OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 28-MAR-83

Report Date: 16-MAY-83
Sample Number: 175120
Cylinder Number: TNP-2104

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.97	Weight Percent
Uranium		67.60	Weight Percent
	Maximum		
Cylinder Vapor Pressure	75	---	psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	[redacted]	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	48	uG/G U-normal
Niobium	1	<0.2	uG/G U-normal
Phosphorus	50	<20	uG/G U-normal
Ruthenium	1	<1	uG/G U-normal
Silicon	100	---	uG/G U-normal
Tantalum	1	<0.3	uG/G U-normal
Titanium	1	<0.3	uG/G U-normal
Elements forming non-volatile fluorides	300	108.0	uG/G U-normal
Chromium	1500	<490.0	uG/G U-235
Molybdenum	200	<50.0	uG/G U-235
Tungsten	200	<50.0	uG/G U-235
Vanadium	200	<30.0	uG/G U-235
Uranium-233	500	<200	uG/G U-235
Uranium-232	0.110	0.03	uG/G U-235
Boron equivalent cross section	8	0.1	uG/G U-normal
Fission product gamma	20	<5	Percent of
Fission product beta	10	0.14	aged natural U
Transuranic alpha	1500	1.9	DPM alpha/G U
Technetium		0.0003	uG/G U-normal
Uranium-234		.015	Weight Percent
Uranium-235		1.020	Weight Percent
Uranium-236		.25	Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05-16-83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175120 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.97
	U-234	.015
	U-235	1.020
	U-236	.25
	U (Total)	67.60

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	75
Ca	3	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	30	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Walter O. Hughes

Date:

05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 25-MAR-83

Report Date: 16-MAY-83
Sample Number: 175118
Cylinder Number: TNP-2122

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.98	Weight Percent
Uranium		67.60	Weight Percent
	Maximum		
Cylinder Vapor Pressure	75	---	psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	---	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	48	uG/G U-normal
Niobium	1	<0.2	uG/G U-normal
Phosphorus	50	<20	uG/G U-normal
Ruthenium	1	<1	uG/G U-normal
Silicon	100	---	uG/G U-normal
Tantalum	1	<0.3	uG/G U-normal
Titanium	1	<0.3	uG/G U-normal
Elements forming non-volatile fluorides	300	117.0	uG/G U-normal
Chromium	1500	<490.0	uG/G U-235
Molybdenum	200	<50.0	uG/G U-235
Tungsten	200	<50.0	uG/G U-235
Vanadium	200	<30.0	uG/G U-235
Uranium-233	500	<400	uG/G U-235
Uranium-232	0.110	0.03	uG/G U-235
Boron equivalent cross section	8	0.1	uG/G U-normal
Fission product gamma	20	<5	Percent of
Fission product beta	10	0.14	aged natural U
Transuranic alpha	1500	1.9	DPM alpha/G U
Technetium		0.0008	uG/G U-normal
Uranium-234		.014	Weight Percent
Uranium-235		1.017	Weight Percent
Uranium-236		.26	Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05/16/83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175119 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.98
	U-234	.014
	U-235	1.017
	U-236	.26
	U (Total)	67.50

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	75
Ca	2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	40	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 17-MAR-83

Report Date: 16-MAY-83
Sample Number: 175118
Cylinder Number: COG-819

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.96	Weight Percent
Uranium		67.59	Weight Percent
	Maximum		
Cylinder Vapor Pressure	75	---	psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	---	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	48	uG/G U-normal
Niobium	1	<0.2	uG/G U-normal
Phosphorus	50	<20	uG/G U-normal
Ruthenium	1	<1	uG/G U-normal
Silicon	100	---	uG/G U-normal
Tantalum	1	<0.3	uG/G U-normal
Titanium	1	<0.3	uG/G U-normal
Elements forming non-volatile fluorides	300	117.0	uG/G U-normal
Chromium	1500	<470.0	uG/G U-235
Molybdenum	200	<50.0	uG/G U-235
Tungsten	200	<50.0	uG/G U-235
Vanadium	200	<30.0	uG/G U-235
Uranium-233	500	<100	uG/G U-235
Uranium-232	0.110	0.09	uG/G U-235
Boron equivalent cross section	8	0.1	uG/G U-normal
Fission product gamma	20	<5	Percent of aged natural U
Fission product beta	10	0.14	
Transuranic alpha	1500	1.9	DPM alpha/G U
Technetium		0.0008	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.064	Weight Percent
Uranium-236		.34	Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05/16/83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175118

Shipping Document:

Cylinder Numbers

Chemical and Isotopic Analyses (Wt. %)	
UF6	99.96
U-234	.018
U-235	1.064
U-236	.34
U (Total)	67.59

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	2
B	<0.1	Mn	2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	75
Ca	3	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	35	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 17-MAR-83

