies	48 000 MWd/t HM
maximum average burn-up of any MOX fuel assembly	52 000 MWd/t HM
minimum burn-up with up to 6 % initial fissile plutonium and for any fuel assembly	32 000 MWd/t HM

4 .5 Minimum COOLING upon DELIVERY

The minimum COOLING of any fuel assembly u
 DELIVERY is given in the table below for uranium fuel :

Average burn-up of each fuel assembly !MWd/t HM COOLING (days)	below	35 000	40 000	45 000	50 000	55 000
		to	to	to	to	to
	35 000	40 000	45 000	50 000	55 000	60 000
	270	330	390	450	500	550

For MOX FUEL, the minimum COOLING will be specified by
 the Reprocessor in due time after consultation with the
 Company.

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4. 6 Fuel assemblies whose U232 content exceeds 5 ppb at the date of dissolution of the fuel assemblies with respect to the residual total uranium may be accepted by the Reprocessor under special commercial conditions.

Fuel assemblies with a burn-up lower than the minimum value defined as Value A in the table of paragraph 4.1 are accepted by the Reprocessor subject to conditions to be AGREED for transport, STORAGE and REPROCESSING.

COGEMA will endeavour in the future	to take all possible steps
in order to accept uranium FUEL i.e.	with a bum-up of more
than 60 000 MWd/t HM as an average	value in any single fuel
assembly, as well as . fuel assemblies	with a maximum Pu238
content of more than 4 % with respect	to the total plutonium.

COGEMA will accept for REPROCESSING MOX FUEL with an initial Pu enrichment above the values listed in paragraph 2.2 and with burn up higher than 52 000 MWd/t HM in any fuel assembly, if such REPROCESSING is technically feasible.

Fuel assemblies which do not comply with the specifications of paragraph 4 may be accepted by the Reprocessor for transport, STORAGE and REPROCESSING on a case by case basis.

5. INFORMATION ON THE FUEL TO BE PROVIDED TO THE REPROCESSOR

5 .1 As soon as practicable after the Company have received details of the design of the fuel assemblies, such details shall be submitted by the Company to the Reprocessor using the forms attached in the Annex to this Appendix. Should these details show that FUEL do not comply with the specifications set out in paragraphs 1, 2, 3 and 4 above, then the parties shall consult together in order to determine the conditions under which the relevant fuel assemblies could still be accepted for transport, STORAGE and REPROCESSING under this Contract.

The Reprocessor ensures the Company that no use will be made of any information about the fuel assemblies received under this Contract for any purpose other. than transport, STORAGE and REPROC'ESSING.

The Company guarantee that all information regarding the FUEL to be MADE AVAILABLE to the Reprocessor is properly established, checked and qualified for distribution outside the Company, following Quality Assurance rules and programmes as required by the relevant Safety Authorities, before it is communicated to the Reprocessor.

Upon request from the Reprocessor, if and when needed, the Company shall provide the Reprocessor with the information necessary to enable it to appreciate the accuracy of the fuel data provided to the Reprocessor and in particular the initial uranium enrichment and burn-up of each fuel assembly, the total plutonium content and the Pu238 content of each FUEL, and the solubility value of ~v10X FUEL.

In addition to the above, it is recognized by the Company that the Reprocessor is entitled to perform on the reactor site any check or control related to the said information and the corresponding Quality Assurance system, which should appear necessary to satisfy the French Safety Authorities.

5. 2 The present paragraph shall apply when Remarks of paragraph 4.1 apply :

The Company will accept to equip the reactor pond, at their own expense, with an equipment of an AGREED type to measure the fuel irradiation of any fuel assembly upon FUEL DELIVERY to the Reprocessor and to bear any cost arising at the POWER STATION from requests from the French Safety Authorities in connection with the criticality risks during transport, FLASK unloading and STORAGE of the FUEL at the REPROCESSING PLANT.

Unless otherwise AGREED, and in particular for exceptional cases, subject to the agreement from the relevant Transport Authorities, this equipment will not be necessary for uranium fuel assemblies of an initial enrichment of not more than 3,500 % U235 when it can be demonstrated that no FUEL of a higher enrichment or no MOX FUEL is present in the reactor pond where the FUEL has been stored.

For initial enrichment between 3,500 % and 3,750 % ^{u235} evidence has to be given by the Company that the fuel assembly has gone through at least one normal cycle in the reactor. The provisions of the present paragraph may be satisfied by means of a yes or no detector response of an AGREED and qualified type. with the necessary documents, the form of which has to be defined by the Reprocessor, showing that before normal time.

Subject to the agreement of the French Safety Authorities, the above value of 3,750 % may be increased after analysis, on a case by case basis.

The Company will grant the Reprocessor or its representatives access to the POWER STATION to check the measurement of the FUEL irradiation to be made upon FUEL DELIVERY to the Reprocessor or its representatives.

The Company will provide a Quality Assurance Programme in which will be detailed all questions related to the safety of the measuring system.

5. 3 The present paragraph shall apply when Remarks I and 2 of paragraph 4.1 apply. Unless otherwise AGREED, instead of a yes or no detector as provided in above paragraph 5.2, the Company shall perform at its own expense, a precise determination of the burn-up on the less irradiated 50 cm of each fuel assembly due to be DELIVERED to the Reprocessor using an equipment of an AGREED and qualified type.

The other provisions of paragraph 5.2 shall apply mutatis mutandis.

5. 4 With respect to MOX FUEL, and in addition to the above, subject to the requirements of the French Safety Authorities and after consultation with the Company, the Reprocessor may require additional information specific to the MOX FUEL which the Company will undertake to provide.

6. LIST OF REFERENCE DOCUMENTS

The following documents have been handed over to the Company. They are part of this Contract and they will be updated by the Reprocessor from time to time on a need basis after full consultation of the Company :

- Acceptance criteria of L \VR fuel by COGEMA Definition of clean fuel dated October 1989,
- Acceptance criteria of fuel by COGEMA - Definition of non damaged fuel, dated September 1980. These criteria solely apply for FUEL with less than four years COOLING,
- Provisional acceptance criteria for LWR fuel assemblies, dated March 1981. These criteria solely apply for FUEL with less than four years COOLING.

For FUEL with longer COOLING, the Reprocessor will establish in due time specific procedures after consultation with the Company.

- Acceptance criteria for Reprocessing at La Hague of damaged L WR fuel assemblies, dated April 1987,

Acceptance criteria for mixed oxide fuel for reprocessing by COGEMA, dated October 1989,

Acceptance criteria for non standard L WR fuel by COGEMA, dated December 1989,

Acceptance criteria for discharge at the La Hague plant of LWR fuel element transport packagings. dated March 1984.

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PROGRAMMES FOR THE DELIVERY OF FUEL

1. Unless otherwise AGREED, the programmes from the DELIVERY of FUEL will be established as follows :

1.1 Not later than 31 January in each YEAR the Company shall give to the Reprocessor details as set out in

I. I. I Appendix 3 Part A in respect of FUEL expected to be MADE AVAILABLE in each remaining YEAR of this Contract, and

1.1.2 Appendix 3 Pan B in respect of the PROVISIONAL QUANTITY of FUEL expected to be MADE AVAILABLE in the period of 2 YEARS commencing on 1 January next following.

The first operative date for paragraph I. I shall be 31 January 1993.

I. 2 DELIVERY PROGRAMME

I. 2. 1 Not later than 30 June in each YEAR the Re processor shall give the Company details as set out in Appendix 3 Part C in respect of the PROVISIONAL DELIVERY PROGRAMME for FUEL to be DELIVERED in the period of 2 YEARS commencing on 1 January next following.

1.2.2 Not later than 31 October in each YEAR the Reprocessor shall give the Company after consultation with the Company a DELIVERY PROGRAMME for FUEL to be DELIVERED during a period of one YEAR commencing on 1 January next following. Such transport programme shall take into account the STATJON.

1. 3 Not less than 6 months before FUEL is scheduled to be MADE AVAILABLE the Company shall inform the Reprocessor which of the FUEL is to be MADE AVAILABLE and is to be DELIVERED to the Reprocessor. Such FUEL shall constitute the FIRM QUANTITY of FUEL. At the same time as such notification is given to the Reprocessor, the Company shall, in respect of the FUEL constituting the FIRM QUANTITY of FUEL, give the Reprocessor the details as set out in Appendix 3 Part D. Should the Company wish to DELIVER FUEL with a COOLING time of less than the limits specified in Appendix I they shall inform the Reprocessor of their requirement within 90 days of the discharge of that particular FUEL from the POWER STATION and the Reprocessor shall decide on the acceptance within 90 days of receipt of such requirement.

I. 4 Each FIRM QUANTITY shall be DELIVERED in accordance with the DELIVERY PROGRAMME relevant thereto. If necessary, the Reprocessor may after AGREEMENT with the Company and following receipt of information pursuant to paragraph 1. 3 amend the DELIVERY PROGRAMME as appropriate. The Reprocessor shall notify the Company of any such amendment within one month after such amendment.

1. 5 As soon as practicable after loading the last fuel assembly in a CONSIGNMENT of FUEL the Company shall give to the Reprocessor the details set out in Appendix 3 Part E.

INFORMATION TO BE PROVIDED BEFORE
DELIVERY OF IRRADIATED FUEL ASSEMBLIES

All information to be provided to the Reprocessor will be communicated using the COGEMA standard forms.

Part A. FUEL expected to be MADE AVAILABLE..

The following information shall be provided by the Company to the Reprocessor :

- A1 type of FUEL and point of DELIVERY ;
- A2 the quantity of FUEL (tonnes of HM) expected to be MADE AVAILABLE at the POWER STATION "in each YEAR".

Part B. Provisional quantity of FUEL

The following information shall be provided by the Company to the Reprocessor in respect of fuel assemblies provisionally scheduled to be MADE AVAILABLE:

- B1 type of FUEL and point of DELIVERY ;
- B2 the quantity of FUEL (tonnes of HM) and approximate amount of fuel assemblies programmed to be MADE AVAILABLE from the POWER STATION and the expected dates on which each quantity will be MADE AVAILABLE ;
- B3 the expected dates of discharge.

The following information shall be provided by the Reprocessor to the Company:

- C1 name of POWER STATION;
- C2 number and types of FLASKS to be transported to the POWER STATION;
- C3 number of fuel assemblies to be DELIVERED in each FLASK ;
- C4 the approximate date for DELIVERY of each FLASK of FUEL.

Part D. Firm Quantity

The following information shall be provided by the Company to the Reprocessor in respect of fuel assemblies to be MADE AVAILABLE:

- D1 the quantity of fuel assemblies to be MADE AVAILABLE and the serial number or other identifying marks on each of such fuel assemblies
- D2 the date on which each of the fuel assemblies was discharged ;
- D3 the weights of uranium and of plutonium isotopes, the weight of U235 isotope of uranium and the weight of each of the plutonium isotopes (with the corresponding date) in each of the fuel assemblies before irradiation ;
- D4 the estimated average level of irradiation attained by the fuel assemblies and the estimated maximum level of irradiation attained by any one of them, expressed in megawatt-days per tonne of HEAVY METAL ;
- D5 the estimated average heat rating of the CONSIGNMENT of fuel assemblies and the estimated maximum heat rating of any one of them, expressed in megawatts per tonne of HEAVY METAL ;
- D6

relevant FUEL:

- D7 the serial number or other identifying marks on each of the fuel assemblies which is known or suspected by the Company to be punctured or otherwise damaged ;
- D8 the irradiation history of each fuel assembly, including in core charts in case of heterogeneous core. That is in case of presence of MOX FUEL (initial enrichment and cycle number of assemblies in the vicinity of each MOX FUEL assembly), of FUEL made out of reprocessed Uranium or of any other special fuel assembly ;
- D9 the calculated average value of solubility for each fresh MOX FUEL assembly together with the individual solubility value of each pellet lot entering in the relevant fuel batch ;
- DI 0 the nature of the undertakings related to safeguarding procedures in the relevant contract for the supply of fissile material and/or resulting from appropriate intergovernmental or international Agreements.

Part E. Before transport to the REPROCESSING PLANT

The Company shall provide the Reprocessor with such information as is necessary for the safe receipt and unloading of the FLASKS by the Reprocessor; such information shall include :

- . E1 the serial number or other identifying marks on each fuel assembly contained in the FLASK;
- E2 the location of each fuel assembly in the FLASK.

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APPENDIX 4

ASSESSMENT OF THE WEIGHTS OF URANIUM, PLUTONIUM AND FISSILE ISOTOPES THEREOF IN THE FUEL ASSEMBLIES

In order to assess the weights of uranium, plutonium and fissile isotopes thereof contained in the fuel assemblies, the Reprocessor shall take all necessary samples and perform all necessary measurements.

This Appendix describes the general procedures and methods which shall be implemented for this purpose and the corresponding rights of the Company.

1. Preparation of dissolver liquor, sampling and analysis

1.1 The uranium and plutonium contained in the FUEL shall be leached out and the resultant liquor thoroughly mixed and sampled according to procedures to be defined by the Reprocessor.

1.2 The analytical procedures used by the Reprocessor are qualified by COGEMA and updated as and when needed.

1.3 Upon request, specimens of such procedures may be shown to the Company representatives when present at the REPROCESSING PLANT.

2. Determination of weight

The weights of uranium and plutonium contained in the fuel assemblies from which the liquor referred to in paragraph 1.1 has been derived shall be assessed by means listed in paragraphs 2.1, 2.2 and 2.3.

weight of uranium

$$= \frac{C}{1 + A + Y} \quad \text{and}$$

weight of plutonium

$$= \frac{CA}{1 + A + Y}$$

A represents the plutonium/uranium weight ratio as determined by analysis ;

C represents the weight of uranium (or HM) contained in the relevant fuel assemblies before irradiation ; and

Y represents a correction for burn-up which may be either the quotient of the ratio of the weights, as determined by analysis, of a specified fission product and uranium, and a constant specific to the reactor or the specified fission product, or alternatively, determined by such other method as may be notified.

A further correction to the weights of uranium and plutonium so obtained may apply to take account of possible systematic errors (including possible errors on C).

Such correction shall be made by using Method 2 (volume concentration method) for the whole quantity of uranium and plutonium contained in the fuel assemblies REPROCESSED during a given period of time including the REPROCESSING of the Company's fuel assemblies.

Method 1 can only be used when the necessary calibration of the Y value has been established by experience and when the dissolution process allows its performance.

2.2 Method 2 Volume concentration method

weight of uranium $V.U$

weight of plutonium weight of uranium w_u

v represents the volume of the liquor as measured in a precalibrated tank

u represents the U_{302} concentration in the liquor as determined by analysis; and

w represents the plutonium concentration in the liquor as determined by analysis.

This method is that intended to be used at the beginning of operation of UP3-A plant.

The necessary corrections shall be made to the basic formula, to take account of various effects such as temperature, acidity, concentrations ... , and in case the volume measurement is not available for specific operating reasons.

2. 3 Method 3 Spike method

weight of uranium = B.S

weight of plutonium = weight of uranium

c
B

where

B represents the uranium spike weight ratio as determined by analysis ;

c represents the plutonium spike weight ratio determined by analysis ;

S represents the weight of the spike element introduced into the liquor.

3. Determination of isotopic composition

The isotopic composition of the sample shall be determined by analysis and the weight of fissile isotopes in the relevant fuel assemblies shall be assessed by applying the results of the analysis to the weights of uranium and plutonium assessed under paragraph 2. Fissile isotopes means in respect of plutonium : plutonium 239 and 241, only, and in respect of uranium: uranium 235 only.

4. Rights of the Company

4 .1 The Reprocessor shall give to the representatives of the Company a right of access to the REPROCESSING PLANT in accordance with Appendix 15, for the purpose of with taking of samples of dissolver liquor by the Rep[;J#~,~~...:i methods used by the Reprocessor in the analysis_.,.<!

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4.2 Sampling

4.2.1 The Reprocessor shall give the Company not less than three weeks'notice of the date when sampling of the dissolver liquor is due to commence and within 8 days after the date of the said notice the Company shall inform the Reprocessor if they intend to exercise the first or alternatively both of the following options :

4.2. L 1 to witness the taking of samples by the Reprocessor, to observe the methods used by the Reprocessor in the analysis of samples, including if the Company so wish, the analysis of samples taken from the Company's FUEL,

4. 2. 1. 2 to require the Reprocessor to take two additional samples for possible further analysis in accordance with the provisions of paragraph 4.2.3 of this Appendix..

4. 2. 2 If the Company do not exercise the options given rn paragraphs 4.2.1.1 and 4.2.1.2, one sample shall be taken from each batch of homogenised dissolver liquor for the purposes of paragraphs 2 and 3 of this Appendix..

