

Cassata, James

From: Jeff Koncki <jeff.koncki@tideh2o.net>
Sent: Thursday, October 10, 2019 10:24 PM
To: R1DNMSMAIL RESOURCE
Cc: Cassata, James; Bruce Reynolds
Subject: [External_Sender] Additional Information - License Extension Request Dated August 27, 2019 - Mail Control 615325
Attachments: Tidewater XRF License Extension Request - NRC - 10-2019.pdf

R1DNMSMail.Resource@nrc.gov

Reference – [James R. Cassata]

Mail Control No. [615325]

Attached is our request for extension letter, signed by an executive of Tidewater, along with a corrected table of list of sources devices radioactivity. It should be noted that we have never possessed, nor are we planning on possessing, any instruments (i.e. Troxler) that contain Cesium-137, Americium-241, and Californium-252. Should this change in the future, we will submit an amendment to the license.

Please let me know if you have any questions.

Thank you,

Jeffrey S. Koncki, PMP
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October 9, 2019

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

Re.: Request for Extension of Radioactive Material License for XRF Use
License 19-31388-01

This letter is to request the extension of License 19-31388-01 for an additional five years. This will extend the term of the original license to 15-years as is currently being issued. The current expiration of this license is October 31, 2019.

This license will only be used for NITON XRF, model XLp 300A containing 40 mCi of Cd-109 manufactured by IPL. We would like to be licensed for a total of six units, of which we currently possess five. We no longer wish to be licensed for any devices containing Cs-137, Am-241, and Cf-252 on this license.

We appreciate your assistance in this matter. Please contact me at (410) 540-8700 or Bruce.Reynolds@tideh2o.net or our RSO Jeffrey Koncki at (410) 540-8700 or jeff.koncki@tideh2o.net if you have any questions.

Respectfully,

Bruce Reynolds, CHMM
Senior Vice President

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Cd-109 Sealed Sources: / Authorized Devices: (Please verify Bolded Text for Sealed Source Manufacturer and Model.)	Maximum Activity on Individual Source
1	Source: QSA Global Inc. Model CUC.D1 ; CA-0406-S-858-S Device: Thermo Niton Analyzers, LLC, Model Xlp Series - MA-1159-D-101-B	100 mCi (3.7 GBq)* * Limited by Device to 50 mCi per source.
2	Source: QSA Global Inc. Model CUC.P1 ; CA-0406-S-275-S Device: Thermo Niton Analyzers, LLC, Model Xlp Series - MA-1159-D-101-B	100 mCi (3.7 GBq)* * Limited by Device to 50 mCi per source
	First Line Item on License for Cd-109: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry. For example, here is how this line item will appear in your extended license. <div> <div>A. Cadmium-109</div> <div>A. Sealed Sources (QSA, Model CUC.D1, CUC.P1)</div> <div>A. 50 millicuries per source and 450 millicuries total</div> <div>A. For use in Thermo Niton Analyzers, LLC, Model Xlp Series portable gauging devices for measuring physical properties of materials.</div> </div>	3 – 150 mCi total
3	Source: Isotope Product Laboratories (IPL) Model XFB Series ; CA-0406-S-112-S Device: Thermo Niton Analyzers, LLC, Model XL Series – NR-164-D-801-B	300 mCi (11.1 GBq)* * Limited by Device to 50 mCi per source
4	Source: Isotope Product Laboratories (IPL) Model XFB3 ; Included in the XFB Series Device: Thermo Niton Analyzers, LLC, Model XL Series – NR-164-D-801-B Device: Thermo Niton Analyzers, LLC, Model Xlp Series - MA-1159-D-101-B	300 mCi (11.1 GBq)* * Limited by Device to 50 mCi per source * Limited by Device to <u>50</u> mCi per source
5	Source: Isotope Product Laboratories (IPL) Model 3204 ; Included in the XFB Series Device: Thermo Niton Analyzers, LLC, Model XL Series – NR-164-D-801-B	300 mCi (11.1 GBq)* * Limited by Device to 50 mCi per source
6	Source: Isotope Product Laboratories (IPL) Model 3205 ; Included in the XFB Series Device: Thermo Niton Analyzers, LLC, Model XL Series – NR-164-D-801-B	300 mCi (11.1 GBq) * Limited by Device to 50 mCi per source
	Second Line Item on License for Cd-109: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	6 – 300 mCi total
7	Source: North American Scientific Model IND-1602 ; CA-0406-S-866-S Device: Thermo Niton Analyzers, LLC, Model XL Series – NR-164-D-801-B	100 mCi (3.7 GBq)* * Limited by Device to 50 mCi per source
	Third Line Item on License for Cd-109: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

Table continued on the next page.

