

United States Nuclear Regulatory Commission  
Region III  
801 Warrenville Road  
Lisle, Illinois 60532-4351  
Attn: Mr Ed Harvey

April 20, 2020

Re: Stolen Nuclear Gauge  
Indianapolis, Indiana  
License No.: 13-18685-01

Dear Mr. Ed Harvey

In accordance with 10 CFR 20.2201, we are sending information regarding the theft of a nuclear density gauge which occurred on the evening of March 25, 2020 or the morning of March 26, 2020. This was reported to Mr. Brian Lin at 08:11 Eastern on March 26, 2020 by Mr. Mark Herber of Alt & Witzig Engineering, Inc. The Event Notification Number is 54613.

Enclosed are copies of the following

Special Form certificate of stolen gauge

Copy of leak test certificate

Corrective Actions

My discussion with our user (Jackson Stone) assigned to this gauge.

On the morning of March 26, 2020, Jackson Stone, an Alt & Witzig approved nuclear gauge user, observed the passenger window to be broken into and his Knaack box lid to be open and in the upright position in front of 7342 Bahama Court, Indianapolis, Indiana. A CPN model portable nuclear device having the serial number 60103007, was missing. The Knaack box was bolted to the bed of a 2016 Ford F150 with two functioning locks. The Knaack box keys had been on a ledge below the dashboard. These keys were used to open the Knaack box and to remove the gauge.

Once Jackson discovered the missing nuclear density gauge, he notified his supervisor, Mark Herber at approximately 7:45 - 8:00 a.m. eastern. Once notified, Alt & Witzig immediately contacted Mr. Brian Lin of the NRC in compliance with 10 CFR 20.2201(a)(1)(i).

The Indianapolis Metropolitan Police Department (IMPD) was notified of the theft. Alt & Witzig was provided with Police Report # IP200031765. Alt & Witzig was then contacted by the IMPD around 9:00 a.m. stating that they had found the nuclear gauge with our company name and number. Mark Herber then retrieved the nuclear gauge from the IMPD. An MC1K GM survey meter was utilized to determine if there were any potential radiological leaks. The gauge appeared to be functioning normally without any excess radiation detected. There did not appear to be anyone who had excessive exposure to radiation.

After retrieving the nuclear gauge, Mark Herber then contacted Mr. Brian Lin of the NRC and outlined the above events. Photos of the gauge, truck window, and knaack box have been sent to Mr. Ed Harvey after the incident.

Subsequent to the incident outlined here, Jackson Stone has retaken the nuclear gauge operator safety training class and test.

Corrective actions implemented since the gauge theft include refresher training for all current nuclear gauge users. This refresher training is in addition to our annual refresher training. Alt & Witzig will also require nuclear gauge operators to keep knack box keys on their person. Additionally, conversations have been had with current nuclear gauge users reinforcing our expectations of their responsibilities that are associated with storing and operating a nuclear density gauge.

Very Truly Yours

Alt & Witzig Engineering, Inc.

# ***Cline's Technical Services, Inc.***

***10883 Cincinnati Zanesville Road - Amanda, Ohio 43102 - Ph 740.969.2720 Fax 740.969.2122***

## **Leak Test Report**

Alt & Witzig Engineering  
4105 West 99th St.  
Carmel, IN 46032

Model Number: CPN MC

Serial Number: 3007

Isotope: Cs-137 10 mCi  
Am-241/Be 50 mCi

Date of test: 12-11-2019

The sample and information above was submitted for leak test analysis.

Analysis date: 12-26-2019

Analysis Number: 6138

Results: Removable Contamination < 1 Becquerel "Bq" or < 2.7027027027027E-05 Ci  
(note: < = less than )

**Note:**

The US Nuclear Regulatory Commission and Agreement States require that the analysis of the wipe from a sealed source be capable of detecting the presence of 185 Becquerel ( or 0.005 micro curie ) on the sample. { The count on this wipe is below 185 Bq. } The Source is not considered leaking.  
This report should be retained for viewing by regulatory agencies.

Signed



Office of Radiation Safety  
Ohio Materials License No. 03225230000



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0627/S-96, REVISION 4

East Building, PHH-23  
1200 New Jersey Ave, SE  
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model No. X.2084 (Manufactured on or after July 28, 1983).
2. Source Description - Cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate outer dimensions are 9.1 mm (0.36 in.) in diameter and 12.8 mm (0.5 in.) in length. Minimum wall thickness of the sheath body is 0.95 mm (0.04 in.) and of the cell body is 0.85 mm (0.03 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA61685, Rev. A.
3. Radioactive Contents - No more than 5.55 GBq (0.15 Ci) of Americium-241. The Am-241 is in solid oxide form and mixed with beryllium.
4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on August 30, 2022. Previous editions which have not reached their expiration date may continue to be used.