4. 2. 3 If the Company elect to exercise the options given rn paragraphs 4.2.1.1 and 4.2.1.2, three approximately equal samples shall be taken from each batch of homogenised dissolver liquor ; the samples shall, if possible, be taken in the presence of lne Company. The first sample shall be used by the Rcproccssor for the purposes of paragraphs 2 and 3 of this

required the second and third samples shall be used for the purposes of paragraphs 2 and 3 of this Appendix in accordance with the provisions of paragraph 5 of this Appendix.

4. 3 The Company undertake not to make unreasonable requests for additional analysis to be carried out by the Reprocessor.

5. Results of analysis

5. 1 The Reprocessor shall inform the Company of the results of the aforesaid assessments when all the relevant data are available. In case of any disagreement which cannot be resolved, the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.
5. 2 If the Company do not exercise the options in paragraphs 4.2.1. 1 and 4.2. 1 .2, the results of the analysis on the first sample from each homogenised volume shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as the relevant data are available.
5. 3 If the Company exercise the options in paragraphs 4.2. 1. 1 and 4.2.1.2, the results of the analysis on the first sample from each homogenised volume shall be given by the Reprocessor to the Company's representative at the REPROCESSING PLANT as soon as all relevant data are available. The Company's representative

results of the analysis on the first samples shall be final and binding. The second and third samples shall be disposed of by the Reprocessor.

5. 4 If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as all relevant data are available. If the results of the first two assessments of the weight of uranium or plutonium or fissile isotopes therein in the fuel assemblies differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of uranium or plutonium or fissile isotopes thereof in the fuel assemblies, and shall be final and binding. The third sample shall be disposed of by the Reprocessor.

5. 5 If the results of the first two assessments of the weight of uranium or plutonium or fissile isotopes therein in the fuel assemblies differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such analysis as is necessary on the third sample and shall inform the Company of the results of the analysis as soon as all relevant data are available. The mean of the two assessments which are closest to each other shall be taken as the weight of the uranium, or plutonium or fissile isotopes thereof in the fuel assemblies. However, if any disagreement cannot be resolved, the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

S. 6 Notwithstanding the foregoing provisions, the analysis of the second and third samples shall only be carried out if, having regard to the time interval between sampling and analysis, meaningful analysis can be carried out. Should this not be the case, the results of the analysis of the first sample shall be final and binding.

6 . Cost of analysis

The analysis required by the Company shall be performed at their expense.

APPENDIXS

PROGRAMMES FOR THE MAKING AVAILABLE
OF URANIUM AND PLUTONIUM

1. Not later than 31 July in each YEAR commencing from 1998, the Reprocessor shall propose to the Company and its other customers a programme (hereinafter called "PROVISIONAL AVAILABILITY PROGRAMME") whereby uranium and plutonium relevant to their FUEL will be MADE AVAILABLE in the 24 month period commencing 1 January next following.
2. Not later than 30 September in each YEAR, the Company shall submit their comments on the PROVISIONAL AVAILABILITY PROGRAMME and may request earlier or later dates for the MAKING AVAILABLE of uranium and/or plutonium to reflect their requirements. The Reprocessor shall endeavour to take into account the Company's requests in the framework of the REPROCESSING programmes.
3. Not later than 15 October in each YEAR the Reprocessor shall, taking into account insofar as practicable requests made pursuant to paragraph 2, notify the programme to the Company for the MAKING AVAILABLE of uranium and plutonium in the following YEAR (hereinafter called "AVAILABILITY PROGRAMME"). The AVAILABILITY PROGRAMME shall specify the estimated dates when quantities of uranium nitrate and plutonium dioxide will be MADE AVAILABLE at the REPROCESSING SITE (which such dates are hereinafter called "NOTIFIED DATES").

4. The Company will receive quantities of products corresponding to their REPROCESSED FUEL in quantities as similar as possible to those of the uranium and plutonium contained therein. If the need arises in the light of experience the parties shall consult together in order to define acceptable limits for deviations in quantities.

In the event that :

4. 1 the actual quantity of uranium and plutonium MADE AVAILABLE in any YEAR is less than the quantity specified in the relevant AVAILABILITY PROGRAMME any shortfall shall be carried over into the YEAR next following.

4. 2 the actual quantity of uranium and plutonium MADE AVAILABLE in any YEAR is greater than the quantity specified in the relevant AVAILABILITY PROGRAMME the excess quantity shall be considered as MADE AVAILABLE in advance with respect to the remaining quantities to be MADE AVAILABLE.

5 The Reprocessor shall notify the Company as soon as possible in the event that there is a likelihood that uranium and/or plutonium will be MADE AVAILABLE on dates other than the NOTIFIED DATES following which notification the parties shall consult with the intention of making suitable arrangements as to how such uranium and plutonium shall be allocated and put at the Company's disposal in the light of circumstances then prevailing.

SPECIFICATION OF URANYL NITRATE

1. Scope

This specification covers aqueous uranyl nitrate solution obtained by separation from plutonium and fission products, during the REPROCESSING of irradiated uranium oxide and mixed oxide fuel assemblies from thermal reactors.

2. Concentration

The concentration of uranium in the solution shall be between 200 and 400 grammes per litre.

3. Acidity

The free nitric acid shall be not more than one molar.

4. Impurities

The following impurities shall not exceed the limits hereinafter stated :

Chromium	100 ppm with respect to uranium
Iron	300 ppm with respect to uranium
Nickel	100 ppm with respect to uranium
Total Halides	300 ppm with respect to uranium

Total Halides means chlorine plus chlorine equivalent) plus fluorine.

5. Non volatile oxides

When heated to dryness and ignited in air at 850°C for two hours the ignited residue shall contain not more than 3000 ppm of non-volatile oxides excluding uranium oxide calculated from the following formula :

$$M \cdot 100 = \frac{A \cdot B \cdot J06}{100} \text{ ppm}$$

where

- M represents the non-volatile oxides excluding uranium oxide;
- A represents the percentage of uranium as determined in the ignited residue ; and
- B represents the factor to convert uranium (U) to triuranium octoxide (U3O8) according to the uranium (U) atomic weight of the material.

6. Boron equivalent

The equivalent boron content as calculated from the determined contents of the following impurities multiplied by the following boron equivalent factors :

Boron	1,0000
Cadmium	0,3104
Cobalt	0,0090
Dysprosium	0,0815
Europium	0,4 I 24
Gadolinium	4,4380
Iron	0,0007
Lithium	0,1457
Samarium	0,5513

shall not exceed 8 ppm with respect to uranium .

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When an element is present below the analytical limit of detection a figure of one third of such limit shall be used for this computation.

7. Fission Products

The content of the following isotopes

Zirconium 95
Niobium 95
Ruthenium 103
Ruthenium 106
Caesium 137
Cerium 144

shall not exceed a total of 0,5 microcuries per gramme of uranium.

8. Non uranic alpha activity

The content of the following elements

Americium
Curium
Neptunium
Plutonium

shall not exceed an alpha activity of 15000 dpm per gramme of uranium.

QUANTITY OF URANYL NITRATE

1. The total uranium content and the mean enrichment level of the uranium (to the nearest 0,001 % U235) contained in each batch of fuel assemblies shall be assessed at the dissolver stage in accordance with the provisions of Appendix 4.

2. The value of uranium in any chemical form shall be obtained by addition of the value of the separative work contained in the material and the value of the corresponding natural uranium feed content.
 2. 1 Unless otherwise AGREED, the separative work unit content and natural uranium feed content in the material shall be determined by use of the standard SWU and feed factors for enriched uranium given in Table I.

 2. 2 The factors for separative work unit and natural uranium content shall be calculated with linear interpolation if necessary. Such interpolation shall be calculated to the nearest thousandth.

 2. 3 The value of one separative work unit and the value for natural uranium will be AGREED before January 1st 1999.

These values shall be applicable until a further AGREEMENT is required by the Company or the Reprocessor.

3. The value of the uranium contained in the fuel assemblies (K) shall be calculated from the following formula :

$$K = (1 - Z) ABx$$

where

- Z represents the notified figure applicable at that time for process losses and separative work losses resulting from blending ;
- A represents the weight of uranium contained in the batch of fuel assemblies as determined at the dissolver stage in accordance with paragraph I above ;
- x represents the mean enrichment level of the uranium contained in the batch of fuel assemblies as determined at the dissolver stage in accordance with paragraph 1 above ;
- Bx represents the value of the uranium at the enrichment level as determined according to the provisions of paragraph 2 above.

4. The Reprocessor shall MAKE AVAILABLE at the REPROCESSING SITE a quantity of uranium in the form of uranyl nitrate whose value shall be calculated according to the following formula :

where :

C is the weight of uranium contained in the uranyl nitrate MADE AVAILABLE to the Company at the REPROCESSING SITE ;

y is the enrichment level of the uranium contained in the uranyl nitrate MADE AVAILABLE to the Company at the REPROCESSING SITE, and

Dy is the value of the uranium at the enrichment level y determined according to the provisions of paragraph 2 above.

5. The quantity of uranium as uranyl nitrate shall be chosen so as to approximate to

$$K=L$$

6. The value of the process loss and separative work losses arising from the blending ("Z" referred to in paragraph 3) cannot be defined with any certainty at the time of signature of this Contract. The Reprocessor will endeavour to achieve this value as targets for the REPROCESSING PLANT below 2,0 %.

7. The Reprocessor shall submit in due time to the Company, and to other utilities having entered into similar contracts with the Reprocessor, an amended procedure of determination of the quantity of uranium to be MADE AVAILABLE, applicable when reprocessing of FUEL with a very low U235 enrichment level - such as MOX FUEL - may result in a discrimination between some customers.

SWU AND FEED FACTORS FOR ENRICHED URANIUM
 BASED ON A TAILS ASSAY OF 0,20 %

Enrichment weight %U235	Natural uranium content Kg/Kg enriched uranium	Separative work unit per Kg enriched U
0,30	0,196	- 0,158
0,40	0,391	- 0,198
0,50	0,587	- 0,173
0,60	0,783	0,107
0,71 I	1,000	0
0,80	1,174	0,104
0,90	1,370	0,236
1,00	1,566	0,380
I, 1 0	I, 7 61	0,535
1,20	1,957	0,698
1,30	2,153	0,868
1,40	2,348	1,045
1,50	2,544	1,227
1,60	2,740	1,413
1,70	2,935	1,603
1,80	3,131	I, 797
I, 90	3,327	1,994

OUTPUT DETERMINATION OF URANYL NITRATE

1. Rights of the Company

1.1 The Reprocessor shall give to the representatives of the Company a right of access to the REPROCESSING PLANT in accordance with Appendix 15 for the purpose of witnessing the taking of samples of uranyl nitrate by the Reprocessor, the methods used by the Reprocessor in the analysis of samples and the analysis of samples taken from the uranyl nitrate. In addition the Company shall have the right to require the Reprocessor to take additional samples and to require the Reprocessor to carry out further analysis of the additional samples in accordance with this Appendix.

1.2 The Company undertake not to make unreasonable requests for additional analysis to be carried out by the Reprocessor.

1.3 The Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. Except as provided for below, the results of such analysis shall be final and binding on the Company.

2. Preparation of Uranyl Nitrate

Batches containing uranyl nitrate shall consist of batches mixed to ensure homogeneity. each batch bearing a different number.

3. Weighing and sampling

3. 1 The Reprocessor shall give the Company not less than six weeks' notice of the date when sampling of the uranyl nitrate is due to commence and not more than two weeks after the date of the said notice, the Company shall inform the Reprocessor if they wish to exercise the first or alternatively both of the following options :
 3. 1.1 to witness the taking of samples by the Reprocessor, to observe the methods used by the Reprocessor in the analysis of samples, including if the Company wish, the analysis of samples taken from the Company's uranium,
 3. 1. 2 to require the Reprocessor to take two additional samples for possible further analysis in accordance with the provisions of paragraph 3.3 of this Appendix.
3. 2 If the Company do not exercise the options given in paragraphs 3.1.1 and 3.1.2, one sample shall be taken from each batch of homogenised uranyl nitrate for the purposes of paragraphs 3 and 4 of this Appendix.
3. 3 If the Company elect to exercise the options given in paragraphs 3.1.1 and 3.1.2, three approximately equal samples shall be taken from each batch of homogenised uranyl nitrate. The samples shall, if possible, be taken in the presence of the Company. The first sample shall be used for the purposes of paragraphs 3 and 4 required the second and third samples for the purposes of paragraphs 3 and 4 of this Appendix i

with the provisions of paragraphs 6.2.1.2, 6.2.1.3 and 6.2.2 of this Appendix. On request of the Company the third sample may also be used for an umpire analysis to be performed in the REPROCESSING PLANT.

3. 4 Each representative sample shall be placed inside a previously weighed container which shall be weighed together with the representative sample. The difference between the two weights shall give the weight of the representative sample.

3. 5 After the taking of the samples the remainder of the batch shall be transferred into previously weighed containers. The containers shall then be reweighed, the difference between the two weights shall give the weight of the uranyl nitrate in the containers.

3. 6 The weights referred to in 3.4 shall be determined to an accuracy of + or - 0,01 % and the weights referred to in 3.5 shall be determined to an accuracy of + or - 0,1 %. The weights of the uranyl nitrate in the batch deemed by the Reprocessor to have been MADE AVAILABLE to the Company shall be calculated by adding together the weights of the uranyl nitrate in the containers and the weight of the representative sample or samples.

4. Assay

The uranium content and the isotopic composition of the representative sample shall be determined by analysis and the weight of fissile isotopes in the uranyl nitrate shall be assessed by applying the results of the analysis to the weight of uranyl nitrate determined under paragraph 3 of this Appendix, by means of the following expression or such other method as may be notified after consultation with the Company :

$$\begin{aligned} \text{total uranium content} &= \frac{A}{100} \times \frac{B}{C} \times D \\ \text{U235 content of the batch} &= \frac{A}{100} \times \frac{B}{C} \times \frac{D}{E} \times 100 \end{aligned}$$

where :

- A represents the percentage of uranium in the representative sample ;
- B represents the weight of the representative sample as measured before any portion thereof is removed for any purpose and immediately before the uranium content referred to in this paragraph is determined ;
- C represents the weight of the representative sample as measured in accordance with paragraph 3.4;
- D represents the weight of uranyl nitrate in the batch as calculated in accordance with paragraph 3.5 ; and
- E represents the weight percentage of fissile isotopes.

5. Analytical procedures

The analytical procedures used by the Reprocessor are qualified by COGEMA and updated as and when needed. Upon request, specimens of such procedures may be shown to the Company representatives when present at the REPROCESSING PLANT.

6. Results of analysis

6.1 If the Company do not exercise the options in paragraphs 3.1.1 and 3.1.2, the results of the analysis on the first sample from each batch of uranyl nitrate shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as practicable.

6.2 If the Company exercise the options in paragraphs 3.1.1 and 3.1.2, the following procedure shall be followed :

6.2.1. Assay

6.2.1.1 The results of the assay analysis on the first sample from each batch of uranyl nitrate shall be given by the Reprocessor to the Company's representative at the REPROCESSING PLANT or, in the event that the Company have not exercised the option given in 3.1.1, notified to the Company

Company as appropriate) shall within of receipt of the results of each

the Reprocessor if the Company wish the analysis to be repeated on a second sample. If no request is received the results of the analysis on the first sample shall be final and binding. Subject to the provisions of paragraph 6.2.2 the second and third samples shall be disposed of by the Reprocessor.

6. 2.1.2 If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as practicable. If the results of the two assessments of the weight of uranium or the fissile isotope content of the uranyl nitrate differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of uranium or fissile isotope content of the uranyl nitrate in the batch and shall be final and binding. The third sample shall be disposed of by the Reprocessor.

6 .2.1.3 If the results of the two assessments of the weight of uranium or fissile isotope content of the uranyl nitrate differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such analysis as is necessary on the third sample and shall inform

the Company of the results of the analysis as soon as practicable. The mean of the two assessments which are closest to each other shall be taken as the weight of the uranium, or fissile isotope content of the uranyl nitrate in the batch. However, if any disagreement cannot be resolved, the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

6.2.2 Specification

6.2.2.1 If the results of the analysis by the Reprocessor of the first sample confirm conformity to the specification, the batch of uranyl nitrate shall be accepted by the Company. Subject to paragraphs 6.2.1.2 and 6.2.1.3 the second and third samples shall be disposed of by the Reprocessor.

6. 2. 2. 2 If the results of the analysis by the Reprocessor on the first sample fail to confirm conformity to the specification the Reprocessor and the Company shall consult together and the Company shall decide which of the following courses of action shall be pursued :
the batch of uranyl nitrate will be accepted by the Company, or
the Reprocessor shall carry out the necessary analysis on the second sample.

6. 2. 2 .3 If the results of the analysis by the Reprocessor on the second sample confirm conformity to the specification, the batch of uranyl nitrate shall be accepted by the Company.