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Cd-109 Sealed Sources: / Authorized Devices: (Please verify Bolded Text for Sealed Source Manufacturer and Model.)	Maximum Activity on Individual Source
8	<p>Source: New England Nuclear (NEN) Models NER-467 Capsule LE66*</p> <p>* CA-0406-S-219-S listed NER-467 Capsule LE66 but it is for Isotope Products Laboratories not NEN. Supersedes MA-476-S-108-S which can't be found in the SSDR. Apparent history shows relationship between NEN and Isotope Products Laboratories. Therefore, accept CA-0406-S-219-S.</p> <p>Du Pont Merck Pharmaceuticals Company - History: see also Isotope Products Laboratories or New England Nuclear, was NEN, was Life Sciences Enterprises Comments:</p> <p>Isotope Products Laboratories - History: see Eckert & Ziegler Isotope Products see also Du Pont Merck Pharmaceuticals Company Comments:</p> <p>Eckert & Ziegler Isotope Products - History: dba Isotope Products Laboratories Comments:</p> <p>* MA-0753-S-101-S is NEN but Model lists NER-467 with no Capsule. Not an exact match. Device: Thermo Niton Analyzers, LLC, Model XL Series - NR-164-D-801-B and it does list Model NEN-467 Capsule LE66.</p>	<p>100 mCi (3.7 GBq)*</p> <p>* Limited by Device to 50 mCi per source</p>
	Fourth Line Item on License for Cd-109: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
9	<p>Source: New England Nuclear (NEN) Models NER-465*; CA-0406-S-219-S* but it is written for Isotope Products Laboratories, not NEN.</p> <p>* NR-0476-S-813-S Du Pont Merck Pharmaceuticals Company states Model 465 can be found under NR-476-S-106-S but SSDR did not have this.</p> <p>No NEN SSDR found but given history of Du Pont Merck Pharmaceuticals Company, Isotope Products Laboratories, and Eckert & Ziegler Isotope Products accept CA-0406-S-219-S.</p> <p>Device: Thermo Niton Analyzers, LLC, Model XL Series - NR-164-D-801-B and it does list Model NEN-465.</p>	<p>300 mCi (11.1 GBq)*</p> <p>* Limited by Device to 50 mCi per source</p>
	Fifth Line Item on License for Cd-109: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

Cd-109 Source Summary:

~~1-2: QSA Global Inc. Model CUC.D1, CUC.P1.~~

3-6: Isotope Product Laboratories (IPL) Model XFB Series, XFB3, 3204, 3205.

~~7: North American Scientific Model IND-1602.~~

~~8-9: NEN Models NER-467 Cap., LE66, NER-465.~~

(Device summary continued on the next page.)

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

Cd-109 Devices Summary:

Thermo Niton Analyzers, LLC, Model XLp Series - MA-1159-D-101-B

~~1-2: QSA Global Inc. Global, Inc. Model CUC.DI or CUC.P1 Cd-109; Max Activity per Source in Device 50 mCi (1850 MBq).~~

4: Isotope Products Laboratories Model XFB-3 Cd-109; Max Activity per Source in Device 50 mCi (1850 MBq).

~~**Thermo Niton Analyzers, LLC, Model XL Series - NR-164-D-801-B**~~

~~3-6: Isotope Product Laboratories (IPL) Models XFB Series, XFB3, 3204, and 3205; Cd-109; Max Activity per Source in Device 50 mCi (1850 MBq).~~

~~7: North American Scientific Model IND 1602; Cd-109; Max Activity per Source in Device Max Activity per Source in Device 50 mCi (1850 MBq).~~

~~8-9: New England Nuclear (NEN) Models NER 467 Capsule LE66 and Model NER 465; Cd-109; Max Activity per Source in Device Max Activity per Source in Device 50 mCi (1850 MBq).~~