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100-199, United States of America.


(-2-)

**CERTIFICATE USA/0627/S-96, REVISION 4**

This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the August 14, 2017 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

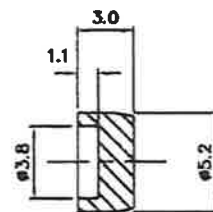
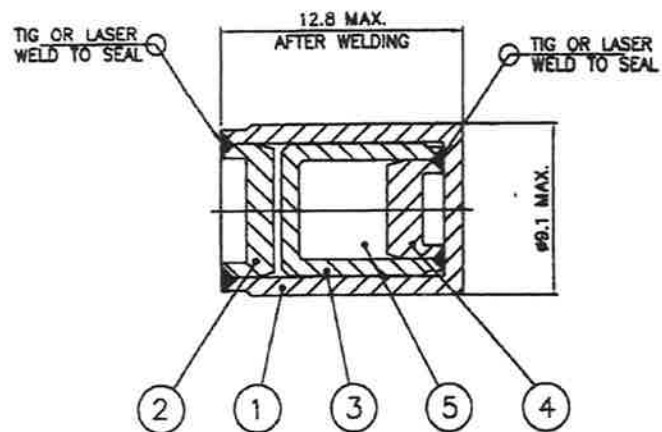
Certified By:



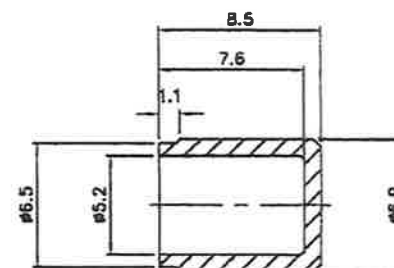
 William Schoonover  
Associate Administrator for Hazardous  
Materials Safety

August 29, 2017  
(DATE)

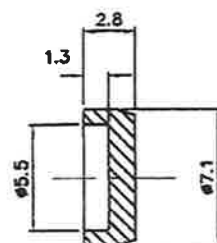
Revision 4 -- Issued to extend the expiration date



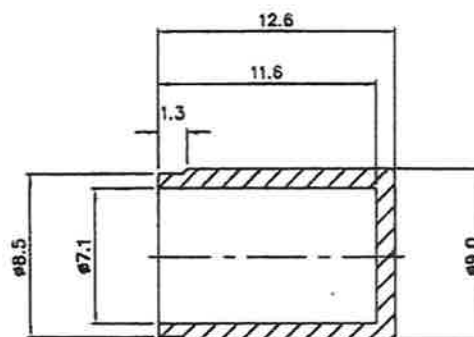
ITEM 4



ITEM 3



ITEM 2



ITEM 1

ITEM No.	DESCRIPTION		QTY.
1	SHEATH BODY	STAIN.STL	1
2	SHEATH LID	STAIN.STL	1
3	CELL BODY	STAIN.STL	1
4	CELL LID	STAIN.STL	1
5	ACTIVE MATERIAL		AR

APPROVALS	
<i>[Signature]</i>	23 MAR 03
<i>[Signature]</i>	3 MAR 03
DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED TOLERANCES:	
X ±0.3	INTERNAL <i>[Symbol]</i>
XX ±0.1	EXTERNAL <i>[Symbol]</i>
XXX ±0.05	
ANGULAR ±5°	



DESCRIPTIVE  
DRAWING

TITLE X2084 CAPSULE ASSEMBLY

SIZE A	DWG. NO. RBA61685	REV A
SCALE: NONE		SHEET 1 OF 1

ERF 475



U.S. Department  
of Transportation

Pipeline and  
Hazardous Materials  
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0634/S-96, REVISION 5

East Building, PHH-23  
1200 New Jersey Ave, SE  
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - QSA Global, Inc. Model X.8 (Manufactured on or after September 23, 1981).
2. Source Description - Cylindrical double encapsulation made of stainless steel and tungsten inert gas or laser seal welded. Approximate exterior dimensions are 6.1 mm (0.24 in.) in diameter and 8.3 mm (0.33 in.) in length. Minimum wall thickness of the outer encapsulation is 0.4 mm (0.02 in.). Construction shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. RBA62011, Rev. C.
3. Radioactive Contents - No more than either 37.0 GBq (1.0 Ci) of Cesium-137, or 740.0 MBq (20.0 mCi) of Radium-226, or 740.0 MBq (20.0 mCi) of Barium-133. The Cs-137 is in the form of a cesium silicate in a glass matrix or a sulfate as ceramic ion exchange pellets. The Ra-226 is in the form of a low solubility radium sulfate powder. The Ba-133 is in the form of barium silicate as a glass bead or a ceramic pellet.