6.2.2.4 If the results of analysis by the Reprocessor on the second sample fail to confirm conformity to the specification, the Reprocessor and the Company shall consult together and the Company shall decide which of the following courses of action shall be pursued :
the batch of uranyl nitrate will be accepted by the Company, or
the batch of uranyl nitrate shall be rejected.

6. 2. 2. 5 If a batch of uranyl nitrate fails to meet the specification and if the Company reject the batch of uranyl nitrate under the provisions of paragraph 6.2.2.4, the Reprocessor shall as soon as is practicable thereafter supply to the Company a quantity of uranyl nitrate equivalent to that quantity of uranyl nitrate from which the said samples were taken in compliance with the specifications.

7. Cost of analysis

The analysis required by the Company shall be performed at their expense.

The cost of analysis will not be charged in case the results of the analysis of the sample fails to show conformity to the

SPECIFICATION OF PLUTONIUM DIOXIDE

1. Scope

This specification covers plutonium dioxide presently obtained by the oxalate precipitation route and calcined at a furnace temperature above 500°C. The plutonium oxalate is obtained from plutonium nitrate solution which is obtained by separation from uranium and fission products, during the reprocessing of irradiated fuel.

2. Appearance and particle size

The plutonium dioxide shall be free from visible fragments of foreign matter. All the plutonium dioxide powder shall be able to pass through a 100 micron sieve, and 95 % of the powder by weight shall be able to pass through a 44 micron sieve.

3. Surface area

The surface area shall be not less than 5 m²/g and not greater than 30 m²/g based on a BET absorption method. In any one batch the surface area determined shall not exceed the surface area determined on any of the five other batches produced before or after that batch by more than a factor of two.

4. Plutonium content

The plutonium content of the material as sampled shall be not less than 86,0 % by weight .

...

5. Impurities

The following impurities after heating the powder in air at 950°C for four hours shall not exceed the limits stated :

Aluminium	150	ppm	with	respect	to	plutonium
Calcium	250	ppm	with	respect	to	plutonium
Carbon	150	ppm	with	respect	to	plutonium
Chromium	200	ppm	with	respect	to	plutonium
Iron	500	ppm	with	respect	to	plutonium
Nickel	200	ppm	with	respect	to	plutonium
Nitrogen	150	ppm	with	respect	to	plutonium
Silicon	200	ppm	with	respect	to	plutonium
Thorium	200	ppm	with	respect	to	plutonium
Titanium	300	ppm	with	respect	to	plutonium
Chlorine	100	ppm	with	respect	to	plutonium
Fluorine	100	ppm	with	respect	to	plutonium
Total halides	150	ppm	with	respect	to	plutonium

Total halides means chlorine plus bromine plus iodine (expressed as chlorine equivalent) plus fluorine. Before heating the powder the total amount for chlorine and fluorine should not exceed 500 ppm with respect to plutonium.

When ignited in air at 950°C for four hours the ignited residue shall contain not more than 6000 ppm of non-volatile oxides excluding plutonium and americium oxides calculated according to the following formula :

$$\frac{A \times B}{100} - T \times 106 \text{ ppm}$$

where

- M represents the non-volatile oxides excluding plutonium and americium oxides ;
- A represents the percentage of plutonium as determined in the ignited residue ;
- B represents the factor to convert plutonium (Pu) to plutonium dioxide (PuO₂) according to the plutonium (Pu) atomic weight of the material ; and
- C represents the percentage of americium dioxide as calculated following determination in accordance with Appendix 11.

6. Boron equivalent

The equivalent boron content as calculated from the determined contents of the following impurities multiplied by the following boron equivalent factors

Boron	1,0000
Cadmium	0,3104
Chromi_um	0,0008
Cobalt	0,0090
Dysprosium	0,0815
Europium	0,4124
Gadolinium	4,4380
Iron	0,0007
Lithium	0,1457
Nickel	0,0011
Samarium	0,5513
Silver	0,0084
Titanium	0,0018

shall not exceed 10 ppm with respect to plutonium.

When an element is present below the analytical limit of detection a figure of one third of such limit shall be used for this computation. The boron equivalent factors are taken from BNL 325 as amended by Supplements and will be further amended as subsequent Supplements are issued.

7. Americium content

The americium content of the material as sampled shall be less than 5000 ppm with respect to plutonium.

8. Fission products

The content of the following isotopes

Zirconium 95
Niobium 95
Ruthenium I 03
Ruthenium I 06
Caesium 137
Cerium 144

shall not exceed a total of eight microcuries per gramme of plutonium.

9. Quality assurance

The plutonium dioxide MADE AVAILABLE by the Reprocessor is produced following a Quality Assurance Programme. The relevant Quality Assurance Programme will be communicated to the plutonium dioxide user and/or to the plutonium fuel manufacturer, on request of the Company.

This Quality Assurance Programme, unless otherwise AGREED, will not be communicated to the Company.

The Reprocessor reserves the right to Programme as and when needed.

QUANTITY OF PLUTONIUM DIOXIDE

1. The total plutonium content and the concentration of each isotope of plutonium contained in the fuel assemblies shall be assessed at the dissolver stage in accordance with the provisions of Appendix 4. The total weight of fissile isotopes of plutonium contained in the fuel assemblies shall thereby be determined.

2. In ascertaining the quantity of plutonium in the form of plutonium dioxide to be MADE AVAILABLE to the Company by the Reprocessor, the total weight of fissile isotopes so determined shall be reduced to a value given by the following formula

$$(I - Z) \frac{r}{1} A + Be \frac{- 6 t}{7588} \frac{1}{J}$$

where :

- A is the total weight of plutonium 239 contained in the fuel assemblies as determined at the dissolver stage in accordance with paragraph I above ;

- B is the total weight of plutonium 241 contained in the fuel assemblies as determined at the dissolver stage in accordance with paragraph I above ;

Li t JS the number of days between' the date of completion of
the dissolver analysis and the date of completion of the
plutonium dioxide isotopic analysis ;

e JS the exponential function ;

z ls the notified figure for process losses applicable at that
time ; and

7588 is taken as a nominal value to reflect the range between
13,20 and 15,r6 quoted in the literature, for the half life
of Pu24 l i.e. 14,4 years.

3. The value of the process loss "Z" referred to in paragraph 2 cannot be defined with any certainty at the time of signature of this Contract. The Reprocessor will endeavour to achieve this value as targets for the REPROCESSING PLANT below 2 %.

OUTPUT DETERMINATION OF PLUTONIUM DIOXIDE

1. Rights of the Company

- 1.1 The Reprocessor shall give to the representatives of the Company a right of access to the REPROCESSING PLANT in accordance with Appendix 15 for the purpose of witnessing the taking of samples of plutonium dioxide by the Reprocessor, the methods used by the Reprocessor in the analysis of samples and the analysis of samples taken from the plutonium dioxide. In addition the Company shall have the right to require the Reprocessor to take additional samples and to require the Reprocessor to carry out further analysis of the additional samples in accordance with this Appendix.
- 1.2 The Company undertake not to make unreasonable requests for additional analysis to be carried out by the Reprocessor.
- 1.3 The Reprocessor shall inform the Company of the results of such assessments when all the relevant data are available. Except as provided for below, the results of such analysis shall be final and binding on the Company.

2. Preparation of the plutonium dioxide

Batches of plutonium dioxide shall consist of batches normally not less than 50 kg Pu (total isotopes) mixed to ensure homogeneity, each batch bearing a different number.

3. Weighing and sampling

3. 1 The Reprocessor shall give the Company not less than six weeks'notice of the date when sampling of the plutonium dioxide is due to commence, and not more than two weeks after the date of the said notice the Company shall inform the Reprocessor if they wish to exercise the first or alternatively both of the following options :

3 .1. 1 to witness the taking of samples by the Reprocessor, to observe the methods used by the Re processor in the analysis of samples, including if the Company wish, the analysis of samples taken from the Company's plutonium,

3 .1. 2 to require the Reprocess or to take two additional samples for possible further analysis in accordance with the provision of paragraph 3.3 of this Appendix.

3. 2 If the Company do not exercise the options given in paragraphs 3.1.1 and 3. 1.2, one sample shall be taken from each batch of homogeneous plutonium dioxide for the purposes of paragraphs 3 and 4 of this Appendix.

3. 3 If the Company elect to exercise the options given m paragraphs 3.1.1 and 3.1.2, three approximately equal samples shall be taken from each batch of homogeneous plutonium dioxide ; the said samples shall, if possible, be taken in the presence of the Company. The first sample shall be used by the Reprocessor for the purposes of paragraphs 3 and 4 of this

If required the second and third samples shall be used for the purposes of paragraphs 3 and 4 of this Appendix in accordance with the provisions of paragraphs 6.2.1.2., 6.2. 1.3. and 6.2.2 of this Appendix. On request of the Company the third sample may also be used for an umpire analysis to be performed in the REPROCESSING PLANT and remain at fuelmanufacturer's disposal for return at its option.

3. 4 Each representative sample shall be placed inside a previously weighed container which shall be weighed together with the representative sample. The difference between the two weights shall give the weight of the representative sample.

3. 5 After the taking of the samples, the remainder of the batch shall be transferred into previously weighed containers. The containers shall then be reweighed, the difference between the two weights shall give the weight of the plutonium dioxide in the containers.

3. 6 The weights referred to in 3.4 shall be determined to an accuracy of +or - 0,01 % and the weights referred to in 3.5 shall be determined to an accuracy of + or - 0, 1 %. The weight of the plutonium dioxide in the batch deemed by the Reptocessor to have been MADE AVAILABLE to the Company shall be calculated by adding together the weights of the plutonium dioxide in the containers and the weight of the representative sample or samples.

4. Assay

The plutonium content and the isotopic composition of the representative sample shall be determined by analysis and the weight of fissile isotopes in the plutonium dioxide shall be assessed by applying the results of the analysis to the weight of plutonium dioxide determined under paragraph 3 of this Appendix by means of the following expression, or such other method as may be notified after consultation with the Company;

i

$$\begin{array}{rcccccc}
 & A & & B & & & \\
 \text{total plutonium content} & & \times & - & \times & D & \\
 & 100 & & c & & & \\
 \text{fissile plutonium content} & A & & B & & & E \\
 & 100 & \times & - & \times & D & \times & 100 \\
 & & & c & & & &
 \end{array}$$

where

- A represents the percentage of plutonium in the representative sample ;
- B represents the weight of the representative sample as measured before any portion thereof is removed for any purpose and immediately before the plutonium content referred to in this paragraph is determined ;
- C represents the weight of the representative sample as measured in accordance with paragraph 3.4 ;
- D represents the weight of plutonium dioxide in the batch as calculated in accordance with paragraph 3.5 ; and
- E represents the weight percentage of fissile

The analytical procedures used by the Reprocessor are qualified by COGEMA and updated as and when needed. Upon request, specimens of such procedures may be shown to the Company representatives when present at the REPROCESSING PLANT.

6. Results of analysis

6.1 If the Company do not exercise the options in paragraphs 3.1.1 and 3.1.2, the results of the analysis on the first sample from each batch of plutonium dioxide shall be final and binding. The results of such analysis shall be sent by the Reprocessor to the Company as soon as practicable.

6.2 If the Company exercise the options in paragraphs 3.1.1 and 3.1.2 the following procedure shall be followed :

6.2.1 Assay

6.2.1.1 The results of the assay analysis on the first sample from each batch of plutonium dioxide shall be given by the Reprocessor to the

Company's representative at the REPROCESSING PLANT or, in the event that the Company have not exercised the option given in 3.1.1, notified to the Company as soon as all relevant data on such sample are available. The Company's representative (or the Company) shall within seven days after results of each analysis notify the

the Company wish the analysis to be repeated on a second sample. If no request is received the results of the analysis on the first sample shall be final and binding.

Subject to the provisions of paragraph 6.2.2 the second and third samples shall be disposed of by the Reprocessor.

6. 2 .1. 2 If the Company require the Reprocessor to analyse a second sample, the Reprocessor shall carry out such analysis and inform the Company of the results of the analysis as soon as practicable.
If the results of the two assessments of the weight of plutonium or the fissile isotope content of the plutonium dioxide differ by not more than 0,7 % from each other, the mean of the assessments shall be accepted as the weight of plutonium or fissile isotope content of the plutonium dioxide in the batch and shall be final and binding. The third sample shall be disposed of by the Reprocessor.

6 .2. 1.3 If the results of the two assessments of the weight of plutonium or fissile isotope content of the plutonium dioxide differ by more than 0,7 %, the Reprocessor and the Company shall meet together and if possible reconcile the figures. If the disagreement cannot be resolved, the Reprocessor shall carry out such

necessary on the third sample and shall inform the Company of the results of the analysis as soon as practicable.

The mean of the two assessments which are closest to each other shall be taken as the weight of the plutonium, or fissile isotope content of the plutonium dioxide in the batch. However, if any disagreement cannot be resolved, the assessment retained by the appropriate safeguards authorities in charge of fissile material in the REPROCESSING PLANT shall be final and binding.

6.2.2 Specification

6. 2. 2 .1 If the results of the analysis by the Reprocessor on the first sample confirm conformity to the specification, the batch of plutonium dioxide shall be accepted by the Company and subject to paragraphs 6.2. 1 .2 and 6.2.1.3 the second and third samples shall be disposed by the Reprocessor.
6. 2. 2. 2 If the results of the analysis by the Reprocessor on the first sample fail to confirm conformity to the specification the Reprocessor and the Company shall consult together and the Company will decide which of the following courses of action shall be pursued :

the batch of plutonium diox.id.e will be accepted by the Company, or the Reprocessor shall carry out the necessary analysis on the second sample.

6. 2. 2. 3 If the results of the analysis by the Reprocessor on the second sample confirm conformity to the specification the batch of plutonium dioxide shall be accepted by the Company.

6.2.2.4 If the results of analysis by the Reprocessor on the second sample fail to confirm conformity to the specification, the Reprocessor . shall consult together with the Company and the Company will decide which of the following courses of action shall be pursued :
the batch of plutonium dioxide will be accepted by the Company, or
the batch of plutonium dioxide shall be rejected.

6. 2. 2. 5 If a batch of plutonium dioxide fails to meet the specification and if the Company reject the batch of plutonium dioxide under the provisions of paragraph 6.2.2.4, the Reprocessor shall as soon as is practicable thereafter supply to the Company a quantity of plutonium dioxide equivalent to that quantity of plutonium dioxide from which the said samples were taken in compliance with the specifications.

7. Cost of analysis

The analysis required by the Company shall be performed at their expense.

The cost of analysis will not be charged in case the res analysis of the sample fails to show conformity to the

FINANCIAL SETTLEMENT IN RESPECT OF RETURN
OF URANIUM AND PLUTONIUM

As it results from the provisions of Clause 6.4 herein that when the last REPROCESSING campaign has taken place it may not be thereafter possible to make quantity adjustments in following campaigns. In such an event financial settlements will take place when all the relevant data are available, as follows :

- 1 . as far as uranium is concerned the prices will be determined pursuant to the provisions of Appendix 7 hereof ;
2. as far as plutonium is concerned a price will be AGREED before the last REPROCESSING campaign.

WASTE AND ALLOCATION AND QUANTITY OF RESIDUES

A. Allocation

- 1 . In compliance with the provisions of Clause 8 the RESIDUES arising from the REPROCESSING by the Reprocessor of the Company's FUEL shall be allocated to the Company.

- 2 . Not later than six months after each shutdown of the plant for maintenance, repair or cleaning the Reprocessor shall notify their customers of the quantities of various waste arising from REPROCESSING in the period between that shutdown and the previous shutdown. Such waste shall include, but shall not be limited to the following categories :

solid WASTE such as cladding, casing and other . mechanical pieces of structure of the fuel assemblies ;

liquid WASTE of high activity such as fission products concentrates ;

other waste such as sludge, drums, barrels

bottles of gases ;

or other containers containing various types of WASTE.

3 . WASTE arising under paragraph 2 above shall be apportioned to the Company as follows :

3. 1 The total quantity of solid WASTE resulting directly from REPROCESSING shall be apportioned to the Company pro rata to the total weight excluding uranium oxide of the Company's FUEL actually REPROCESSED. The basis of this calculation will be the weights relevant to the fuel assemblies before irradiation.

3. 2 The total quantity of highly active liquid WASTE resulting from REPROCESSING and from various operations ancillary to REPROCESSING shall be apportioned to the Company pro rata to the quantity of fission products deemed to be contained in the Company's FUEL actually REPROCESSED and taking into account such differences in various fuel irradiation conditions in the reactor (average specific power in reactor) and in differences in COOLING times that may have elapsed since the date of discharge of the FUEL from the POWER STATION or in the specific design of the FUEL.