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Cs-137 Sealed Sources: / Authorized Devices: (Please verify Bolded Text for Sealed Source Manufacturer and Model.)	Maximum Activity on Individual Source
1	Source: CPN Model CPN-131 ; CA-208-S-101-S. Device: MC Portaprobe Series; CA-0208-D-102-S.	10 mCi (370 MBq)
	First Line Item on License for Cs-137: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
2	Source: QSA Global Inc., Model CDC-W556 ; MA-1059-S-924-S. Device: Troxler Electronic Laboratories Model Nos. 3401; NC-646-D-830-S; Cs-137; 9 mCi (333 MBq). Device: Troxler Electronic Laboratories Model 4640; NC-646-D-131-S; Cs-137; 9 mCi (333 MBq). Device: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Cs-137; 9 mCi (333 MBq). Device: Troxler Electronic Laboratories Model 3411, NC-646-D-830-S; Cs-137; 9 mCi (333 MBq).	8.9 mCi (329.3 MBq)
	Second Line Item on License for Cs-137: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Cs-137 Sealed Sources: / Authorized Devices: (Please verify Bolded Text for Sealed Source Manufacturer and Model.)	Maximum Activity on Individual Source
3	<p>Source: QSA Global Inc., Models CDC.805; no direct SSDR entry found but references made in each of the following device registries indicating the SSDR existed at one time:</p> <p>Device: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Cs-137; 11 mCi (407 MBq).</p> <p>Device: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; 11 mCi (407 MBq).</p> <div style="display: flex; justify-content: space-around;"> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #000;"> <p>SEALED SOURCE MODEL DESIGNATION: Humboldt Drawing No. 2200064-1 which covers: AEA Technology/QSA, Inc. Model No. CDC.805 Capsule Type X8</p> </div> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #000;"> <p>SEALED SOURCE MODEL DESIGNATION: AEA Technology QSA, Inc. Model No. CDC.805 Capsule Type X8 Special Form Certificate No. USA/0634/S</p> </div> </div> <p>Also, MA-1059-S-200-S states the following and may apply to CDC.805:</p> <div style="border: 2px solid red; padding: 10px; margin: 10px 0;"> <p>The sources were referenced on a previous registration sheet with sub-model numbers based on source nominal activity. Though this sub-classification was referenced, in practice it was never used for source distributions. Since the fabrication for CDC.800 Series sources are the same regardless of activity, the sub-model numbers references have been removed. Sources are distributed to licensees licensed for the CDC.800 Series sources.</p> </div> <p>Therefore, accept MA-1059-S-200-S is the SSDR entry for QSA Global Inc. CDC.805.</p> <p>Device: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Cs-137; 11 mCi (407 MBq).</p> <p>Device: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; 11 mCi (407 MBq).</p> <p>QSA Global, Inc. - History: Formerly AEA Technology QSA, Inc.; Amersham Comments:</p>	<p>470 mCi (17.4 GBq)*</p> <p>* Limited by Device to 11 mCi per source</p>
	Third Line Item on License for Cs-137: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
4	<p>Source: Isotope Product Laboratories (IPL) Model HEG-137; CA-0406-S-122-S.</p> <p>Device: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Cs-137; 11 mCi (407 MBq).</p> <p>Device: Troxler Electronic Laboratories Model 4640; NC-646-D-131-S; Cs-137; 9 mCi (333 MBq).</p> <p>Device: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Cs-137; 9 mCi (333 MBq).</p> <p>Device: Troxler Electronic Laboratories Model 3411, NC-646-D-830-S; Cs-137; 9 mCi (333 MBq).</p> <p>Device: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; 11 mCi (407 MBq).</p>	<p>600 mCi (22.2 GBq)*</p> <p>* Limited by Device to 11 mCi per source</p>
	Fourth Line Item on License for Cs-137: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

~~Cs-137: Sealed Source Summary:~~

- ~~1: CPN Model CPN-131.~~
- ~~2: QSA Global Inc. Model CDC.W556.~~
- ~~3: QSA Global Inc. Model CDC.805.~~
- ~~4: Isotope Product Laboratories (IPL) Model HEG-137; CPN International Division of InstroTek, Inc. gauge models AC, MC, and 500 series gauges.~~

~~Cs-137: Device Summary:~~

- ~~1: CPN Model No. MC Portaprobe Series; CA-0208-D-102-S; Cs-137; 10 mCi (370 MBq).~~
- ~~2: Troxler Electronic Laboratories Model Nos. 3401; NC-646-D-830-S; Cs-137; 9 mCi (333 MBq).~~
- ~~3-4: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Cs-137; 11 mCi (407 MBq).~~
- ~~2, 4: Troxler Electronic Laboratories Model 3411, NC-646-D-830-S; Cs-137; 9 mCi (333 MBq).~~
- ~~2, 4: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Cs-137; 9 mCi (333 MBq).~~
- ~~2, 4: Troxler Electronic Laboratories Model 4640; NC-646-D-131-S; Cs-137; 9 mCi (333 MBq).~~
- ~~3, 4: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; 11 mCi (407 MBq).~~

