

Material Transfer Report for 2017

January 20, 2018

TO:

Director, Office of Federal and State Materials and Environmental Management Programs
ATTN: Document Control Desk/Exempt Distribution
U.S. Nuclear Regulatory Commission,
Washington, DC 20555-0001

Licensee:

XL Technologies, Inc
1501 Norman Drive
Darien, IL 60561

License Number:

12-35143-01E

Docket No.:

040-38370

Description of the materials transferred for use under §40.13(c):

§40.13(c)(1)(iii), welding rods (2% Thoriated tungsten electrodes)

Description of the products

The products are tungsten rods doped with <4% ThO₂ (the actual content is between 1.8% and 2% ThO₂, averaging 1.9%).
The rods are 7" long with various diameters of 0.04", 1/16", 3/32", 1/8", 5/32", 3/16", and 1/4".

Products transferred during the license period in 2017 (01/01/2017 to 12/31/2017)

Part number	Dimensions		Transferred during license period		
	Diameter	Length	Quantity of Welding Rods, box*	Quantity of Welding Rods, piece	Radioactivity Quantity** (mCi)
WT040x7	0.04"	7"	360	3,600	0.016678199
WT116x7	1/16	7"	6,100	61,000	0.720360119
WT332x7	3/32	7"	17,160	171,600	4.614083698
WT018x7	1/8	7"	11,560	115,600	5.502570236
WT532x7	5/32	7"	0	0	0
WT316x7	3/16	7"	0	0	0
WT014x7	1/4	7"	0	0	0
Total					10.85369225

*Each box contains 10 pieces of welding rods

**Based on actual average content of 1.9%ThO₂, with a unit radioactivity value of 67.29 Bq per gram of thoriated tungsten rods

Name: Zack Li

Signature: 

Title: President

Date: 1/20/2018

Content of Th-232 per gram of WT20:			1.8% ThO ₂	2.0% ThO ₂	Average 1.9%ThO ₂
% of Th-232 in ThO ₂ per gram of WT20:			0.015818182	0.017575758	0.01669697
Radioactivity per gram of WT20 in Bq:			63.74727273	70.83030303	67.28878788
Radioactivity per gram of WT20 in mCi:			1.72118E-06	1.91242E-06	1.8168E-06

Part number	Dimensions		Transferred during license period			
	Diameter	Length	Quantity of Welding Rods (Box)	Quantity of Welding Rods (pc)	Unit Weight (g)	Radioactivity (mCi)
WT040x7	0.04"	7"	360	3,600	2.55	0.016678199
WT116x7	1/16	7"	6,100	61,000	6.50	0.720360119
WT332x7	3/32	7"	17,160	171,600	14.80	4.614083698
WT018x7	1/8	7"	11,560	115,600	26.20	5.502570236
WT532x7	5/32	7"	0	0	40.90	0
WT316x7	3/16	7"	0	0		0
WT014x7	1/4	7"	0	0	104.80	0
Total						10.85369225