3. 3 For the purposes of this calculation the quantity of fission products deemed to be contained in fuel assemblies shall be considered as proportional to the following :

$u_{2380} \quad U_{238} + 0,85 (U_{235} \text{So} \cdot U_{235}) \cdot Pu$

where :

U_{2380} . represents the quantity of U_{238} g in the fuel before irradiation

u 2350 represents the quantity of U235 In the fuel before irradiation

u 238 represents the quantity of U23g in the fuel after irradiation

u 235 represents the quantity of U235 In the fuel after irradiation

Pu represents the quantity of plutonium total isotopes rn the fuel after irradiation.

3. 4 The correction factor to eventually apply to take account of possible differences of irradiation conditions of the fuel in reactor and cooling times at the dates of REPROCESSING shall be defined if necessary, and after consultation with the Company.
3. 5 Total quantities of WASTE other than as defined in 3.1 and 3.2 above, resulting directly from REPROCESSING during the period as defined in paragraph 2 above and the various operations prior to restart shall be apportioned to the Company pro rata to the quantity of uranium contained in the Company's FUEL actually REPROCESSED in that period.
3. 6 Total quantities of WASTE consisting of consumable pieces of contaminated equipment incapable of decontamination_ resulting from the maintenance or repair of the REPROCESSING PLANT during shutdown shall be apportioned pro rata at the Reprocessor's option to the quantity of U contained m the Company's FUEL actually REPROCESSED at that time or previously REPROCESSED.

4. WASTE shall be converted by the Reprocessor and the converted WASTE shall be apportioned to the Company from time to time pro rata to the quantities of the Company's WASTE deemed to have been converted.

5. The allocation of RESIDUES to the Company shall consist of the allocation to the Company of :
 5. 1 That converted WASTE which can be transported corresponding in quantity to the relevant quantity of WASTE apportioned to the Company in compliance with above paragraph 3 ;

 - 5.. 2 A quantity of converted WASTE capable of being transported which shall be deemed to be equivalent to that converted WASTE which cannot be transported or to that WASTE which cannot be converted and which . have been apportioned to the Company in compliance with the above paragraph 3. The criteria for defining such equivalent quantity shall be established by the Reprocessor and, after AGREEMENT whit the Company, shall be notified to the Company. Such criteria shall be determined after consideration of the respective quantities, volumes, heat powers and half lives of the various products and after special consideration to the respective toxicity (alpha activity, beta and gamma activities) of the said products.

6. The Reprocessor shall not be required, at any time, to affix any stamp or label attesting the ownership or the origin of the WA STE STORED on the REPROCESSING SITE or of the RESIDUES before they have left the REPROCESSING SITE.

B. Quantity

1. Quantity of WASTE and converted WASTE

1. 1 The Reprocessor shall maintain for all types of WASTE arising from REPROCESSING and apportioned to the Company a series of cumulative running accounts of various WASTE apportionments made by the Reprocessor pursuant to Part A of this Appendix.

1. 2 Following the operation of the appropriate conversion facility, the appropriate running accounts of WASTE shall be :

1. 2 .1 reduced by the quantity deemed to be converted and corresponding to the quantity of WASTE apportioned to the Company and

1. 2 .2 increased by the quantity of converted WASTE apportioned to the Company after conversion.

2. Quantity of RESIDUES

2. 1 The Reprocessor shall maintain for all types of RESIDUES either arising from conversion of the WASTE apportioned to the Company or deemed to be equivalent to the WASTE apportioned to the Company and unable to be converted and/or transported a series of cumulative running accounts of the various RESIDUES apportionments made by the Reprocessor in compliance with the rules set out in Part A of this Appendix.

2. 2 In respect of any addition to a

2. 3 Any return to the Company of a quantity of a designated RESIDUE shall result in a reduction by a quantity equal to the said return of the running account of the appropriate RESIDUE.

C. Any allocation of WASTE shall be non discriminatory as to quantity, radioactivity and type of material as between the customers whose fuel is REPROCESSED by the Reprocessor.

ESCALATION

The prices referred to in Clauses 9 .1.1. and 9 .1. 2 and the sum of referred to in Clause. 9.1.7.2 will be subject to escalation according to the following provisions :

- 1. The price for the transport of the FUEL referred to in Clause 9.1.1.1 is based on the economical conditions of January 1986.

It will be subject to escalation from this date until the date of DELIVERY of the FUEL in accordance with the provisions of Amendment n° 2 to the Service Agreement.

- 2. The REPROCESSING price referred to in Clause 9.1. 1.2 is based on the economical conditions of July 1989.

The down payment of this price, provided for in Clause 9.2.2.1 will be subject to escalation from July 1989 until the date of DELIVERY of each CONSIGNMENT of FUEL.

The remaining part of this price, provided for in Clause 9.2.2.2 will be subject to escalation from July 1989 until thirty days after the end of dissolution of the quantity covered by the relevant invoice.

In both cases the escalation will be calculated according to the following formulas :

2. 1 From July 1989 to July 2000 :

$$P = P_0 \left(0,65 \frac{S}{S_0} + 0,30 \frac{P_{sdB}}{P_{sdBo}} + 0,05 \frac{RF}{RFO} \right)$$

where

p is the escalated price,

Po is the price specified in the Clause 9.1.1.2,

So represents the "Indice du Cout de la marn d'oeuvre des Industries Mecaniques et Electriques" published by INSEE for July 1989 i.e. : 651,4,

PsdBo represents the "Indice des produits et services divers B" published in the "Bulletin Officiel de la Concurrence, de la Consommation et de la Repression des Fraudes" for July 1989 i.e. : 767,

RFo represents the "Operations du Tresor - Detail des recettes du budget general - Recettes fiscales" published by INSEE, and calculated for July 1989 according to the procedure described in paragraph 5 hereafter, i.e.

$$[\dots] \quad 7/12 =$$

S, PsdB, RF represent the value of the same indices on the date of DELIVERY of the FUEL or on July 2000 when this formula is used together with the formula defined in paragraph 2.2.

2. 2 From July 2000 on

$$P'' = PJ (0,15 + 0,56 \text{ SJS} + 0,25 \text{ PsdB} + 0,04 \text{ RF} + \dots)$$

where

- P is the escalated price,
- P1 is the price specified in the Clause 9.1.1. 2, escalated from July 1989 to July 2000 by means of the formula specified in paragraph 2.1.
- S1 represents the "Indice du Coût de la main d'oeuvre des Industries Mécaniques et Électriques" published by INSEE for July 2000,
- PsdB I represents the "Indice des produits et services divers B" published in the "Bulletin Officiel de la Concurrence, de la Consommation et de la Répression des Fraudes" for July 2000,
- RF! represents the "Opérations du Trésor - Detail des recettes du budget général - Recettes fiscales" published by INSEE, and calculated for July 2000 according to the procedure described in paragraph 5 hereafter,

S, PsdB, RF represent the value of the same indices on the date of DELIVERY of the FUEL or thirty days after the end of dissolution of the quantity covered by the relevant invoice, as the case may be.

3. The extension of storage referred to in the Clause 9.1.2 is based on the economical conditions of July 1989.

It will be subject to escalation from this date until the date of DELIVERY of the FUEL as far as the sum payable under Clause 9.1.2.1. is concerned, or until the date of invoicing as far as the sum payable under Clause 9.1.2.2. is concerned, in accordance with the formulas set out in paragraph 2 above.

4. The sum of ~ referred to in Clause 9.1.7.2 is based on the economical conditions of July 1989 and will be subject to escalation from this date until the date of economical conditions of the cost of additional refurbishing work.

5. Taking into account the definition of the indice RF, which represents the amount of taxation over a whole year, this indice has a meaningful value only in December each year.

Should a value of RF become necessary for a month of rank x in the year n, which is not December, the value of RF will be determined according to the following formula :

$$\text{RF (December year n-1)} = \frac{\text{RF (December year n-1)} \times \text{I}^2}{\text{X} [\text{RF (December year n-2)}]}$$

6. Provisional and definitive invoicing.

If the indices necessary for invoicing are not available at the moment of invoicing, the invoice shall be based on the last known indices. A definitive invoice shall be submitted when all final indices are known.

Should one or several indices referred to in the paragraphs t and 2 above be no longer available, the Reprocessor shall propose substitute indices, applicable for the period after the last published original indice, and the Parties shall endeavour to AGREE in good faith. Failing such an AGREEMENT, a settlement will take place in the framework of Clause 26 "ARBITRATION" of the SERVICE AGREEMENT.

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7. Should the Reprocessor and the UP3 BASELOAD CUSTOMERS AGREE in the framework of Amendment A of the SERVICE AGREEMENT (i.e. operating fee bonus-malus system)~ to supersede the RF index by another one, any Party shall have the right to ask for the implementation of the same modification in the framework of the present Amendment.

RIGHT OF ACCESS TO THE REPROCESSING SITE

1. The Reprocessor shall arrange for representatives of the Company to have access to the REPROCESSING SITE for the purpose of exercising the first or both of the options given in:

- paragraph 4.2 of Appendix 4
- paragraph 3.1 of Appendix 8 and
- paragraph 3.1 of Appendix 11.

In the event of the Company on any occasion failing to exercise their right of access under this paragraph or if they exercise only the first option under paragraphs 4.2 of Appendix 4 or 3.1 of Appendices 8 and 11, in such case, they shall not, in respect of such occasion, thereafter challenge the weights of samples and bulk material and the relevant samples taken and the analysis thereof made by the Reprocessor.

2. The Company shall provide the Reprocessor with the name and such other information regarding each representative as the Reprocessor may reasonably require, at least 14 days before the date of his first visit to the REPROCESSING PLANT.
3. The Reprocessor reserves the right to object to the nomination of any particular representative and to deny access to the REPROCESSING SITE to any particular representative, which right shall not be unreasonably exercised.

4. Not more than three representatives of the Company shall be present at the REPROCESSING SITE at any one time, for the purposes of the above paragraph 1 of this Appendix.

5. Each representative shall comply with the disciplinary codes and all relevant site and plant instructions in force at the REPROCESSING SITE.

6. A representative shall not be permitted to be present at any time on any part of the REPROCESSING SITE unless accompanied by a representative of the Reprocessor.

7. The Company shall fully indemnify the Reprocessor against all claims and proceedings made or brought against the Reprocessor in respect of any personal injury (including injury resulting in death) or loss of or damage to property suffered by any representative while on any premises occupied by the Reprocessor and against any costs reasonably incurred in connection with any claim or proceedings as aforesaid PROVIDED THAT this indemnity shall not apply to the extent that the said injury, loss or damage was caused by the emission of ionising radiations or by the neglect or default of the Reprocessor or any servant or agent of the Reprocessor.

8. For the purpose of this Appendix, the REPROCESSING SITE shall include the Analytical Laboratories in which the weighing, sampling and analysis of samples are carried out.

9. The above provisions also apply in the case that the Company wish to send representatives to the REPROCESSING SITE for the implementation of the procedures used for the accounting of RESIDUES and to witness the loading and transport of FLASKS.

LIST OF CAPITAL ESTIMATES

- CE N° 1 NPH
- CE N° 2 NPH hot pipe duct
- CE N° 3 STE 3 part 1 Network connection system
- CE N° 4 Storage pond C
- CE N° 5 Flask unloading (To) and storage pond D
- CE N° 6 High activity process (T1 - T2)
- CE N° 7 Uranium purification and storage (T3 - TS)
- CE N° 8 Plutonium purification and conversion (T4)
- CE N° 9 Plutonium storage (BSI)
- CE N° 10 HAW glassification and interim glass storage (T7)
- CE N° 11 MA solid waste interim storage (EDS)
- CE N° 12 Solid waste conditioning and decontamination (AD 2)
- CE N° 13 Central building (BC)
- CE N° 14 STE 3 part 2 - Liquid waste treatment
- CE N° 15 Site arrangement - Power and utilities network
- CE N° 16 Power and utilities production
- CE N° 17 General support

AMENDMENT n° 4

to the SERVICE AGREEMENT

COMPAGNIE GENERALE DES MATIERES
NUCLEAIRES
"COGEMA"

and

N. V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ
ZUID-NEDERLAND EPZ

This document is the property of COGEMA.4 and N.V. Elektriciteits-Produktiemaatschappij Zuid ··
Nederland EPZ.

This Amendment is made on the 11 day of .. t!.et11.~.... 1995,

BETWEEN

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES "COGEMA", having their registered office at 2, rue Paul Dautier 78140 VELIZY-VILLACOUBLAY - FRANCE ("Reprocessor")

AND

N.V. Elektriciteits·Produktiemaatschappij Zuid - Nederland EPZ, having their registered office at De Blecourtstraat 1, 5652 GB ELNDHOVEN - NETIIERLANDS ("Company"),

WHEREAS the Reprocessor and N.V. PZEM signed on March 20th 1978 a Service Agreement, as amended from time to time, ("the Service Agreement and its Amendments") for the REPROCESSING of FUEL arising from the Borssele nuclear power plant, and

\WHEREAS all the rights and obligations of N.V. PZEM were transferred to the Company, and

WHEREAS the Company has requested the Reprocessor that the OPERATION COST for FUEL RECEPTION and STORAGE and the relevant fee can be paid on a fixed price basis, for the remaining period starting from January 1st 1994 during which RECEPTION and STORAGE of FUEL shall be performed by the Reprocessor for the quantities defined in Clauses 2.1, 2.3. 1 and 2.3.2 of the Service Agreement and similar agreements signed with other BASELOAD CUSTOMERS, and

WHEREAS the Reprocessor and the Company have AGREED that the Company will be charged for such OPERATION CHARGE on a fixed price basis, and

NOW THEREFORE IT IS HEREBY AGREED AS FOLLOWS :

CLAUSE 1 - DEFINITIONS

In this Amendment, the words and expressions written in block capitals shall, unless the context otherwise requires respectively have the same meaning (with the singular including the plural and verb tenses being changed as the context may require) as defined in the Service Agreement or have the following meaning as the case may be, that is to say :

"OPERATION CHARGE" means the OPERATION COSTS as defined in the Service Agreement plus the relevant fee.

"RECEPTION" means all the operations taking place after the end of transport, until the FUEL is at store.

"STORAGE" means the storage of FUEL in the ponds prior to REPROCESSING at the REPROCESSING SITE.

"RECEPTION and STORAGE" has the same meaning as STORAGE of FUEL as defined in the Service Agreement.

CLAUSE 2 - SCOPE

The scope of this Amendment is to :

- ¿ amend the financial provisions of Clause 12 of the Service Agreement in respect of RECEPTION and STORAGE of FUEL operating services,
- ¿ define the revised financial conditions based on a fixed price scheme covering the relevant OPERATION CHARGE,

to define the conditions under which the Reprocessor will refund the amounts paid in 1994 on the COST plus fee basis for the related services, as the fixed price scheme shall effect from 1st January, 1994.

CLAUSE 3 . FINANCIAL CONDITIONS

3.1 The Company shall pay a RECEPTION and STORAGE OPERATION CHARGE of _____, applicable to each kilogramme of uranium contained in the FUEL irradiation.

This charge shall apply to the total quantity of uranium, contained in the FUEL irradiation, as contracted under the Service Agreement i.e. at the date of signature of this Amendment 140 000 kg U. The quantity of uranium contracted under the Amendment n° 3 of the Service Agreement is not covered by this charge.

This amount constitutes a final settlement as far as the OPERATION COSTS and fees of the FUEL RECEPTION and STORAGE services are concerned from January 1st, 1994 under the Service Agreement.

3.2 Terms of payment

3.2 .1 The RECEPTION and STORAGE OPERATION CHARGE defined in the above Clause 3.1 shall be paid in accordance with the following schedule :

	1994	1995	1996	1997	1998	1999	2000
FRF/kg							

3.2.2 The Company shall pay each yearly charge defined in the above Clause 3.2.1, multiplied by the quantity defined in Clause 3.1, on July 1st of each YEAR with the exception of YEAR 1994 for which the charge shall be paid as soon as possible after signature of this Amendment.

For each yearly charge the Reprocessor shall submit an invoice to the Company not less than sixty (60) days before the due date of payment.

3.3 Financial costs

The Company shall, in addition to the yearly charge for 1994 as defined in Clauses 3.2.1 and 3.2.2, bear financial costs calculated between October 1st, 1994 and the actual date of payment of the yearly charge for 1994.

The interest rate to be applied shall be the medium term loans interest rate: ("Marche Financier, rendement des obligations cotees - fin de mois-emprunts d'Etat a court terme" published in the "Bulletin Mensuel de statistique de l'INSEE" for the month of August 1994).

3.4 The payments referred to in the above Clauses 3.2 and 3.3 shall be made by the Company to the Reprocessor by bank transfer to the account designated on the relevant invoice.