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Am-241 (Am-241-BE) Sealed Sources: / Authorized Devices: (Please verify Bolded Text for Sealed Source Manufacturer and Model.)	Maximum Activity on Individual Source
1	Source: CPN Model CPN-131 ; CA-208-S-101-S; Am-241/Be; 100 mCi (3.7 GBq). Device: MC Portaprobe Series; CA-0208-D-102-S	100 mCi (3.7 GBq).
	First Line Item on License for Am-241-Be: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
2	Source: QSA Global Inc. Model AMN.V997 ; MA-1059-S-358-S; Am-241:Be; 50 mCi (1.85 GBq). Device: Troxler Electronic Laboratories Model Nos. 3401, 3411; NC-646-D-830-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Troxler Electronic Laboratories Model 3216; NC-646-D-126-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Am-241:Be; 44 mCi (1.63 GBq). Device: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; Am-241:Be; 44 mCi (1.63 GBq).	50 mCi (1.85 GBq)* * Limited by Device to 44 mCi per source.
	Second Line Item on License for Am-241-Be: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
3	Source: QSA Global Inc. Model AMN.V997 ; MA-1059-S-358-S; Am-241:Be; 50 mCi (1.85 GBq). Device: Troxler Electronic Laboratories Model 4301 and 4302; NC-646-D-134-S; Am-241:Be; 11 mCi (407 MBq).	50 mCi (1.85 GBq)* * Limited by Device to 11 mCi per source.
	Third Line Item on License for Am-241-Be: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
4	Source: Isotope Products Laboratories (IPL) Model AM1.NO2 ; CA-0406-S-193-S; Am-241:Be; 100 mCi (3.7 GBq). Device: Troxler Electronic Laboratories Model Nos. 3401, 3411; NC-646-D-830-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Troxler Electronic Laboratories Model 3216; NC-646-D-126-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Am-241:Be; 44 mCi (1.63 GBq). Device: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Am-241:Be; 44 mCi (1.63 GBq). Device: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; Am-241:Be; 44 mCi (1.63 GBq).	100 mCi (3.7 GBq)* * Limited by Device to 44 mCi per source.
	Fourth Line Item on License for Am-241-Be: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0
5	Source: Isotope Products Laboratories (IPL) Model AM1.NO2 ; Am-241:BE; 100 mCi (3.7 GBq) Device: Troxler Electronic Laboratories Model 4301 and 4302; NC-646-D-134-S; Am-241:Be; 11 mCi (407 MBq).	100 mCi (3.7 GBq)* * Limited by Device to 11 mCi per source.
	Fifth Line Item on License for Am-241-Be: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

~~Am-Be Source Summary:~~

- ~~1: CPN Model CPN-131; CA-208-S-101-S; Am-241:Be; 100 mCi (3.7 GBq).~~
- ~~2, 3: QSA Global Inc. Model AMN.V997; MA-1059-S-358-S; Am-241:Be; 50 mCi (1.85 GBq).~~
- ~~4, 5: Isotope Products Laboratories (IPL) Model AM1.NO2; CA-0406-S-193-S; Am-241:Be; 100 mCi (3.7 GBq)~~

~~Am-Be Device Summary:~~

- ~~1: MC Portaprobe Series; CA-0208-D-102-S~~
- ~~2, 4: Troxler Electronic Laboratories Model Nos. 3401, 3411; NC-646-D-830-S; Am-241:Be; 44 mCi (1.63 GBq).~~
- ~~2, 4: Troxler Electronic Laboratories Model 3216; NC-646-D-126-S; Am-241:Be; 44 mCi (1.63 GBq).~~
- ~~2, 4: Troxler Electronic Laboratories Model 3400 Series; NC-646-D-130-S; Am-241:Be; 44 mCi (1.63 GBq).~~
- ~~2, 4: Humboldt Scientific Inc., Model 5001; NC-356-D-101-S; Am-241:Be; 44 mCi (1.63 GBq).~~
- ~~2, 4: InstroTek Model 3500; NC-1241-D-101-S; Cs-137; Am-241:Be; 44 mCi (1.63 GBq).~~
- ~~3, 5: Troxler Electronic Laboratories Model 4301 and 4302; NC-646-D-134-S; Am-241:Be; 11 mCi (407 MBq).~~

Tidewater Inc., License No. 19-31388-01 (amendment 2), Docket No 030-38165, and Mail Control Number 615325. Sources and devices reference to your letter application August 27, 2019, requesting for the extension of Nuclear Regulatory Commission (NRC) License.

#	Cf-252 Sealed Sources: / Authorized Devices: (Please List the Sealed Source and Device Manufacturer and Model for your Cf-252.)	Maximum Activity on Individual Source
1	Sealed Sources (Troxler Dwg. No. A-105560) — Unknown, Not in SSDR. Please list Source Manufacturer and Model. Device: Unknown. Please list Source Manufacturer and Model.	Unknown.
	First Line Item on License for Cf-252: Please provide the number of devices you want licensed for each line so a total radioactivity can be determined/ verified for this line entry.	0

~~Sealed Source listed on current license (Troxler Dwg. No. A-105560) — Not in SSDR.~~

~~Possible Sources (or others not listed):~~

~~Isotope Products Laboratories Model HEG-XXX; CA-0406-S-122-S; Cf-252; 1 mCi (37 MBq)~~

~~Isotope Products Laboratories Model CPN-131; CA-208-S-101-S; Cf-252; 30 uCi (1.11 MBq)~~