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100-199, United States of America.


**CERTIFICATE USA/0634/S-96, REVISION 5**

4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on October 31, 2022. Previous editions which have not reached their expiration date may continue to be used.

This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the October 6, 2017 petition by QSA Global, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified By:



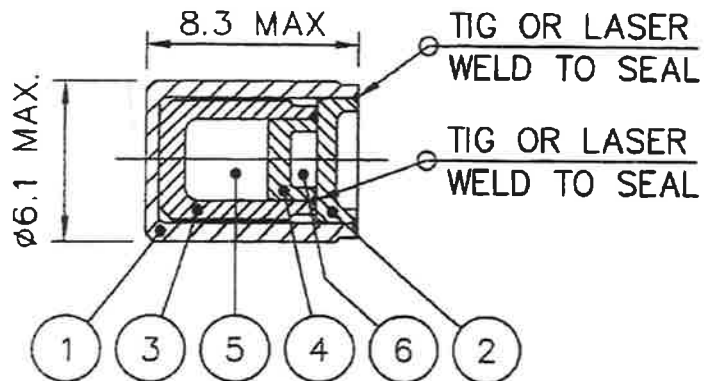
 William Schoonover  
Associate Administrator for Hazardous  
Materials Safety

November 03,  
2017

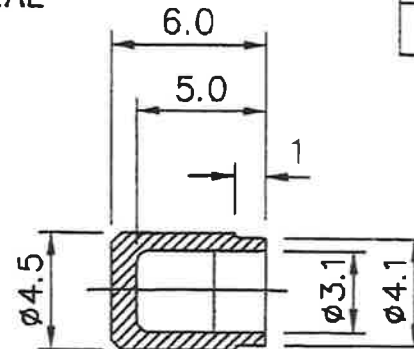
(DATE)

Revision 5 - Issued to extend the expiration date.

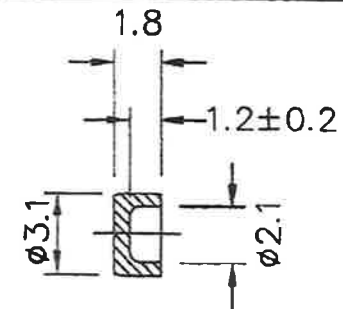




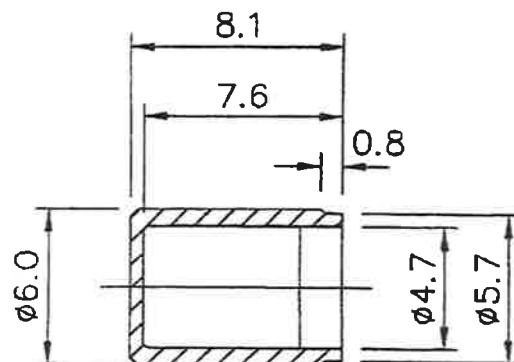
ITEM No.	DESCRIPTION	QTY.
1	SHEATH BODY STAIN.STL	1
2	SHEATH LID STAIN.STL	1
3	CELL BODY STAIN.STL	1
4	CELL LID STAIN.STL	1
5	ACTIVE MATERIAL AND CERAMIC FIBER PACKING MATERIAL	AR
6	CERAMIC FIBER PACKING MATERIAL (OPTIONAL)	AR



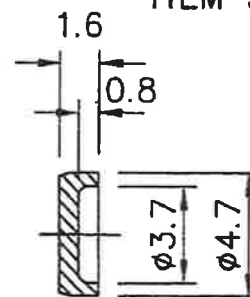
ITEM 3



ITEM 4



ITEM 1



ITEM 2

APPROVALS	
<i>R. Munn</i>	10/03
<i>A. P. Webb</i>	10/03
DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED TOLERANCES:	
X ±0.5	INTERNAL ±0.1
XX ±0.1	EXTERNAL ±0.1
XXX ±0.05	ANGULAR ±5°



DESCRIPTIVE  
DRAWING

TITLE X8 CAPSULE ASSY

SIZE A DWG. NO. RBA62011

SCALE: NONE SHEET 1 OF 1

REV C

ERF # 679