

**From:** Reber, Eric  
**Sent:** Wednesday, February 03, 2016 11:10 AM  
**To:** 'Tri@diamondground.com'; 'Tnguyen@Diamondground.com'  
**Subject:** Request for Revision to 2015 Report of Exempt Transfers; Diamond Ground Products; License No. 04-35195-01E  
**Attachments:** RIS 2014-10 Exempt Distribution.pdf

Dear Mr. Nguyen,

I've reviewed your exempt distribution report dated January 29, 2016 that was provided to the NRC via an email with the same date.

Please revise and resubmit your report to indicate that your products are transferred for use under 10 CFR 40.13(c)(1)(iii). With regard to this regulatory reference, two of the digits appear to have been transposed. Also, your email and its attachments did not provide the total quantity of the source material (in your case, thorium) transferred for each type of product and each model number. Therefore, the revision to your report must include, for each type of source material in each type of product and each model number, the total quantity of the source material, as required by 10 CFR 40.53(c)(3)(ii). Further information about the requirements that apply to annual reports of exempt distribution can be found in the attached Regulatory Issue Summary.

A hard copy of your revised report should be addressed and sent to:

ATTN: Document Control Desk/Exempt Distribution  
Director, Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Please be aware that upon your request, proprietary information submitted to the NRC may be withheld from public disclosure. To do this, you must follow the procedures in 10 CFR 2.390(b) including requesting withholding at the time the information is submitted and complying with the document marking and affidavit requirements set forth in 10 CFR 2.390 (b)(1).

If you have any questions, please feel free to contact me.

Regards,  
Eric

Eric H. Reber  
General Engineer/Project Manager  
Materials Safety Licensing Branch  
Division of Material Safety, State, Tribal, and Rulemaking Programs  
US Nuclear Regulatory Commission  
Washington, DC 20555-0001  
Tel: +1 (301) 415-5608  
Office: T-8i04

---

**From:** Tri Nguyen [<mailto:Tri@diamondground.com>]  
**Sent:** Friday, January 29, 2016 8:02 PM  
**To:** NSTSHelp Resource  
**Subject:** [External\_Sender] NRC:10 CFR 40.53 Annual Reporting License # 04-35195-01E

29 January 2016

Dear Sir or Madam:

Please find attached documents regarding requirement described in subject line.

Regards,

Tri Nguyen  
Quality Assurance Manager

Ph: 1.805.498.3837 x280

Fax: 1.805.498.9347

[TNguyen@Diamondground.com](mailto:TNguyen@Diamondground.com)

[www.Diamondground.com](http://www.Diamondground.com)



Made in the USA

Mail: 2651 Lavery Ct., Newbury Park, CA 91320



**Confidential Privileged Communication:**

The information contained in this message is privileged, confidential and protected from disclosure. This message is intended for the individual or entity addressed herein. If you are not the intended recipient, please do not read, copy, use, or disclose this communication to others; also please notify the sender by replying to this message and then delete it from your system. The sender totally disclaims, and will not accept, any responsibility or liability for the unauthorized use, or the consequences of any unauthorized use, of this communication or message.



29 January 2016

**Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001**

**Attn: Document Control Desk/Exempt Distribution  
Re: 10 CFR 40.53 Reporting Requirement for Calendar/Fiscal Year 2015**

**License # 04-35195-01E      Docket # 040-38382**

Dear Sir or Madam:

This correspondence and attachments are conditions of NRC: 10 CFR 40.53(c)(1) annual report detailing information regarding conditions, type, and quantity of products transferred under NRC Form 374 "Materials License". Specific use is described as:

*"In accordance with 10 CFR 40.52, "Certain items containing source material; requirements for license to apply or initially transfer," the licensee is authorized to distribute pre-packaged tungsten electrodes, containing not more than 4% thorium, to persons exempt from licensing under 10 CFR 40.31(c)(1)(iii), or equivalent provisions of any Agreement State."*

Please refer to document "NRC\_10\_CFR 40.52" PDF Section II and invoked document "TIG\_packaging" PDF (both attached) for description and identification of type of material.

Please refer to document "US-NRC\_Declaration 2016" (PDF) for an accounting of source material listed by type/model, total quantity held, and quantity transferred for calendar/fiscal year 2016.

Regards,

Tri Nguyen  
Quality Assurance Manager

Note: The recording of false, fictitious, and fraudulent statements or entries on the document may be punished as a felony under Federal Statutes.



