

**Roldan, Lizette**

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**From:** Roldan, Lizette  
**Sent:** Wednesday, February 01, 2012 11:06 AM  
**To:** 'edward.lewis@usd.edu'  
**Subject:** REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST  
CONTROL 576380

Docket No. 030-15186  
License No. 40-02331-19  
Control No. 576380

Dear Mr. Lewis:

This is in reference to your letter dated November 10, 2011 requesting to amend Nuclear Regulatory Commission License No. 40-02331-19. In order to continue our review, we need the following additional information:

1. Please state the form (Any or Sealed Source) of the material requested:
  - a. Americium 241:