3.5 Auditor's certificate

As far as the FUEL RECEPTION and STORAGE OPERATION COSTS are concerned, the provisions of the Service Agreement relating to the Auditor's certificate are no longer applicable.

3.6 Refund of the amounts paid in 1994 on the cost + fee basis

The Reprocessor will refund to the Company all the amounts paid on the COST plus fee basis and corresponding to the RECEPTION and STORAGE OPERATION CHARGE for 1994.

In addition to this refund, the Reprocessor shall pay financial costs calculated between the dates of payment of the amounts paid on the COST plus fee basis for 1994 and the actual date of refund using the interest rate defined in the hereabove Clause 3.3.

The amount of the corresponding credit note shall be deducted from the amount due by Company for 1994, in pursuance of Clauses 3.2 and 3.3, and the balance shall be paid by the Company or refunded to the Company, as the case may be.

CLAUSE 4 - VALIDITY OF IBE SERVICE AGREEMENT

All the provisions of the Service Agreement .and its Amendments which are not contradictory to the provisions set forth in this Amendment shall remain in force.

IN WITNESS WHEREOF, the Reprocessor and the Company have caused this Amendment to be executed by their duly authorized representatives as of the date first above written.

SIGNED BY
J.SYROTA
Chairman and Chief Executive Officer

for and on behalf of
COMPAGNIEGENERALE DES MATIERES NUCLEAIRES "COGEMA"

SIGNED BY

ir. H.A. Droog

for and on behalf of
N.V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPU ZUID-NEDERLAND "EPZ"

AMENDMENT N° 5
to the SERVICE AGREEMENT

COMPAGNIE GENERALE
DES MATIERES NUCLEAIRES (COGEMA)

and

N.V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID
- NEDERLAND E P Z

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to any possible damages which COGEMA and/or N. V. ELEKTRICITEITS-
PRODUKTJEMAATSCHAPPIJ ZUID - NEDERLAND E P Z may claim from him.

This Amendment is made between

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

having their registered office at 2, rue Paul Dautier, 78140 VELIZY VILLACOUBLAY (hereinafter called "the Reprocessor") of the one part and

N.V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID - NEDERLAND E P Z

having their registered office at De Blecourtstraat 1, 5652 GB EINDHOVEN - (NETHERLANDS), (hereinafter called "the Company") of the other part,

WHEREAS:

- (1) the Reprocessor and N.V. PZEM have signed on March 20 1h 1978 a Service Agreement for the REPROCESSING of FUEL arising from the Borssele nuclear power plant (this agreement, as amended from time to time, is hereinafter referred to as "the Service Agreement'), and
- (2) all the rights and obligations of N.V. PZEM were duly transferred to the Company,
- (3) the Reprocessor and the Company wish to revise the terms and conditions for transport of FUEL as defined in Amendment 3 to the Service Agreement,

CLAUSE 1 - SCOPE OF AMENDMENT

The purpose of this Amendment is to revise the terms and the conditions for the transport by the REPROCESSOR of a specific quantity of fuel assemblies, from the point of DELIVERY at the POWER STATION of BORSSELE to the REPROCESSING PLANT.

CLAUSE 2 - GENERAL CONDITIONS

- 2.1 As of 151 January 2000 onwards, transport of FUEL from the POWER STATION to the REPROCESSING SITE shall be performed by means of TN 17/2 FLASKS. The TN 17/2 type flask will normally be capable of transporting 7 fuel assemblies (with burn up measurement) or 6 fuel assemblies (without burn up measurement):
- 2.2 Empty FLASKS will be transported by rail to the harbour of Vlissingen, and then by road to the POWER STATION. After loading, they will be transported by road to the harbour of Vlissingen, and then by rail to the railway terminal of Valognes, and then by road to the REPROCESSING SITE.
- 2.3 Notwithstanding above Clause 2.2, the REPROCESSOR has the option to perform the transport of loaded FLASKS by ship from the harbour of Vlissingen to Cherbourg, then by rail from Cherbourg to Valognes terminal, and then by road from Valognes to the REPROCESSING PLANT. Such option for ship transport of loaded FLASKS shall be implemented only with three FLASKS at the same time. If the REPROCESSOR wishes to select this option, it shall notify the Company not later than 2 MONTHS in advance of the planned transport date for the full FLASKS.

CLAUSE 3 - FINANCIAL CONDITIONS

- 3.1 FUEL delivered before 1st January 2000

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3.2 FUEL delivered from 1st January 2000 onwards

The following terms and conditions described in this Clause 3.2 shall apply for FUEL DELIVERED after 1st January 2000 and supersede the terms and conditions described in Clauses 9.1.1, 9.1.2.1, 9.1.3, 9.2.2.1, 9.2.2.2 and 9.2.3 of the Amendment 3 to the Service Agreement.

3.2.1 Price

3.2.1.1.

For the provision by COGEMA of the following services :

- ∩ transport of FUEL from the POWER STATION to the REPROCESSING SITE according to the provisions of Clause 2 above and of Clause 4 of the Amendment n°3, it being understood that each FLASK shall be fully loaded,
- ∩ unloading and storage of such FUEL until it is REPROCESSED,
- ∩ REPROCESSING of such FUEL,
- ∩ STORAGE of uranium in the form of uranyl nitrate for 91 days, and STORAGE of plutonium for two YEARS,
- § STORAGE of WASTE. conversion of WASTE into RESIDUES (including compaction services for solid waste) and interim STORAGE of the RESIDUES for three YEARS,

EPZ shall pay a price of _____ 'per kg of HEAVY METAL contained in FUEL before irradiation

3.2.1.2

Notwithstanding the conditions described in Clause 3.2.1.1, the following rebates shall apply :

Rebate of _____ % in case transport is performed by rail and in tandem (i.e. two TN 17/2 FLASKS transported together back and forth), applicable to the FUEL transported during such an occurrence,

Rebate of _____ % if a railway connection to the POWER STATION is built. In such a case, all FLASKS shall be transported by rail, whether empty or loaded.

It is nevertheless agreed that the Company shall bear no penalty for the last FLASK to be shipped to the REPROCESSING SITE under existing agreements, if such FLASK is not fully loaded. .

3.2.3 Escalation

The prices set out in above Clauses 3.2.1 and 3.2.2 are based on the economical conditions of December 1999, and shall be revised according to the following formula:

$$P = P_0 \times (0.15 + 0.56 \frac{ICHTTS1}{ICHTTS1_0} + 0.25 \frac{PsdB}{PsdB_0} + 0.04 \frac{RF}{RF_0})$$

Where:

- P is the escalated price
- P₀ is the price resulting from the implementation of Clauses 3.2.1 and 3.2.2, based on the economical conditions of December 1999,
- ICHTTS1₀ represents the "Indice du Coût Horaire du Travail, Tous Salaires - Industries mécaniques et électriques", published by INSEE for December 1999,
- PsdB₀ represents the "Indice des produits et services divers B" published in the "Bulletin Officiel de la Concurrence, de la Consommation et de la Répression des Fraudes" for December 1999,
- RF₀ represents the "Operations du Trésor - Detail des recettes du budget general - Recettes Fiscales" published by INSEE for December 1999,
- ICHTTS1, PsdB and RF represent the value of the same indices on the date of issuance of the relevant invoice.

Should a value of RF become necessary for a month of rank x in the year, which is not December, the value of RF will be determined according to the following formula:

$$AF = \frac{RF_{\text{December year } n-1} \times \dots \times RF_{\text{December year } n-1}}{[RF_{\text{December year } n-1}]^2}$$

If the indices necessary for invoicing are not available at the moment of invoicing, the invoice shall be based on the last known indices. A definitive invoice shall be submitted when all final indices are known.

3.2.4 Invoicing and payment

3.2.4.1

After DELIVERY to the Reprocessor of each CONSIGNMENT, the Reprocessor shall submit to the Company an invoice for a Dow quantity of FUEL in the relevant CONSIGNMENT.

Such amount shall be paid by the Company to the Reprocessor by bank transfer within 30 days of the date of the said invoice, free of any deduction whatsoever, to the account designated on the said invoice.

3.2.4.2

Thirty days after dissolution of each batch of FUEL (a batch being the quantity of FUEL dissolved without intercalating fuel from another customer), or thirty days after the end of each MONTH if the dissolution of the batch takes place over a period of more than one MONTH, the Reprocessor shall submit to the Company an invoice for the total price payable under Clauses 3.2.1, 3.2.2, and 3.2.3 in respect of the quantity of FUEL dissolved for the account of the Company during the said MONTH. The net amount to be paid shall be of the price payable under Clauses 3.2.1, 3.2.2, and 3.2.3.

Such amount shall be paid by the Company to the Reprocessor by bank transfer within 60 days of the date of the said invoice, free of any deduction whatsoever, to the account designated on the said invoice.

CLAUSE 4- VALIDITY

The terms and conditions of the Service Agreement which are not contradictory to the present Amendment shall remain in force.

However, should at any time under this Amendment n°5 be implemented a provision of the Amendment n°3 to the Service Agreement which specifically concerns either the services of transporting or of reprocessing, EPZ and COGEMA agree that the relevant price shall be the price as referred to in the Amendment n°3.

SIGNED BY

SIGNED BY

CO AGNIE GENERALE DES
MATIERES NUCLEAIRES

P. PRADEL

AMENDMENT N° 6
to the SERVICE AGREEMENT

COMPAGNIE GENERALE
DES MATIERES NUCLEAIRES (COGEMA)

and

N.V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID
- NEDERLAND E P Z

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PRODUKTIEMAATSCHAPPIJ ZUID - NEDERLAND E P Z may claim from him.

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This Amendment is made this (i ~ day of i?o/ Two Thousand and one

BETWEEN

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES

having its registered office at 2, rue Paul Dautier, 78140 VELIZY-VILLACOUBLAY (FRANCE), (hereinafter called "the Reprocessor") of the one part

AND

N.V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID- NEDERLAND E P Z

having its registered office at Zeedijk 32, 4454 PM Borssele (NETHERLANDS), (hereinafter called "the Company") of the other part,

The Reprocessor and the Company being from time to time in this Amendment 6 referred to collectively as "the Parties".

WHEREAS:

- (1) The Reprocessor and N.V. PZEM signed on March 20th, 1978 a Service Agreement for the REPROCESSING of FUEL arising from the Borssele POWER STATION (this agreement, as amended from time to time, is hereinafter referred to as "the Service Agreement"), and
- (2) All the rights and obligations of N.V. PZEM were duly transferred to the Company, and
- (3) The Reprocessor and the Company now wish to revise the terms and conditions for the definition of the REPROCESSING programmes of the FUEL DELIVERED under Amendment 3 to the Service Agreement and the associate terms and conditions for invoicing and payment as defined in Amendment Service Agreement,

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CLAUSE 1 ·SCOPE OF AMENDMENT

The purpose of this Amendment is to revise the terms and conditions for the definition by the Reprocessor of the REPROCESSING programmes of the FUEL DELIVERED under Amendment 3, and the associated terms and conditions for invoicing and payment.

CLAUSE 2 - PROGRAMMES

- 2.1 The REPROCESSING programmes shall be established by the Reprocessor and transmitted to the Company for information purposes and for the proper implementation of Clause 4 herein.
- 2.2 The financial conditions described in Clause 9 of Amendment 3 to the Service Agreement and amended per Clause 3 of Amendment 5 to the Service Agreement shall be implemented on the basis of a specific fixed schedule as described in Clause 3 below.
- 2.3 The scope of the annual update of the tentative schedule as defined in Clause 2.1 of Amendment 3 to the Service Agreement shall be restricted to the estimate of FUEL to be discharged from the POWER STATION. Such discharge schedule shall be updated not later than October 31 51 in each YEAR, the first such update to be given in October 2001.

CLAUSE 3 - FINANCIAL CONDITIONS

- 3.1 FUEL delivered before 1;1 January 2000

Notwithstanding provlsions of Clause 3.1 of Amendment 5 to the Service Agreement, the provisions of Clauses 9.2.2.2 and 9.2.3 of Amendment 3 to the Service Agreement, applicable to the FUEL DELIVERED at the REPROCESSING SITE before 1st January 2000, shall be implemented according to the following reference schedule :

Number of assemblies	Quantity (~~- contained in .FUEL I ____, __b_e_f_ore irradiation <1J	Date of invoicing
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74	23.5	1st Jul 2002
43	.---'1~3~.6~---_J, ____:.-;~imm?-,,---_J	

Pl The figures indicated in this table under the
for invoicing purposes.

3.2 FUEL delivered from 151 January 2000 onwards

3.2.1 The provisions of Clause 3.2.4.2 of Amendment 5 to the Service Agreement, 51
 applicable to the FUEL DELIVERED at the REPROCESSING SITE from 1
 January 2000 onwards, shall be implemented according to the following
 reference schedule, or upon the date of actual REPROCESSING, whichever the
 later:

Number of assemblies	Quantity (tHM) contained in FUEL before irradiation <1)	Date of invoicing
57	18.1	1 Julv 2008 51
48	15.2	
211	66.9	1 July2010 151 July2010

<> The figures indicated in this table under the section "quantity" have been rounded for better understanding. It is understood that exact figures shall be used for invoicing purposes.

3.2.2 The Company and the Reprocessor shall have the right to request an update of the schedule defined in above Clause 3.2.1, in particular if the quantities of the FUEL to be REPROCESSED were to be increased as provided for by Clause 2.5 of Amendment 3 to the Service Agreement, as amended per Letter referenced BCR/DACP/DAI 00-5378/0P dated 11 m May 2000.

Upon such request, the Parties shall meet in order to review the situation and define the actions to be undertaken.

Any update of the schedule defined Jn above Clause 3.2.1 will have to be AGREED between the Parties before coming into force.

CLAUSE 4 ; PLUTONIUM

The Reprocessor will propose to the Company, in due time after REPROCESSING of each batch of the Company's FUEL, to enter into a temporary loan agreement providing for the transfer to the Reprocessor of title to the quantity of plutonium arising from such REPROCESSING and for the return, in due time, to the Company of a corresponding quantity.

CLAUSE 5 - ENTRY INTO FORCE

This Amendment 6 shall enter into force upon signatur

All terms and conditions of the Service Agreement and of its Amendments 3 and 5 which are not contradictory to the present Amendment shall remain in force and shall apply to this Amendment 6.

In WITNESS WHEREOF the duly authorised representatives of the PARTIES hereto have executed this Amendment 6, in two original copies, this day and this year first above written.

SIGNED BY

SIGNED BY

For and on behalf of
COMPAGNIE GENERALE DES
MATIERES NUCLEAIRES

For and on behalf of
N.V. ELEKTRICITEITS-
PRODUKTIEMAATSCHAPPIJ ZUID ·
NEDERLAND E P Z

AMENDMENT N° 7
to the SERVICE AGREEMENT

COMPAGNIE GENERALE
DES MATIERES NUCLEAIRES (COGEMA)

and

N. V. ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID
- NEDERLAND E P Z (EPZ)

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ELEKTRICITEITS-PRODUKTIEMAATSCHAPPIJ ZUID - NEDERLAND E P Z.

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WHEREAS the Reprocessor and N.V. PZEM signed on March 20 1978 a Service Agreement for the REPROCESSING of FUEL arising from the POWER STATION, as amended from time to time (hereinafter referred to as "the Service Agreement");

WHEREAS all rights and obligations of N.V. PZEM under the Service Agreement have duly been transferred to the Company;

WHEREAS the Reprocessor and the Company signed, on July 5th, 1993, an Amendment 3 to the Service Agreement, providing for transport, STORAGE and REPROCESSING services of FUEL discharged from the POWER STATION until the end of 2004, as well as for an optional continuation of these services for FUEL, this amendment being amended from time to time (the Amendment 3 to the Service Agreement, as amended from time to time, being hereinafter referred to as "Amendment 3');

WHEREAS the Company and the Reprocessor wish to extend the Amendment 3 by supplying additional reprocessing services, as well as. to modify some of its terms under this Amendment 7 and to set forth the terms anti conditions for the providing by the Reprocessor of MANAGEMENT OF PRODUCTS,

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS;

EPZ and COG EMA

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All terms used in this Amendment 7 have the meaning as set forth in Amendment 3, unless modified or defined in this Article 1:

"CONVERSION" means processing of UN into U308 and the related services as defined in Clause 6.2 as amended in article 4.2 of this Amendment 7 and the Appendix 6,

"CONVERSION PLANT" means COGEMA's Pierrelatte Conversion facility (France):

"CONVERTED URANIUM" means U308 resulting from CONVERSION,

"CSD-C" means Universal Canisters of compacted wastes complying with the specification 300 AQ 55,

"CSD-V" means Universal Canisters of vitrified wastes complying with the specification 300 AO 16,

"FEED" means the total quantity of plutonium managed by the Reprocessor, including the MANAGED PLUTONIUM,

"MANAGED PLUTONIUM" means the following quantities of plutonium which belong to the Company:
-SEPARATED Pu,
- plutonium arising from REPROCESSING of FUEL and which is allocated to the Company after the date of signature of this Amendment 7 under Article 4 and Article 5 of this Amendment 7,
- LOANED Pu as from the date of return to the Company,
The MANAGED PLUTONIUM will enter the FEED.