2651 Lavery Court  
Newbury Park, CA 91320

License # 04-35195-01E  
Docket # 040-38382

US-NRC Declaration 2016  
Thorium containing products (1% - 4%)  
10 CFR 40.53 Reporting Requirement for calendar year 2015

*Note: Refer to document "TIG\_Packaging" PDF for reference of "DGP", "RADNOR" and "WOLFRAM" label.  
Also, dimensions listed in left column describe individual electrode diameter and length.  
Quantity represent 1 package of 10 pieces per package.*

(DGP LABEL)		1% Thoriated Material	Source: CHINA
	Dimensions	INVENTORY ON HAND (31 Dec. 2015)	QTY SOLD/TRANSFERRED 2015
	.040" x 7"	5	0
	1/16" x 7"	5	0
	3/32" x 7"	4	1
	1/8" x 7"	6	0
	5/32" x 7"	5	0
	3/16" x 7"	0	0
	TOTAL PACKAGES:	25	1
(DGP LABEL)		2% Thoriated Material	Source: CHINA
	Dimensions	INVENTORY ON HAND (31 Dec. 2015)	QTY SOLD/TRANSFERRED 2015
	.040" x 7"	1186	2510
	1/16" x 7"	1646	12698
	3/32" x 7"	881	49283
	1/8" x 7"	1265	29018
	5/32" x 7"	416	539
	3/16" x 7"	216	359
	.0943" X2.41"	60	40
	.0943" X 3.41"	0	100
	.123"-.124" x 3.140"	0	100
	0.8MM x 7"	0	5
	1.2MM x 7"	0	4
	1/2" x 7"	1	2
	1/2" X 1.50"	0	3
	1/4" x 7"	10	200
	1/8" X 18"	0	7
	1/8" X 24"	0	1
	3/16" X 12"	19	80
	3/16" X 3.585"	246	677
	3/16" X 4.40"	685	678
	3/32" x 12"	510	940
	3/32" x 18"	23	99
	3/8" x 7"	20	15
	3/8" X 3"	0	20
	3/8" X 3.010"	0	110
	5/32" X 12"	10	0
	TOTAL PACKAGES:	7194	97488
(DGP LABEL)		4% Thoriated Material	Source: CHINA
	Dimensions	INVENTORY ON HAND (31 Dec. 2015)	QTY SOLD/TRANSFERRED 2015
	.040" x 7"	73	148
	1/16" x 7"	416	2580
	3/32" x 7"	500	1061
	1/8" x 7"	283	307
	5/32" x 7"	84	36
	3/16" x 7"	87	0
	3/16" X 4.375"	101	190
	8MM X 40MM	0	1
	TOTAL PACKAGES:	1544	4323
(RADNOR LABEL)		2% Thoriated Material	Source: CHINA
	Dimensions	INVENTORY ON HAND (31 Dec. 2015)	QTY SOLD/TRANSFERRED 2015
	.040" x 7"	936	1061
	1/16" x 7"	963	9683
	3/32" x 7"	272	42919
	1/8" x 7"	132	25394
	5/32" x 7"	58	390
	3/16" x 7"	110	59
	TOTAL PACKAGES:	2471	79506
(WOLFRAM LABEL)		2% Thoriated Material	Source: GERMANY
	Dimensions	INVENTORY ON HAND (31 Dec. 2015)	QTY SOLD/TRANSFERRED 2015
	.040" x 7"	875	1205
	1/16" x 7"	1014	1738
	3/32" x 7"	1217	2457
	1/8" x 7"	270	652
	5/32" x 7"	185	1415
	3/16" x 7"	151	601
	1/4" x 7"	14	62
	10MM X 100MM	0	5
	16MM X 50MM	0	10
	3/16" X 18"	0	10
	3/16" X 12"	0	10
	5/16" x 7"	0	700
	TOTAL PACKAGES:	3726	8865

Prepared by: T. Nguyen (electronic) QA Manager  
Date: 29 January 2016

13 February 2015

RE: US NRC (Xu, S. correspondence of 26 January 2015) request for additional information per 10 CFR 40.52

- I. Description of Material Source
  - a. Origin
  - b. Packaging
- II. Product form (individual)
  - a. Packaging
  - b. Identification
- III. Warehouse storage
  - a. Location
- IV. Packaging components
  - a. Cardboard box type
  - b. Labeling
  - c. Comments on dimensions and weight
- V. Radiological considerations
  - a. Test equipment
  - b. Calibration status
- VI. Documentation
  - a. MSDS
  - b. Certificates of Conformance