Report Date: 16-MAY-83
Sample Number: 175117
Cylinder Number: COG-599

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.96	Weight percent
Uranium		67.59	Weight percent
	Maximum		
Cylinder Vapor Pressure	75	---	psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	---	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	48	uG/G U-normal
Niobium	1	<0.2	uG/G U-normal
Phosphorus	50	<20	uG/G U-normal
Ruthenium	1	<1	uG/G U-normal
Silicon	100	---	uG/G U-normal
Tantalum	1	<0.3	uG/G U-normal
Titanium	1	<0.3	uG/G U-normal
Elements forming non-volatile fluorides	300	95.0	uG/G U-normal
Chromium	1500	<470.0	uG/G U-235
Molybdenum	200	<50.0	uG/G U-235
Tungsten	200	<50.0	uG/G U-235
Vanadium	200	<30.0	uG/G U-235
Uranium-233	500	<200	uG/G U-235
Uranium-232	0.110	0.07	uG/G U-235
Boron equivalent cross section	8	NONE DET	uG/G U-normal
Fission product gamma	20	<5	Percent of
Fission product beta	10	0.14	aged natural U
Transuranic alpha	1500	1.9	DPM alpha/G U
Technetium		0.0008	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.064	Weight Percent
Uranium-236		.33	Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05/16/83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175117 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.96
	U-234	.019
	U-235	1.064
	U-236	.33
	U (Total)	67.59

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	us/gU	Element	us/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	55
Ca	<2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	5
Cu	25	Sn	<2
Fe	10	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 16-MAR-83

Report Date: 16-MAY-83
Sample Number: 175116
Cylinder Number: COG-828

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.98	Weight percent
Uranium		67.60	Weight percent
	Maximum		
Cylinder Vapor Pressure	75	---	psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	[redacted]	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	48	uG/G U-normal
Niobium	1	<0.2	uG/G U-normal
Phosphorus	50	<20	uG/G U-normal
Ruthenium	1	<1	uG/G U-normal
Silicon	100	---	uG/G U-normal
Tantalum	1	<0.3	uG/G U-normal
Titanium	1	<0.3	uG/G U-normal
Elements forming non-volatile fluorides	300	74.0	uG/G U-normal
Chromium	1500	<470.0	uG/G U-235
Molybdenum	200	<50.0	uG/G U-235
Tungsten	200	<50.0	uG/G U-235
Vanadium	200	<30.0	uG/G U-235
Uranium-233	500	<200	uG/G U-235
Uranium-232	0.110	0.03	uG/G U-235
Boron equivalent cross section	8	NONE DET	uG/G U-normal
Fission product gamma	20	<5	Percent of
Fission product beta	10	0.14	aged natural U
Transuranic alpha	1500	1.9	DPM alpha/G U
Technetium		0.0008	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.064	Weight Percent
Uranium-236		.33	Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05-16-83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175116 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.99
	U-234	.018
	U-235	1.064
	U-236	.33
	U (Total)	67.60

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	4
Bi	<1	Ni	35
Ca	<2	P	<40
Cd	<0.1	Pb	7
Co	<1	Sb	<5
Cr	<2	Si	3
Cu	15	Sn	<2
Fe	10	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COGEMA
Date received in laboratory: 16-MAR-83

Report Date: 16-MAY-83
Sample Number: 175115
Cylinder Number: COG-740

Property	Specification Limits	Analysis		
	Minimum			
Uranium Hexafluoride	99.5	99.98		Weight Percent
Uranium		67.60		Weight Percent
	Maximum			
Cylinder Vapor Pressure	75	---		psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	[redacted]		Mole Percent
Antimony	1	<1		uG/G U-normal
Bromine	5	<5		uG/G U-normal
Chlorine	100	46		uG/G U-normal
Niobium	1	<0.2		uG/G U-normal
Phosphorus	50	<20		uG/G U-normal
Ruthenium	1	<1		uG/G U-normal
Silicon	100	---		uG/G U-normal
Tantalum	1	<0.3		uG/G U-normal
Titanium	1	<0.3		uG/G U-normal
Elements forming non-volatile fluorides	300	72.0	R	uG/G U-normal
Chromium	1500	<470.0		uG/G U-235
Molybdenum	200	<50.0		uG/G U-235
Tungsten	200	<50.0		uG/G U-235
Vanadium	200	<30.0		uG/G U-235
Uranium-233	500	<200		uG/G U-235
Uranium-232	0.110	0.05		uG/G U-235
Boron equivalent cross section	8	NONE DET		uG/G U-normal
Fission product gamma	20	<5		Percent of
Fission product beta	10	0.14		aged natural U
Transuranic alpha	1500	1.9		DPM alpha/G U
Technetium		0.0008		uG/G U-normal
Uranium-234		.017		Weight Percent
Uranium-235		1.065		Weight Percent
Uranium-236		.34		Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05-16-83