"MANAGEMENT OF PRODUCTS" means provision of the services regarding uranium and plutonium as described in Article 4.2 and Article 5 of this Amendment 7,

"SEPARATED Pu"

"LOANED P\1"

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means uranyl nitrate resulting from the REPROCESSING of FUEL at the REPROCESSING PLANT,

"UR SYSTEM"

means the procedure in force at the REPROCESSING SITE for the accountancy of WASTE and RESIDUES as set forth in the document 300 AO 127 released by the Reprocessor.

"MADE AVAILABLE"

means

- (a) in respect of FUEL, FUEL acceptable to the Reprocessor pursuant to Clause 4.3.2 of Amendment 3 and which has been declared by the Company as being available for DELIVERY,
- (b) in respect of uranium, CONVERTED URANIUM which has been declared by the Reprocessor to be available for collection by the Company at the CONVERSION PLANT,
- (c) in respect of RESIDUES, RESIDUES which have been declared available by the Reprocessor, after the performance of operations as described in the OESTORAGE PROCEDURE (as provided for in Amendment B to the Service Agreement), for collection by the Company from the REPROCESSING SITE and transport to the Netherlands.

"POWER STATION AVAILABILITY"

means the annual power production of the POWER STATION, divided by the theoretical maximum annual power production at 450 MWe, times 100%.

The purpose of this Amendment 7 is to define the terms and conditions under which the Reprocessor shall provide the Company with additional REPROCESSING services according to Clause 2.5 of Amendment 3 for a quantity of FUEL as described hereafter.

In addition, this Amendment 7 (i) settles the quantity of FUEL covered by Amendment 3 and (ii) sets forth the terms and conditions for the providing by the Reprocessor of MANAGEMENT OF PRODUCTS.

ARTICLE 3 SETTLEMENT OF THE QUANTITY OF FUEL COVERED BY AMENDMENT 3

3.1 Taking into account the continuation of activity of the POWER STATION BEYOND December 31 51 , 2003, the quantity of FUEL covered by Amendment 3 is hereby set, upon mutual agreement between the Parties, at an exact total number of 372 fuel assemblies, which corresponds to about 118 tons of HEAVY METAL

3.2 Clause 3.2. 1 of Amendment 6 is deleted and replaced by the following clause 3.2.1:

3.2.1 The provisions of Clause 3.2A.2 of Amendment 5 to the Service Agreement, applicable to the FUEL DELIVERED at the REPROCESSING SITE from 1 January 2000 onwards, shall be implemented according to the following reference schedule, or upon the date of actual REPROCESS/NG, whichever the later:

Number of assemblies	Quantity contained i before irra
-----+-----+-----<	
21	
40	
57	
48	
89	

The figures indicated in this table under tfile section "quantity" have bee ~ understanding. It is understood that exact figures shall be used for invoic. lf-

ARTICLE 4 ADDITIONAL REPROCESSING SERVICES

For the performance of additional REPROCESSING services to be supplied by the Reprocessor to the Company for a quantity of FUEL to be MADE AVAILABLE before December 31 51, 2015, Amendment 3 shall be modified as follows:

4.1 Modifications to Clauses 2 and 3

Clauses 2 and 3 of Amendment 3 are deleted and replaced by the following Clause 2 and Clause 3 ;

"Clause 2-Scope of services

2.1 The Reprocessor will supply the Company with the following REPROCESSING and related services:

Transport from the POWER STATION to the REPROCESSING SITE of all FUEL MADE AVAILABLE by the Company,
Unloading and STORAGE of such FUEL until it is REPROCESSED,
REPROCESSING of such FUEL,
MANAGEMENT OF PRODUCTS arising therefrom,
STORAGE of WASTE, conversion of WASTE into RESIDUES (including compaction services for solid waste) and interim STORAGE of the RESIDUES at the REPROCESSING SITE until their MAKING AVAILABLE,
MAKING AVAILABLE of such RESIDUES at the REPROCESSING SITE for their return to the Netherlands.

2.2 Specific provisions related to transport of FUEL

The Reprocessor shall provide the corresponding FUEL transport services as described in Amendment 3.

2.1.1 Notwithstanding the above, it is AGREED that rail transports of FUEL shall be performed in tandem, i.e. two loaded FLASKS transported together from the POWER STATION to the REPROCESSING SITE, unless otherwise AGREED.

1.2.1 The Company shall have the option to request that rail transport of FUEL to be performed with three loaded FLASKS transported together from the POWER STATION to the REPROCESSING SITE.

Clause 3 - Quantities and schedule

3.1 Quantities

In conformity with Clause 2. 5 of Amendment 3, the Company shall MAKE AVAILABLE the FUEL discharged from the POWER STATION to the Reprocessor until December 31st, 2015. The quantity of such FUEL is estimated to be 90 tons of HEAVY METAL

However, should the POWER STATION cease to operate after December 31¹, 2013, the estimated quantity will be increased to about 143 tons of HEAVY METAL

3.2 Schedule

The Parties agree that the schedule for the transport of FUEL by the Reprocessor will be based on a seven-YEARS based rolling program. This program will be AGREED between the Parties and will be based on the quantities the Company can MAKE AVAILA 13LE and on the industrial, logistics and recycling possibilities the Reproce can unt.:rtake for the said period.

As from the YEAR 2005 and onwards, the quantity corresponding lo the new YEAR will be added in order lo define the next seven YEARS program. The parties shall update th program not later than October 31st of each YEAR. Unless otherwise AGREED, the only possibility for the Company to decrease the quantities of the first six years of program is if. for whatever reason except for reasons following an act or failure to of the Dutch Authorities or competent bodies taking decisions or giving advises for o on behalf of the Dutch Authorities, the POWER STATION AVAILABILITY in the previous YEAR has been 90% or less, it being agreed that such decrease of the quantities shall be limited by and in accordance with the actual decrease ofthe POWER STATION AVAILAB/LfIT.

The first seven YEARS program, covering the period 2005-20I I. is defined in Appendix 3.

3.3 The DELIVERIES at the REPROCESSING SITE of FUEL shall start after completion of the DELIVERIES ofFUEL to be REPROCESSED under Amendment 3.

At the date of signature of Amendment 7, the DELIVERIES at the REPROCESSING SITE ofFUEL are anticipated to start during the year 2006.

3.4 Clauses 2.7, 2.8, 2.9, 2.12, 2.13 and 2.15 of Amendment 3 shall remain applicable.

4.2 Modifications to Clause 6 .

Clause 6 of Amendment 3 is deleted and replaced by the following Clause 6 :

"Clause 6 - MANAGEMENT OF PRODUCTS

6.1 Management ofPlutonium

6.1.1 The plutonium arising from the REPROCESSING of the FUEL MADE AVAILABLE by the Company shall be included in the MANAGED PLUTONIUM upon allocation.

6.1.2 The plutonium to be recovered from REPROCESSING of FUEL shall be allocated (in accordance with the U-Pu allocation procedures in force at the REPROCESSING SITE) without further identification of the PuO₂ batches, containers and EURATOM codes.

The MANAGED PLUTONIUM shall be managed without physical identification

6.1.3 The MANAGED PLUTONIUM shall be stored by the Reprocessor until 2019 at the latest. The Reprocessor shall provide accounting services for the MANAGED PLUTONIUM, according to the principles set forth in Appendix 5 of Amendment 7, by providing not later than October 31" in each YEAR a balance of the quantities credited and debited into the MANAGED PLUTONIUM account. Such report shall specify the fissile content of the MANAGED PLUTONIUM at the reference date of the report.

6.1.4 The Reprocessor shall provide a recycling solution for the MANAGED PLUTONIUM and therefore undertake all necessary actions to maintain the MANAGED PLUTONIUM in a condition suitable for such recycling.

6.1.5 The Reprocessor will undertake any necessary actions to maintain the MANAGED PLUTONIUM in conformance with applicable regulations in a condition suitable for recycling until the completion of such recycling.

6.1.6 Appendices 9, 10 and 11 of Amendment 3 shall remain applicable.

6.2 Management ofReprocessed uranium

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An inventory of UN and CONVERTED URANIUM (as described in Appendix 6 of Amendment 7) shall be supplied by the Reprocessor to the Company on an annual basis not later than October 31", the first inventory to be given in 2006.

6.2.2 Appendices 6, 7 and 8 of Amendment 3 shall remain applicable "

4.3 Modifications to Clause 8

Clause 8 of Amendment 3 is completed by the following terms:

"RESIDUES arising from REPROCESSING of the FUEL shall be returned after the end of the return of RESIDUES arising from previous contracts transferred to the Company or executed between the Company and the Reprocessor, such return being based on the tentative schedule as set out in Appendix 4 of Amendment 7.

WASTE and RESIDUES shall be accounted for according to the procedures of the UR SYSTEM

RESIDUES to be returned to the Company will be CSD-C and CSD-V.

The Reprocessor shall make its best efforts in order to reach a target for the total volume of RESIDUES of a maximum 0.5 m³ per ton of FUEL REPROCESSED.

RESIDUES shall be stored by the Reprocessor until their MAKING AVAILABLE to the Company for transport to the Netherlands. MAKING AVAILABLE; of RESIDUES at the REPROCESSING SITE is based on the tentative schedule set out in Appendix 4 of Amendment 7, which corresponds to the quantity of WASTE corresponding to the REPROCESSING of the maximum quantity of FUEL as mentioned in Clause 3.1 hereabove.

The Reprocessor shall make its best efforts to fit the availability of RESIDUES with the operational schedule of the REPOSITORY in the Netherlands for their MAKING AVAILABLE. The schedule described in Appendix 4 of Amendment 7 represents the best estimate of the Parties at the date of signature hereof. The Parties shall update such tentative schedule not later than October 31" in each YEAR, the first such update to be given in October 2004"

4.4 Modifications to Clause 9

U'Z 1111d COG EMA

9.1 Price

9.1.1 For all services set forth in Clause 2, except the services described in Clause 6.1, the Company shall pay an all-in price of _____ contained in FUEL before irradiation.

This price is based upon applicable standards and regulations on the date of signatu of Amendment 7. Should such standards or regulations be modified, corresponding modifications of the conditions (including the price) for the performance of the additional REPROCESSING services as referred to in Clause 2.1 would then be discussed and AGREED.

9.1.2 Notwithstanding the provisions of Clause 9.1.1. the following modifications the price shall apply.

Rebate of . - ' " . HM0 in case transport of FUEL is performed with the loaded flasks in accordance with Clause 2.2.2.

Additional charge of . . --- . , in case transport of FUEL from the POWER STATION to the REPROCESSING SITE is performed only with one FUSK due to reasons not attributable to the Reprocessor or the French Authorities.

9.13 For the services set forth in Clause 6.1. the Company shall pay to the Reprocessor an all-in price of _____ .. _ r-----r Suc payment represents the only and final obligation of the Company towards the Reprocessor for storage, cleaning and recycling ofthe concerned quantity ofplutonium.

9.1.4 Escalation

The prices mentioned here above are based on the economical conditions of September 2003.

They shall be escalated according to the following for,mula:

$$P = P_0 \times (1 + 0.15 + 0.06 \text{ ICHTTS1} + 0.2s \text{ PsdBJ} + 0.06 \text{ ICHTTS10} + 0.2s \text{ PsdB0})$$

Where:

P

Po

JCHTTSJ 0 represents the "Indice du Cout Horaire du Travail Taus Salaries pour /es industries mecaniques et electriques" published by JNSEE for the month of March 2001,

Psd80 represents the "Indice des Produits et Services Divers B" published in the "Bulletin Olficiel de la Concurrence, de la Consommation et de la Repression des Fraudes" for the month of March 2001,

ICHTTSI and PsdB are the values of the same indices six months before the date of invoicing.

9.1.5 invoicing and payment

9.1.5.1

After DELIVERY to the Reprocessor of each CONSIGNMENT of FUEL, the Reprocessor shall submit to the Company an invoice for a downpayment of

of the escalated price payable under Clause 9. I. I in respect of the quantity of FUEL in the relevant CONSIGNMENT.

of the escalated rebate or additional charge calculated under Clause 9.1. 2

Such amount shall be paid by the Company to the Reprocessor by bank transfer within 30 days of the date of the said invoice, free of any deduction whatsoever, to the account designated on the said invoice.

9.1.5.2

The Reprocessor shall submit to the Company an invoice for the total escalated price payable under Clause 9. I. I in respect of the quantities of FUEL REPROCESSED according to the following schedule or upon the date of actual REPROCESSING, whichever the later:

Number of assemblies	Quantity (tHM) contained in FUEL before irradiation(!)	Date of invoicing
60	19.1	July 2010
60	19.1	I" July 2012
60	19.1	I' July 2014
Remaining quantity		I" July 2016

(I) The figures indicated in the above table under the section "quantities" have been rounded for better understanding. It is understood that exact figures shall be used for invoicing purposes.

The net amount to be paid shall be 911.

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9.1.5.3

The escalated price set forth in Clause 9.1.3 shall be invoiced as follows:

- of the price: at the date of allocation to the Company
- remaining amount of the price: upon the date of transfer of title to the Reprocessor for recycling

Such amount shall be paid by the Company to the Reprocessor by bank transfer within 45 days of the date of the said invoice, free of any deduction whatsoever, to the account designated on the said invoice.

In addition should, after recycling of all of the UNMANAGED PLUTONIUM and of all the LOANED Pu, the Reprocessor identify recycling possibilities for plutonium corresponding to a maximum quantity of 143 tons of HEAVY METAL of FUEL to be MADE AVAILABLE as referred to in Clause 3.1 and which has not yet been REPROCESSED, the Reprocessor shall be entitled to request, following written confirmation and identification of such recycling possibilities to the Company and the FACDD of the related plutonium quantity, an advanced payment for the total amount of the escalated price corresponding to the related plutonium quantity.

The Company is entitled to appoint an auditor to verify the contractual arrangements (especially but not limited to the quantities and the "fuel assembly contractual due delivery date" as mentioned in such arrangements, and hereinafter referred to as "FACDD") made between the Reprocessor and any third party with regard to the recycling possibilities.

The Company shall within two (2) months from its issuance acknowledge receipt of such confirmation.

The advanced payment shall be invoiced by the Reprocessor as follows:

- of the advanced payment: 24 (twenty four) months before the FACDD or upon reception of the acknowledgement of the Company, whichever is later,
- of the advanced payment: 12 (twelve) months before the FACDD
- of the advanced payment: at the FACDD

and shall be paid by the Company to the Reprocessor by bank transfer within 45 days, free of any deduction or discount whatsoever, to the account designated on the said invoice.

Upon invoicing of the last instalment of the advanced payment, the Reprocessor will then debit the Company's account as in Appendix 5 with the related plutonium quantity and submit the Company with an updated balance sheet not later than one (1) month after such update. This balance sheet will bear the signature of a duly authorised officer of the Reprocessor and of the auditor appointed by the Company

Such advanced payment represents the only and final obligation towards the Reprocessor for (storage, cleaning and) recycling of (future) plutonium.

Every time actual plutonium allocation will take place in accordance with Clause of Article 4. 2 of this Amendment 7, the Company's account will be credited and the concerned quantity will simultaneously be transferred to the Reprocessor.

In case the balance ends up negative after all the FUEL has been REPROCESSED and after all of the corresponding plutonium has been allocated and transferred, the Company shall have the right to request the Reprocessor to take title to a corresponding quantity of plutonium arising from further REPROCESSING operations in compliance with the option as described in Clause 2. 6 of the Amendment 3 to the Service Agreement, and the Reprocessor shall accept such request.

It is agreed that in any case the Reprocessor will not reimburse to the Company the advanced payments should the corresponding quantities of FUEL not be MADE AVAILABLE or DELIVERED by the Company. The Reprocessor however shall reimburse the advanced payments should the corresponding quantities of FUEL not be MADE AVAILABLE or DELIVERED for reasons attributable to the Reprocessor.

Notwithstanding the above, should FUEL not be MADE AVAILABLE or DELIVERED for reasons of Force Majeure or POWER STATION AVAILABILITY, the Parties shall meet in good faith and assess the actual costs and consequences incurred to the Reprocessor in respect with the related plutonium quantities.

In addition, the Company shall have the option, within the upper limit of the final negative balance of the Company's plutonium balance sheet, to deliver at the REPROCESSING SITE and to request the Reprocessor to take title to a quantity of plutonium dioxide with an americium content of less than 5000 ppm, and the Reprocessor shall accept such request, it being agreed that all costs related to the purification, conditioning, transport to the REPROCESSING SITE and associated expenses shall be borne by the Company.