I. Description of Material Source

- a. All material containing thorium oxide ( $\text{Th}_2\text{O}_2$ ) imported by Diamond Ground Products, Inc. comes from either Germany or China. Thorium does not exist in the free state but as an alloying element in a tungsten base. Please refer to attachment A5.12M\_2009 (PDF).
- b. Typical packaging as received from manufacture is shown with identification (20" x 17" x 7", source: GERMANY):



II. Product form (individual)

- a. Individual TIG welding electrode packages measure 8" x 2" x 1/4" as shown in attachment TIG\_PACKAGING (PDF).
- b. Document TIG\_PACKAGING(PDF) shows typical form commonly shipped to customer. Page 1: Left box is Wolfram (German sourced) material for contracts requiring Defense Federal Acquisition Regulations compliance (15%). Middle box marked RADNOR is China sourced and labeled specifically according to customer's request and branding (Airgas / RADNOR) (15%). Right box marked Diamond Ground represents the majority or all shipments bearing company labeling (70%). Page 2: Back of box with warning labels.

III. Warehouse storage

- a. Controlled (locked with limited access) warehouse storage shown (two leftmost and far right shelves are nonradioactive (non-thorium oxide) material):



IV. Packaging components (shipping)

- a. Double wall cardboard boxes and styrofoam peanut buffer material is used when packaging TIG welding electrode boxes (Section II. Above)



(Un-assembled)



(Completed or ready-to-ship)

(Top, 12" x 6" x 6", Bottom, 14" x 10" x 8")

- b. Labeling identifying UN 2909 is used for all packages containing thorium material:



- c. Depending on TIG electrode diameter and density, weight per cardboard box will vary but all radiological measurements will be less than maximum DOT threshold of .5 mR/hr due to established packaging guidelines developed internally.
- V. Radiological considerations
  - a. All out going packages is scanned at surface for DOT max emission compliance .5mR/hr. Device used is a SE International Radiation Alert Inspector EXP+.



- b. Device is currently calibrated and due for calibration on 03/14/2015 (see photo above).
- VI. Documentation
- a. All material is accompanied by MSDS documentation from both Diamond Ground products, Inc. and the source. Refer to DGP-MSDS-TIG\_N (PDF) and DGP-MSDS\_TIG-W (PDF) for reference.
  - b. All material shipped is accompanied by Certificates of Conformance identifying material type. Refer to DGP-CoC\_DFAR (DFAR German source requirement) and DGP\_CoC\_STD (PDF) for all others as reference.



Wolfram Industrie

Germany

2.0% Thoriated Tungsten/EWTh-2  
Specifications:  
ANSI/AWS A5. 12  
DIN EN ISO 6848, JIS Z 3233

Diameter

1/8"

Ø 3,2

Length

7"

(175 mm)

Quantity

10

Batch No.

114062

Split-Free/Annealed  
Eddy Current Tested



USA

2651 Lavery Court • Newbury Park, CA 91320

Tel: 805-498-3837 • Fax: 805-498-9347

sales@diamondground.com • diamondground.com

SEE REVERSE SIDE FOR WARNING

**RADNOR**

## Tungsten Electrodes

2% Thoriated (EWTh-2)  
1/8" x 7"

LOT#101235

Ground & Annealed  
1 Pack (10 Pieces)  
AWS A5.12M/A5.12:2009  
ISO 6848:2004

64001960



639890019603

RADNOR  
PRODUCTS  
PO Box 6675  
RADNOR, PA  
19087

Made in China



**2% Thoriated**  
Tungsten Electrodes

AWS Class EWth-2  
Specifications:  
ANSI/AWS A5. 12, JIS  
DIN EN 26848, ISO 6848

Diameter

1/8

Length

7"

(175mm)

Quantity

10

Batch No.

052116

**GROUND**  
Finish

DIAMOND GROUND PRODUCTS, INC.  
2651 Lavery Court • Newbury Park, CA 91320  
Tel: 805-498-3837 • Fax: 805-498-9347  
sales@diamondground.com • diamondground.com

Also available: Pre-Ground Electrodes,  
Precision Tungsten Electrode Grinders,  
2% Ceriated & 2% Lanthanated  
Tungsten Electrodes

SEE REVERSE SIDE FOR WARNING

This product contains or produces a chemical known to the State of California to cause cancer or birth defects (or other reproductive harm).

(California Health and Safety Code Section 25249.5 et seq.).

#### WARNING

Read and understand this label.

Protect yourself and others.

- Fumes and gases of welding electrodes can be dangerous to your health.
- Arc rays can injure eyes and burn skin.
- Electric shock can kill.
- These welding electrodes contain small amounts of thorium, a radioactive element.
- Safe disposal of waste is required, particularly when grinding and machining these electrodes (see laws and regulations for radiation protection).