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175115 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.99
	U-234	.017
	U-235	1.065
	U-236	.34
	U (Total)	67.60

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	us/gU	Element	us/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	35
Ca	2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	35	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-06-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COMHUREX
Date received in laboratory: 15-MAR-93

Report Date: 16-MAY-93
Sample Number: 175114
Cylinder Number: COG734

Property	Specification Limits	Analysis		
	Minimum			
Uranium Hexafluoride	99.5	99.98		Weight Percent
Uranium		67.60		Weight Percent
	Maximum			
Cylinder Vapor Pressure	75	---		psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	[redacted]		Mole Percent
Antimony	1	<1		uG/G U-normal
Bromine	5	<5		uG/G U-normal
Chlorine	100	48		uG/G U-normal
Niobium	1	<0.2		uG/G U-normal
Phosphorus	50	<20		uG/G U-normal
Ruthenium	1	<1		uG/G U-normal
Silicon	100	---		uG/G U-normal
Tantalum	1	<0.3		uG/G U-normal
Titanium	1	<0.3		uG/G U-normal
Elements forming non-volatile fluorides	300	42.0	R	uG/G U-normal
Chromium	1500	<470.0		uG/G U-235
Molybdenum	200	<50.0		uG/G U-235
Tungsten	200	<50.0		uG/G U-235
Vanadium	200	<30.0		uG/G U-235
Uranium-233	500	<100		uG/G U-235
Uranium-232	0.110	0.09		uG/G U-235
Boron equivalent cross section	8	NONE DET		uG/G U-normal
Fission product gamma	20	<5		Percent of
Fission product beta	10	0.14		aged natural U
Transuranic alpha	1500	1.9		DPM alpha/G U
Technetium		0.0008		uG/G U-normal
Uranium-234		.018		Weight Percent
Uranium-235		1.065		Weight Percent
Uranium-236		.34		Weight Percent

Reported by:

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

05-16-93

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175114 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.98
	U-234	.018
	U-235	1.065
	U-236	.34
	U (Total)	67.60

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	10
Ca	2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	30	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

Analyses contained hereon are furnished as a courtesy and should not be construed as a certification or warranty that the material will so conform.

OAK RIDGE GASEOUS DIFFUSION PLANT
K-25 PROCESS SUPPORT DIVISION
URANIUM HEXAFLUORIDE ANALYSES

Producer: COMHUREX
Date received in laboratory: 15-MAR-83

Report Date: 16-MAY-83
Sample Number: 175113
Cylinder Number: COG882

Property	Specification Limits	Analysis		
	Minimum			
Uranium Hexafluoride	99.5	99.95		Weight Percent
Uranium		67.58		Weight Percent
	Maximum			
Cylinder Vapor Pressure	75	---		psia
Hydrocarbons, chlorocarbons, partially substituted halohydrocarbons	0.01	<0.01		Mole Percent
Antimony	1	<1		uG/G U-normal
Bromine	5	<5		uG/G U-normal
Chlorine	100	48		uG/G U-normal
Niobium	1	<0.2		uG/G U-normal
Phosphorus	50	<20		uG/G U-normal
Ruthenium	1	<1		uG/G U-normal
Silicon	100	<2		uG/G U-normal
Tantalum	1	<0.3		uG/G U-normal
Titanium	1	<0.3		uG/G U-normal
Elements forming non-volatile fluorides	300	47.0	R	uG/G U-normal
Chromium	1500	<470.0		uG/G U-235
Molybdenum	200	<50.0		uG/G U-235
Tungsten	200	<50.0		uG/G U-235
Vanadium	200	<30.0		uG/G U-235
Uranium-233	500	<200		uG/G U-235
Uranium-232	0.110	0.05		uG/G U-235
Boron equivalent cross section	6	NONE DET		uG/G U-normal
Fission product gamma	20	<5		Percent of aged natural U
Fission product beta	10	0.14		
Transuranic alpha	1500	1.9		DPM alpha/G U
Technetium		0.0008		uG/G U-normal
Uranium-234		.018		Weight Percent
Uranium-235		1.064		Weight Percent
Uranium-236		.33		Weight Percent

Reported by:

05-16-83

The following samples have been composited:

175113, 175114, 175115, 175116, 175117
175118, 175119, 175120, 175121, 175122

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175113 Shipping Document:

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.95
	U-234	.018
	U-235	1.064
	U-236	.33
	U (Total)	67.58

Spectrographic Analyses (Micrograms element per gram Uranium)

Element	ug/gU	Element	ug/gU
Al	<2	Mg	<2
B	<0.1	Mn	<2
Ba	<1	Mo	<2
Be	<0.1	Na	<2
Bi	<1	Ni	20
Ca	2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	25	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

Reported by:

Date: 05-16-83

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