9.1.6 The prices specified in this Clause 9 do not include Value Added Tax. Such and any relative additional charge, if any, will be added to the mentioned prices. All other taxes and duties existing at the date of signature of Amendment 7 are included in the prices. Any other taxes and/or duties not existing at the date of signature of Amendment 7 that may be applied to the additional REPROCESSING services as referred to in Clause 2. 1 shall be borne by the Company, subject to evidence thereof to be provided by the Reprocessor to the Company

9.1.7 Incomplete DELIVERY of the total quantity of FUEL
9. I. 7. I For the quantities included in the seven-YEARS program:

Should some quantities be cancelled the Reprocessor shall be entitled to reimburse the Company a compensation calculated on the basis of the latest service agreement AGREED between the Parties in compliance with Clause 3.2 calculated according to the following formula .

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where

cc.= non performance charge calculated on the year "n" of a cancelled quantity

BPE price as specified in Clause 9.1.1, escalated at the date of invoice

MQ_{ij} , = cancelled quantity for year "n+i" (difference between AGREED value and lowered actual value)

Pn+i = percentage relevant for a notification during year "n" of a cancelled quantity year "n' i"

n+1
n+2
n+3
n+4
n+5
n+6
n+7

Implementation of such principles is provided in Appendix 8.

Such compensation would be invoiced by the Reprocessor not later than 6 months after the end of the relevant period of the non DELIVERY. and paid by the Company not later than 30 (thirty) days from the receipt of the invoice.

It is understood that a quantity shall be deemed to be cancelled if:

∫ for reasons directly attributable to the Company or following an act or failure to act of the Dutch Authorities or competent bodies taking decisions or giving advises for or on behalf of the Dutch Authorities but only insofar as such reasons, act or failure to act are not linked to transport licensing issues, the DELIVERY of such quantity of FUEL is delayed for a period of two YEARS or more,

or

In addition to the above should, for reasons directly attributable to the Company or following an act or failure to act of the Dutch Authorities or competent bodies taking decisions or giving advises for or on behalf of the Dutch Authorities and not arising from the extension of the operational life of the POWER STATION, the cumulative quantity of FUEL MADE AVAILABLE by the Company until 31 December 2016 be lower than the quantity as indicated in Clause 3.1. as amended in accordance with the actual POWER STATION AVAILABILITY and after deduction of the quantities for which the Company has already paid a compensation in accordance with Clause 9. I. 7.1. the Company shall pay to the Reprocessor a compensation for this missing quantity corresponding to the escalated price indicated in Clause 9. J. I. Such compensation would be invoiced by the Reprocessor not later than June 30th 2017. and paid by the Company not later than 30 (thirty) days from the receipt of the invoice

4.5 Modifications to Clause 10.2

Clause 10.2.3 of Amendment 3 is completed by the following provisions :

"With respect to the nuclear third party liabilities of the Parties regarding the UN t be transported from the REPROCESSING SITE to the site of the CONVERSION PLANT for conversion and storage, the Reprocessor shall be liable for the consequences of a nuclear incident arising from such material under the terms and conditions of the above mentioned Paris Convention.

With respect to the nuclear third party liabilities of the Parties regarding the MANAGED PLUTONIUM, to be transported and stored by the Reprocessor in a facility located in France or in Belgium, the Reprocessor shall be liable for the consequences of a nuclear incident arising from such material under the terms and conditions of the above mentioned Paris Convention."

4.6 Modifications to Clause 10.3

Clause 10.3 of Amendment 3 is replaced by the following clause:

"At all times during which the Reprocessor shall have custody of any FUEL, WASTE and RESIDUES belonging or allocated to the company the risk of loss thereof and damage thereto shall be with the Company. The Reprocessor shall nevertheless use its best endeavours in relation to the physical security thereof in accordance with the rules of the art. If the Company so require any identifiable FUEL or RESIDUES may be insured in the name of the Company at value which the Company may determine. Such insurance shall be obtained by the Reprocessor in which event the premium shall be reimbursed to the Reprocessor together with an overheads percentage of 10% (ten per cent). Such insurance may be obtained by the Company through the agency of the Reprocessor and the premiums therefore shall be paid by the Company to the Reprocessor subject to overheads percentage.

"...)(.....~:1

At all times during which the Reprocessor shall have the custody of uranium and plutonium belonging or allocated to the Company and managed by the Reprocessor under Clause 6, the risk of loss thereof and damage thereto shall be with Reprocessor. "

4.7 Modifications to Clause 11.1

Clause 11.1 of Amendment 3 is deleted and replaced by the following clause:

"The terms and conditions of Amendment 7 and all information and drawings provided by one party to the other under such amendment shall be confidential. Neither Party shall, without the prior written permission of the other, disclose such terms and conditions or information or drawings received from the other party to any third party, except to such extent as may be required by relevant government authorities or other authorities having due legal effect or as may be necessary for the proper performance of Amendment 7. To this extent, the Parties hereby agree to disclose Amendment 7 to the shareholders of the Company and, as far as necessary, to COVRA, for their own purposes provided however that such disclosure complies with the provisions of Clause 11.3 here below,"

4.8 Modification of Clause 12.2

Clause 12.2 of Amendment 3 is deleted and replaced by the following clause:

For the Reprocessor

COMPAGNIE GENERALE DES MATIERES NUCLEAIRES
Business Unit Traitement
B.P; 4
78141 Velizy Villacoublay
Tel.: +33 13926 30 00
Fax: + 33 1 39 26 28 55

For the Company

NV: EPZ
Zeedijk 32
4454 PAI Borssele

Telefax: +31 113 35 23 20
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Mail address : Postbus 130
4380 AC Vlissingen - NL

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Invoices should be sent to:

N.V. EPZ
Atm. Department FEZ
Postbus 130
4380 AC Vlissingen NL

"

ARTICLE 5 MANAGEMENT OF THE PLUTONIUM ISSUED FROM THE
IMPLEMENTATION OF AMENDMENT 3 AND OF PREVIOUS
REPROCESSING CONTRACTS

5.1 From the date of signature of this Amendment 7, all quantities of plutonium arising from the implementation of Amendment 3 and from previous REPROCESSING contracts shall be included in the MANAGED PLUTONIUM as follows:

- ∫ for the SEPARATED Pu : upon signature of this Amendment 7,
- ∫ for plutonium to be recovered from REPROCESSING of FUEL under Amendment 3 after the date of signature of this Amendment 7 : upon allocation,
- ∫ for the LOANED Pu : as from the the date of return to the Company of such Pu as specified in Appendix 2 of this Amendment 7.

5.2 The plutonium to be recovered from REPROCESSING of FUEL under Amendment 3 after the date of signature of this Amendment 7 shall be allocated (in accordance with the U-Pu allocation procedures in force at the REPROCESSING SITE) without further identification of the Pu0 2 batches, containers and EURATOM codes.

The MANAGED PLUTONIUM shall be managed without physical identification.

5.3 The MANAGED PLUTONIUM shall be stored by the Reprocessor until 2019 at the latest. The Reprocessor shall provide accounting services for the MANAGED PLUTONIUM, according to the principles set forth in Appendix 5 of this Amendment 7, by providing not later than October 31st in each YEAR a balance of the quantities credited and debited into the MANAGED PLUTONIUM account. Such report shall specify the fissile content of the MANAGED PLUTONIUM at the reference date of the report.

5.4 The Reprocessor shall provide a recycling solution for PLUTONIUM and therefore undertake all necessary actions to ensure that the MANAGED PLUTONIUM is in a condition suitable for such recycling.

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- 5.5 The Reprocessor will undertake any necessary actions to maintain the MANAGED PLUTONIUM in conformance with applicable regulations in a condition suitable for recycling until the completion of such recycling.
- 5.6 Appendices 9, 10 and 11 of Amendment 3 shall remain applicable.
- 5.7 For the services set forth in this Article 5, the Company shall pay to the Reprocessor an all-in price of _____ per gram of total allocated plutonium (say _____; per gram of total allocated plutonium). Such payment represents the only and final obligation of the Company towards the Reprocessor for storage, cleaning and recycling of the concerned quantity of plutonium.

This price is at the economical conditions of September 2003 and shall be revised according to the following formula:

$$P = P_0 \times (0.15 + 0.6 \text{ ICHTIS1} + 0.25 \text{ PsdB})$$

ICHTIS1 0
PsdB 0

Where:

P is the amount of the escalated price at the date of invoicing
 P₀ is the amount of the price at the economical conditions of 2003.

ICHTIS1 represents the "Indice du Coût Horaire du Travail Tous Salaires pour les industries mécaniques et électriques" published by INSEE for the month of March 2003,

PsdB represents the "Indice des Produits et Services Divers B" published in the "Bulletin Officiel de la Concurrence, de la Consommation et de la Repression des Fraudes" for the month of March 2003,

ICHTIS1 and PsdB are the values of the same indices, six months before the date of invoicing.

- 5.8 The price set forth in Article 5.7 shall be invoiced as follows:

If the price:

- is for the SEPARATED PU, upon signature of this Amendment;
- is for the LOANED PU, at the date of return to the Company.

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2 for plutonium to be recovered from REPROCESSING of FUEL under Amendment 3 after the signature of this Amendment 7, upon allocation to the Company.

Remaining amount of the price: upon the date of transfer of title to the Aeprocessor for recycling.

Such amount shall be. paid by the Company to the Aeprocessor by bank transfer within 45 days of the date of the said invoice, free of any deduction whatsoever, to lhe account designated on the said invoice.

In addition, the Parties agree on the following:

- should the Reprocessor identify recycling possibilities for plutoni corresponding to all or part of the LOANED PU, the reprocessor shall be entitled to request the Company, following written confirmation of such recycling possibilities to the Company, not to retransfer the rel plutonium quantity to the Company and lo invoice to the Company the total amount of the price set forth in Article 5.7 corresponding to su quantity.
- should, after recycling of all of the MANAGED PLUTONIUM and of all the LOANED Pu, the Reprocessor identify recycling possibilities for plutonium corresronding to FUEL which has not yet been REPROCESSED, the Reprocessor shall be. entitled to request, following written confirmation and identification of such recycling possibilfties to the Company and the FACDD of the related plutonium quantity, an advanced payment for the total amount of the price set forth in Article 5.7 and corresponding to the related plutonium quantit

The Company is entitled to appoint an auditor to verify the contractual arrangements (especially but not limited to the quantities and the "fuel assembly contractual due delivery date; as mentioned in such arrangements, and hereinafter referred to as "FACDD") made between the Reprocessor and any third party with regard to the recycling possibifities.

The Company shall within two (2) months from its issuance acknowledge receipt of such confirmation.

The advanced payment shall be invoiced by the Reprocessor as follows:

, of the advanced payment: 24 (twenty four) months before the FACDD or upon reception of the acknowledgement of the Company, whichever the later :>f the advanced payment: 12 (twelve) months before the FACDD of the advanced payment: at the FACDD

and shall be paid by the Company to the Reprocessor by bank 45 days, free of any deduction or discount whatsoever, tr:;rf:.....__ ~~~ designated on the said invoice.

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Upon invoicing of the last instalment of the advanced payment, the Reprocessor will then debit the Company's account as in Appendix 5 with the related plutonium quantity and submit the Company with an updated balance sheet not later than one (1) month after such update. This balance sheet will bear the signature of a duly authorised officer of the Reprocessor and of the auditor appointed by the Company.

Such advanced payment represents the only and final obligation of the Company towards the Reprocessor for (storage, cleaning and) recycling of the concerned quantity of (future) plutonium.

Every time actual plutonium allocation will take place in accordance with Articles 5.1 and 5.2, the Company's account will be credited and the title of the concerned quantity will simultaneously be transferred to the Reprocessor.

In case the balance ends up negative after all the FUEL has been REPROCESSED and after all of the corresponding plutonium has been allocated and transferred, the Company shall have the right to request the Reprocessor to take title to a corresponding quantity of plutonium arising from further REPROCESSING operations in compliance with Article 4 and the Reprocessor shall accept such request.

5.9 The price specified in Article 5.7 does not include Value Added Tax. Such tax and any relative additional charge, if any, will be added to the mentioned prices. All other taxes and duties existing at the date of signature of this Amendment 7 are included in this price. Any other taxes and/or duties not existing at the date of signature of this Amendment 7 that may be applied to the services performed under this Article 5 shall be borne by the Company, subject to evidence thereof to be provided by the Reprocessor to the Company.

5.10 At all times during which the Reprocessor shall have the custody of plutonium belonging or allocated to the Company and managed by the Reprocessor under this Clause 5, the risk of loss thereof and damage thereto shall be with Reprocessor.

5.11 Clause 10.2.3 of Amendment 3 is completed by the following provisions :

"With respect to the nuclear third party liabilities of the Parties regarding the MANAGED PLUTONIUM to be transported and stored by the Reprocessor in a facility located in France or in Belgium, the Reprocessor shall be liable for the consequences of a nuclear incident arising from such material under the terms and conditions of the above mentioned Paris Convention".

ARTICLE 6 ENTRY INTO FORCE

The Parties agree that this Amendment shall enter into force when both Parties (ii) approval of their respective national authorities.

respect of the return of the RESIDUES, to the extent that such approval is required, and after confirmation of the Parties that (a) such approval has been obtained or that (b) such approval is not necessary, (iii) the approval of the shareholders in the Company.

Should such approvals as referred to in (ii) and (iii) not be obtained within 180 days from the date of signature of this Amendment 7, the Reprocessor and the Company shall have the option to void this Amendment, such option to be exercised within 420 days from the date of signature of this Amendment 7. In such case, the Parties shall AGREE on the appropriate consequences resulting from the non entering into force of this Amendment 7.

ARTICLE 7 INVARIABLE PROVISIONS

The provisions of Amendment 3, which are not deleted and replaced under this Amendment 7, and which are not contradictory to this Amendment 7 shall remain in full force and effect for the performance of this Amendment 7, in particular for the performance of the additional REPROCESSING services as referred to in Article 4 of this Amendment 7. With respect to such additional REPROCESSING services, the Parties agree that the implementation of such provisions of Amendment 3 which remain in force shall be made in the specific context of these services and may therefore, on a case by case basis, be interpreted by taking into account such specific context.

IN WITNESS WHEREOF, the Parties hereto have, by their respective duly authorised officers, executed this Amendment 7 in duplicate in the English language, with one original to be retained by each Party, as of the day and year first above written.

Made in Velizy, on the :?oTlf or= Af'fli.. '2004

COG EMA

Name: . P. r~ .11,oEL . Name: , . / Olrectc ... du Secteur

Position: (Tnattement . Recydage. Log~ Position:

Visa: Visa;

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SEPARATED Pu ALLOCATED TO THE COMPANY
AND ENTERING INTO THE MANAGED PLUTONIUM

The quantities indicated in the following table are the quantities allocated to the Company, at their date of allocation.

BATCH N°	CONTAINER N°	TOTAL Pu WEIGHT	fa
300		159E	11 56
300		160;	11 45
3011		162i	11 22(
3011		1631	10 50i
302i		176	11 78i
302i		176	11 75
302i		177:	11 83
302i		177ç	11 83

3021		3027-R1	----
302i	..	3027-ffi	
3031		184 .	11 73
303		184	
			11 781
303		1851	11 731
303		3036-R1	
303ç		3036-A;	----
3051		3057-R1	
305,		3057-H2	----
			1
305i		428~	11 311
305i		428::	11 36E
305i		428'	11 32!
305;	..ç	42~	11 35!
306!		3069-R1	1
306!		3069--	1
306!		4141	11 42ç

306~		414!	11 48i
306!		415(	~:t.l .4:(i
306!		4151	11 43t
306!		415<	----
			11 67(
--			
309~		449:	
			12 22(
.---			
309~			
3091	...	449!	
		4505	
			12 24(-----
			11 571

309(... 4501:	11 531
			11 45f

309!		450f	
310{		461~ ~~~~~"
			10 35(
,			
31ot		4615	10 351

.....