For further information see :

- safety data sheet for W-ThO<sub>2</sub> electrodes, available from supplier
- national standards for arc welding and relevant laws and regulations.

We recommend avoiding the use of thoriated electrodes.

Alternative: WS2 WITSTAR®

#### WARNUNG

Bitte beachten Sie folgende Warnhinweise.

Schützen Sie sich selbst und andere.

- Rauch- und Gasbildung durch Schweißen kann gesundheitsschädlich sein.
- Der Lichtbogen kann Augen- und Hautverletzungen verursachen.
- Ein Stromschlag kann tödlich sein.
- Diese Schweißelektroden enthalten Thorium, ein radioaktives Element.
- Sicherheitsentsorgung der Abfälle ist nötig, speziell wenn die Elektroden bearbeitet werden (beachten Sie hierzu auch Gesetze und Vorschriften bezüglich Strahlenschutz).

Zur weiteren Information beachten Sie :

Sicherheitsdatenblätter für thoriierte Elektroden, die Sie vom Lieferanten erhalten sowie nationale Vorschriften für Lichtbogenschiessen und relevante Gesetze und Vorschriften.

Wenn möglich sollte der Einsatz von strahlungsfreien Schweißelektroden bevorzugt werden.

Alternative: WS2 WITSTAR®

#### MISE EN GARDE

Lisez bien cette notice.

Protégez vous et protégez vos collègues.

- La fumée et les gaz émanant des électrodes peuvent être dangereux pour votre santé.
- Les rayons de l'arc peuvent blesser les yeux et brûler la peau.
- Les décharges électriques peuvent entraîner la mort.
- Ces électrodes de soudage contiennent de petites quantités de thorium, un élément radioactif.
- Les déchets résultant du meulage et de l'usinage doivent être évacués de manière sûre (voir les lois et règlement relatifs à la protection contre les radiations).

Pour des informations plus détaillées voir :

- la fiche de données de sécurité pour les électrodes en tungstène thoré fournie par le fabricant
- les normes nationales pour le soudage à l'arc et les lois et règlements s'y rapportant.

Où possible on devrait de préférence utiliser des électrodes de soudure non-radioactives.

Alternatif: WS2 WITSTAR®

This product contains or produces a chemical known to the State of California to cause cancer or birth defects (or other reproductive harm).  
(California Health and Safety Code Section 25249.5 et seq.).

Warning: Protect yourself and others. Read and understand this information. Fumes and Gases can be dangerous to your health. Arc Rays can injure eyes and burn skin, Electric shock can kill. Before use, read and understand the manufacture's instructions. Material Safety Data Sheets(MSDS), and your employer's safety practices, Keep your head out of the fumes, Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases away from your breathing zone and the general area. Wear correct eye, ear, and body Protection. Do not touch live electrical parts, See National Standard Z49.1 Safety in Welding and Cutting, published by the American Welding Society, 500 N W LeJeune Road, P.O.Box 351040, Miami, Florida 33135: OSHA Safety and Health Standards, 29 CFR 1910, available from the U.S. Government Printing Office, Washington, D.C.20402.

The grinding(sharpening) of the tungsten electrodes produce a dust which should not be ingested. Special precautions relative to ventilation should be considered.

This product contains or produces a chemical known to the State of California to cause cancer or birth defects (or other reproductive harm).  
(California Health and Safety Code Section 25249.5 et seq.).

Warning: Protect yourself and others. Read and understand this information. Fumes and Gases can be dangerous to your health. Arc Rays can injure eyes and burn skin. Electric shock can kill. - Before use, read and understand the manufacturer's instructions. Material Safety Data Sheets (MSDS), and your employer's safety practices. - Keep your head out of the fumes. - Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases away from your breathing zone and the general area. - Wear correct eye, ear, and body protection. - Do not touch live electrical parts. - See National Standard Z49.1 Safety in Welding and Cutting, published by the American Welding Society, 500 NW LeJeune Road, P.O. Box 351040, Miami, Florida 33135: OSHA Safety and Health Standards, 29 CFR 1910, available from the U.S. Government Printing Office, Washington, D.C. 20402. - The grinding (sharpening) of the tungsten electrodes produce a dust which should not be ingested. Special precautions relative to ventilation should be considered. This product contains or produces a chemical known to the State of California to cause cancer or birth defects (or other reproductive harm). (California Health and Safety Code Section 25249.5 et seq.)