FOIA Request OR-00-208

GDP0576

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

Producer: COGEMA

Date received in laboratory: 15-MAR-1984

Report Date: 31-MAY-1984
Sample Number: 175140
Cylinder Number: TNF-82

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	32	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	45.0	uG/G U-normal
Chromium	1500	<610.0	uG/G U-235
Molybdenum	200	<60.0	uG/G U-235
Tungsten	200	<60.0	uG/G U-235
Vanadium	200	<40.0	uG/G U-235
Uranium-233	500	<100	uG/G U-235
Uranium-232	0.110	0.018	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		0.011	Weight Percent
Uranium-235		0.8169	Weight Percent
Uranium-236		0.18	Weight Percent

** Exceeds Specifications
R Revised Result

Reported by:

The following samples have been composited:
175140, 175141, 175142, 175143, 175144
175145, 175146, 175147, 175148, 175149

This report has been printed 8 times.

OR0014250

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

Producer: COGEMA
Date received in laboratory: 16-MAR-1984

Report Date: 27-MAR-1984
Sample Number: 175141
Cylinder Number: TNF 92

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	32	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	45.0	uG/G U-normal
Chromium	1500	<610.0	uG/G U-235
Molybdenum	200	<60.0	uG/G U-235
Tungsten	200	<60.0	uG/G U-235
Vanadium	200	<40.0	uG/G U-235
Uranium-233	500	<200	uG/G U-235
Uranium-232	0.110	0.016	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		0.012	Weight Percent
Uranium-235		0.8155	Weight Percent
Uranium-236		0.17	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 4 times.

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

Producer: COGEMA
Date received in laboratory: 19-MAR-1984

Report Date: 27-MAR-1984
Sample Number: 175142
Cylinder Number: TNF073

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	100.00	Weight percent
Uranium		67.62	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	32	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	45.0	uG/G U-normal
Chromium	1500	<620.0	uG/G U-235
Molybdenum	200	<60.0	uG/G U-235
Tungsten	200	<60.0	uG/G U-235
Vanadium	200	<40.0	uG/G U-235
Uranium-233	500	<300	uG/G U-235
Uranium-232	0.110	0.020	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		0.012	Weight Percent
Uranium-235		0.8108	Weight Percent
Uranium-236		0.17	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 4 times.

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

Producer: COGEMA
Date received in laboratory: 28-MAR-1984

Report Date: 9-APR-1984
Sample Number: 175149
Cylinder Number: TNF-35

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.98	Weight percent
Uranium		67.61	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	32	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	24.0	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	---	uG/G U-235
Uranium-232	0.110	0.080	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		---	Weight Percent
Uranium-235		1.027	Weight Percent
Uranium-236		---	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140, 175141, 175142, 175143, 175144
175145, 175146, 175147, 175148, 175149
This report has been printed 6 times.

Reported by:

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175149 Customer: COGEMA

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.98
	U-234	---
	U-235	1.027
	U-236	---
	U (Total)	67.61

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	15
Ca	<2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	9	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

R Revised Result

Reported by: S.B. Woodfin

Date: 6-15-84

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: 23-MAR-1984

Report Date: 15-JUN-1984
Sample Number: 175146
Cylinder Number: TNF-71

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.93	Weight percent
Uranium		67.57	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	32	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	27.0	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	<300	uG/G U-235
Uranium-232	0.110	1.0E-1	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.026	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140, 175141, 175142, 175143, 175144
175145, 175146, 175147, 175148, 175149
This report has been printed 1 times.

Reported by:

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175146 Customer: COGEMA

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.93
	U-234	.018
	U-235	1.026
	U-236	0.37
	U (Total)	67.57

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	5
Bi	<1	Ni	7
Ca	<2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	15	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

R Revised Result

Reported by: [signature]

Date: 6-15-84

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: 26-MAR-1984

Report Date: 15-JUN-1984
Sample Number: 175148
Cylinder Number: TNF-083

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	---	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	32	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	37.0	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	<300	uG/G U-235
Uranium-232	0.110	8.7E-3	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		.017	Weight Percent
Uranium-235		1.029	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140, 175141, 175142, 175143, 175144
175145, 175146, 175147, 175148, 175149
This report has been printed 1 times.

Reported by:

UF6 SUPPLEMENTAL ANALYSIS REPORT

Sample Number: 175148 Customer: COGEMA

Cylinder Numbers	Chemical and Isotopic Analyses (Wt. %)	
	UF6	99.97
	U-234	.017
	U-235	1.029
	U-236	0.37
	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	7
Bi	<1	Ni	20
Ca	<2	P	<40
Cd	<0.1	Pb	<2
Co	<1	Sb	<5
Cr	<2	Si	<2
Cu	10	Sn	<2
Fe	<5	V	<2
Li	<2	Zn	<20

R Revised Result

Reported by: S B Woodfin

Date: 6-15-84

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: 21-MAR-1984

Report Date: 2-APR-1984
Sample Number: 175143
Cylinder Number: TNF-041

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	32	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	55.0	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	<300	uG/G U-235
Uranium-232	0.110	9.0E-2	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.030	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 3 times.

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

Producer: COGEMA
Date received in laboratory: 22-MAR-1984

Report Date: 2-APR-1984
Sample Number: 175144
Cylinder Number: TNF-42

Property	Specification Limits	Analysis	
	Minimum		
Uranium Hexafluoride	99.5	99.99	Weight percent
Uranium		67.61	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	32	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	54.0	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	<300	uG/G U-235
Uranium-232	0.110	8.0E-2	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		.018	Weight Percent
Uranium-235		1.030	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 3 times.

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

Producer: COGEMA
Date received in laboratory: 22-MAR-1984

Report Date: 30-MAR-1984
Sample Number: 175145
Cylinder Number: TNF-55

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	---	Mole Percent
Antimony	1	<1	uG/G U-normal
Bromine	5	<5	uG/G U-normal
Chlorine	100	32	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	30.0	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	<100	uG/G U-235
Uranium-232	0.110	8.3E-2	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		0.018	Weight Percent
Uranium-235		1.030	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 4 times.

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

Producer: COGEMA
Date received in laboratory: 23-MAR-1984

Report Date: 30-MAR-1984
Sample Number: 175147
Cylinder Number: TNF-75

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	32	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	23.0	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	<300	uG/G U-235
Uranium-232	0.110	1.5E-1 **	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	0.24	aged natural U
Transuranic alpha	1500	NONE DET	DPM alpha/G U
Technetium		0.005	uG/G U-normal
Uranium-234		.017	Weight Percent
Uranium-235		1.029	Weight Percent
Uranium-236		0.37	Weight Percent

** Exceeds Specifications
R Revised Result
The following samples have been composited:
175140

Reported by:

This report has been printed 3 times.