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BATCH N°	C:ONTAINER N°	TOTAL Pu WEIGHT	ta	FISSILE Pu WEIGHT	lal
31 () (461	10	381		6624
310	461i	10	38<		6622
3101	462	11	74		7610
310/	463	11	74e		7 610
310;	4631	11	76!		7 625
--	3141	3141-R1	1:		10
--					10
- - . -	3141	3141-R~	1'		
	3141	494'	14 96!		9 845
	3141	494i	14 961	.....	9 842
	3141	494	15 01f		9 877
	3141	495	14 961		9842
	3211	3211-R1	1!		10
	3211	3211-ru!	1!		10
	3211	566'	14 94~	..	10392
	3211	566f	14 95~		10 399
	3211	566E	14 94(		10390
	3211	567C	14 931		10388
	3211	5671	14 72 z		10242
	57{	126f	12 55C		9 017
	57(	126!	12 671		9105
	57(	1271	12 18f		8758
	57(	570-R1	H		13
	57(	570-R2	11		12
----	357i	3577-R1	1!	....	9
	357i	4052-z	13 26~		8165
	3571	4056-<	13 311		8200
	3577	4291-<	13 58!	----	8364
	359z	1464-t	12 851		8231
	359,	1579.'	12 96i		8 301
	359<	1609-'	13 00~		8328
----	359'1	2235-~	12 83!		8 219
TOTAL			629 55:		423498

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Appendix 2
as referred to in Article 1

LOANED Pu

Date	Quantity (a Put)	Quantitv la Pufl	Date of return
November 1998	143914	95387	31/12/2004
July 1999	159074	104155	31/12/2004
July 2000	194944	129376	31/12/2004
June 2001	43468	29392	31/12/2004
September 2001	374766	246240	31/12/2005
Total	916166	604550	

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Appendix 3

Tentative schedule of transport as referred to in Article 4.1

Year of MAKING AVAILABLE	Number of FA MADE AVAILABLE	Quantity tHM before irradiation	Year of transport to La Hague	Year of reprocessing
2005	12	3.9	2006	2007
2006	28	8.9	2007	2008
2007	28	8.9	2008	2009
2008	28	8.9	2009	2010
2009	28	8.9	2010	2011
2010	28	8.9	2011	2012
2011	28	8.9	2012	2013
Total	180	57.3		

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Appendix 4

Estimated schedule for the return of RESIDUES as referred to in Article 4.3

Year	Number of CSD-V casks transported to HABOG	Number of CSD-C casks transported to HABOG
2014	2	2
2016	2	2
Total	4	4

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Appendix 5

Principles for Pu management as referred to in Article 4.2 and Article 5

1. The Company's account is managed on a total plutonium basis.
2. The Reprocessor shall be in a position to report this account at any time, upon request of the Company.
3. Types of inventory changes:
 - Input : Quantity of total plutonium entering the MANAGED PLUTONIUM:
 - ¿ For REPROCESSED FUEL after the date of signature of this Amendment 7, the total plutonium value stated in the input assessment,
 - ¿ SEPARATED Pu upon signature of this Amendment 7
 - ¿ LOANED Pu as from the date of return to the Company
 - Output: recycling by the Reprocessor
 - Balance: difference between input and output expressed in total plutonium
4. The EURATOM code(s) allocated to the outputs will be selected among the codes attached to the inputs, except otherwise AGREED.
5. Balance sheet

The following principle of balance sheet (Pu inventory) will be updated by the Reprocessor after each significant input/output and once a year at least, and submitted to the Company not later than 2 months after such update.

Inventory change	Reference Date	Total Pu +Am (g)	Observation
Input 1	15/04/04	500000	Signature of Amendment 7
Input 2	31/12/04	400000	Pu returned by COG EMA
Balance 1	31/10/05	900000	
Output 1	31/12/05	900000	Recycling
Balance 2	31/12/05	000000	
Output 2	31/12/06	240000	
Balance 3	31/12/06	·I· 240000	

Principles for U management as referred to in Article 4.2

For the purpose of this Appendix, the following terms used with capital letters shall have the following meanings:

- "BATCH" quantity of CONVERTED URANIUM belonging to the Company;
- "DELIVERY" the operations (including the filling, packaging, quantitative and qualitative control of the CONVERTED URANIUM) which when completed will enable the Reprocessor to issue the certificate of quality and the Company to have the CONVERTED URANIUM stored at the CONVERSION PLANT, or shipped from the CONVERSION PLANT ;
- "DRUM" U30a transportation and storage container ;
- "U308" triuranic octoxide ;
- 'UN DELIVERY" loading by the Reprocessor on behalf of the Company of the UN containers on the Reprocessor transport vehicle at the REPROCESSING SITE ;

SCOPE OF CONVERSION SERVICES

The Reprocessor undertakes to perform the CONVERSION of the UN arising from REPROCESSING of FUEL in accordance with the quantity and schedule defined in Clause 6.2;.

Said CONVERSION shall include performance of the following services:

- a) collection of the UN at the REPROCESSING SITE and transport of said UN to the CONVERSION PLANT in containers provided by the Reprocessor ;
- b) the quantitative and qualitative control leading to the acceptance by the CONVERSION PLANT of the UN, and the emptying and cleaning of the containers used for the transport of the UN from the REPROCESSING SITE to the CONVERSION PLANT ;
- c) the return of the emptied UN transport containers to the ~~~~~
SITE; ~#
~
- d) the processing of the UN into CONVERTED URANIUM 1!

- a) to replace the concerned batch by another one belonging to the Reprocessor and having characteristics at least equivalent for the Company. In such case, no compensation is due by either Party.
- OR
- b) to propose to the Company to process the batch in order to bring the US assay into the acceptable range
- OR
- c) to seek the agreement from the Company to accept the batch as it is, and in this case to indemnify the Company for the discrepancy between the converted values and the characteristics of the UN fed into the CONVERSION PLANT, at conditions to be agreed upon in due time.

Form of CONVERSION (U308)

The form of CONVERSION shall be U308, unless otherwise notified in writing by the Company with a one year notice.

MAKING AVAILABLE OF CONVERTED URANIUM

¿ Schedule of MAKING AVAILABLE.

CONVERTED URANIUM resulting from the processing of UN shall be MADE AVAILABLE by the Reprocessor to the Company upon completion of the CONVERSION of each BATCH.

It is foreseen at the date of the signature of this Amendment 7 that such MAKING AVAILABLE should be performed within one year after the REPROCESSING of the corresponding FUEL

¿ Conditions of the MAKING AVAILABLE

The Reprocessor shall, upon each MAKING AVAILABLE of CONVERTED URANIUM, send to the Company for each BATCH, a certificate of quality (as enclosed in Appendix 7).

CONVERTED URANIUM ACCEPTANCE

¿ Specifications

The Reprocessor hereby warrants that the CONVERTED URANIUM shall have such characteristics that the Reprocessor may, even after STORAGE of such CONVERTED URANIUM under this Amendment 7, convert it further to UF6 meeting the internationally acknowledged ASTM C 787 specifications for reprocessed uranium hexafluoride.

¿ Quantitative and qualitative control operations

The Reprocessor shall carry out the sampling, weighing CONVERTED URANIUM produced at the CONVERSI
send a certificate of quality and a certificate with the c "'
analysis as per Appendix 7 showing the results of ;:.

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Company for each BATCH upon each DELIVERY of CONVERTED URANIUM.

2 Non conformity

In the event that CONVERTED URANIUM delivered hereunder is determined not to be in conformity with the applicable specifications, the Reprocessor shall, after consultation with the Company:

2 process the non conforming CONVERTED URANIUM so as to make it conforming and compensate the Company for any directly associated expenses,

2 or replace the non conforming CONVERTED URANIUM with conforming CONVERTED URANIUM having characteristics equivalent to those described above at no charge for the Company,

2 or indemnify the Company for any demonstrated expenses and damages, including the treatment and handling of the non conforming CONVERTED URANIUM, suffered directly by the Company as a result of the Reprocessor's failure to provide conforming CONVERTED URANIUM.

The financial charges, expenses and damages to be borne by the Reprocessor pursuant thereto, shall not exceed the total value of the CONVERSION for the BATCH involved in the non-conforming CONVERTED URANIUM. Such total value shall be determined on the basis of a unit price of ~ UN at the economical conditions of September 2003, to be revised according to the formula set forth in Clause 9.1.3.

CONVERTED URANIUM STORAGE AND DELIVERY

2 Duration

The Reprocessor shall STORE the CONVERTED URANIUM from the date of MAKING AVAILABLE up to the date of DELIVERY to the Company at the CONVERSION PLANT without exceeding a total duration of ten (10) years.

2 DELIVERY

The Reprocessor shall make available at the CONVERSION PLANT its own non-returnable DRUMS necessary for the packing of the CONVERTED URANIUM. The DRUMS used for the packing of the CONVERTED URANIUM shall comply with the prevailing relevant standards and regulations.

A tentative annual schedule for the DELIVERY of the CONVERTED URANIUM MADE AVAILABLE from STORAGE for shipment to another facility shall be established, updated and notified by the Company to the Reprocessor not later than October 31 of each year, the first such notification to be given in 2007.

This tentative schedule shall be AGREED between the Parties. Company shall have the option with a four (4) months advance notice to the Reprocessor to anticipate or postpone the DELIVERY from or without exceeding the ten (10) years STORAGE duration.

The Company shall notify the Reprocessor of each DELIVERY on a firm and binding basis four (4) months prior to such DELIVERY.

In case the effective shipment is not performed within six weeks after the shipment date so agreed for reasons not attributable to the Reprocessor, the corresponding costs incurred by the Reprocessor related to storage, handling of casks and immobilization of transport means (including potential rental cost of iso 20 containers) shall be borne by the Company.

The Parties shall, in due time, agree upon a mutually convenient date for shipment within such month of DELIVERY.

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Appendix 7

Quality certificates for uranium as referred to in Appendix 6

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CERTIFICAT de QUALITE
Quality Certificate

CONTRAT
pour la Conversion d'Uranium de Retraitement
(Contract pertaining to the conversion of Reprocessed Uranium)

Conversion de Nitrate d'Uranyle en Oxyde d'Uranium (U3 O 8)
Conversion of Uranyfe Nitrate into Uranium Oxide (U O)
3 8

Lot n°	Batch n°		
Poids net en U, 0 ,	U3 q	net weight	0 kg
Quantile totale d'U contenu		total U weight	0 kg
Date de Mlse a disposition		Availability date	30 jun 2000
Teneur d'U235 moyenne du lot ,,, U average batch content		0 % ponderal/U total	
Teneur d'U236 moyenne du lot ""' U average batch content		o % ponderal/U tota	

RESULTATS ANALYTIQUES. CARACTERISTIQUES LOT N°

COG EMA

LA HAGUF

Dnte de l'cchantillonage:

Originç de lo solurlon :

URANillM (Analyse N'

du .

')

Teneur en Ude la solution:

g/kg

Tcneur en US (rnasse %) :

%

Masse d'U total du lot :

kg

	Mcsures	Specilkntiorn	
Conccnrr.:ition U	g/l	200<{U}<400 g/I	
H+	-	<=IM	(
InlpurctCs npris		< = 3000 ppm	R
2 h de <-oldruitioç	<		C
ii sso .c			
Cr	<	<= 100ppm	
Fe	<	< = 3,00 ppm	A
Ni	<	<"' 100ppm	u
Halogenes tolaux/	<	<=J00 ppm	(
			P

EQUIVALENT lLORE
SPECIFICATIONS; SOMME ""'8 ppm
Teneur

	Focteur de conversion	ppmU	Equivolcnt ho re
ll	1.0000	<	<
Cd	0.3104	<	<
Co	0.0090	<	<
Dy	0.0815	<	<
Eu	0.4124	<	<
Fe	0.0007	<	<
Gd	4.4380	<	<
Li	0.1457	<	<
Sm	0.5513	- - -	<
		-	<
		' ' < . . .	<

Appendix 8
Calculation of the compensation as referred to in Article 4.4

Should, during the YEAR N, the Parties AGREE on the following seven-YEARS program, and should it not been updated during the following YEARS:

Year -----	Quantity to be DELIVERED	
N+1	10	.
N+2	10	
N+3	10	..
N+4	10	
N+5	10	
N+6	10	
N+7	10	--

and should the DELIVERIES due to be performed during the YEAR N+3 not be completed before the end of the YEAR N+5, the missing quantity shall be deemed to be cancelled, and the Reprocessor shall invoice to the Company a compensation amounting to . for such quantity.

In the event that the program has been updated in accordance with this Amendment 7, then the updated program shall be the basis for the above calculation. ..

Calendrier de retour des déchets et de recyclage des matières valorisables
issus des 5 tonnes de combustibles de EPZ
reçues à l'usine de La Hague mi décembre 2005

1- Calendrier de retour des déchets vers le centre d'entreposage HABOG aux Pays Bas

TYPE DE DECHET	CALENDRIER DE RETOUR AHABOG
Dechets vitrifiés	Avant fin 20 JO
Autres déchets (coques, em bouts, déchets technologiques ou de procédé)	Avant fin 2012

2- Calendrier de recyclage des matières valorisables

- 2-1 L'uranium issu du traitement des combustibles reçus de EPZ le 14
décembre 2005 à La Hague sera livré sous la forme de combustible
à un réacteur EPZ de Borssele avant fin 2010.
- 2-2 Le plutonium issu du traitement des combustibles reçus de EPZ le 14
décembre 2005 à La Hague sera livré sous forme de combustible MOX à
un réacteur européen (hors France) avant fin 2010.

Calendrier de retour des matières valorisables et des déchets

1. Concernant les déchets, il faut savoir que le retour des déchets issus du traitement des combustibles usés suppose l'existence, dans le pays de retour, d'une installation d'entreposage, laquelle doit avoir etc! approuvée par les autorités de sûreté des deux pays concernés.

Au terme d'une enquête publique et de longues procédures d'autorisation, les Pays-Bas ont construit une installation de ce type, nommée HABOG.

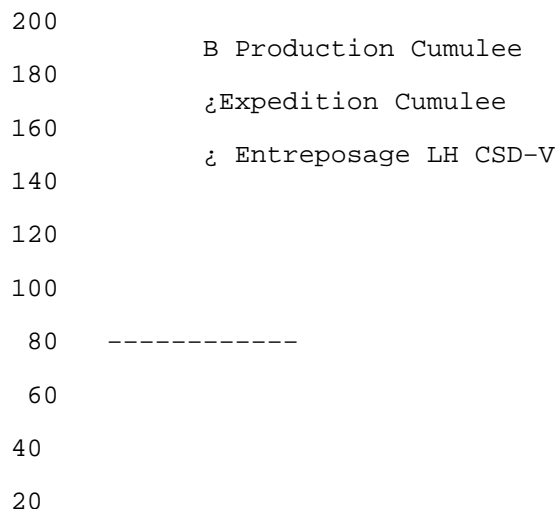
C'est finalement à la fin de l'année 2003 que l'installation néerlandaise de réception HABOG a été mise en service.

Le retour des résidus vitrifiés correspondant au traitement des quantités de combustibles usés objet du Service Agreement du 28 mars 1978 et de son Avenant n° 3 en date du 5 juillet 1993 se poursuivra jusqu'en 2009/2010, à raison d'un transport de 28 résidus vitrifiés CSD par an, de sorte qu'en six à sept années le total de ces résidus vitrifiés aura été expédié vers Pays-Bas.

Les autorisations relatives à ces résidus vitrifiés seront soumises à l'approbation des autorités néerlandaises. Le rythme de leur retour sera similaire à celui des résidus vitrifiés.

Le calendrier de retour des matières valorisables et des déchets

Le tableau suivant montre le rythme de décroissance des quantites de residus vitrifies dep la mise en service de l'installation Neerlandaise de reception HABOG et le debut du retour ces residus :



2. Concernant le devenir des matieres valorisables, il est rappele que l'operation de traitement consiste, apres refroidissement des assemblages, a en separer les matieres valorisables savoir l'uranium et le plutonium - lesquelles sont recyclees:

au sein du reacteur de Borsselle lui-meme, pour ce qui concerne l'uranium;

au sein de reacteurs tiers s'agissant du plutonium, le reacteur de Borsselle disposant pas de la licence lui permettant d'accepter du combustible MOX cc, contrairement a de tres nombreux autres reacteurs en Europe et aux Etats Unis.

Annexe d" retour des matieres valorisables et des dechets

A l'arrivee des combustibles uses destines aetretraites, AREVA NC declare aux organismes de controle nationaux et internationaux (IRSN, EURATOM, AIEA) les quantites integrees dans le flux de l'usine de La Hague.

A partir de ces memes donnees, AREVA NC etablit la quantite de plutonium a porter credit de l' (inventaire plutonium) du client conceme.

Une fois separe, le plutonium est dirige, sauf exigence particuliere d'un client, vers des equipements qui peuvent contenir du plutonium de differents clients (principe de fongibilite).

Le plutonium de l'electricien EPZ est recycle - et continuera de l'etre au sein de reacteur moxes europeens.

Afin d'assurer ce recyclage, AREVA NCprend provisoirement le titre de ce plutonium qui sera recycle en execution des differents types de contrats conclus par AREVA NC et au moyen desquels il lui est donc pennis de recycler une quantite de plutonium superieure a celle contenue dans Les combustibles uses en provenance de la centrale de Borssele.

Calendrier de retour des matieres valorisables et des dechets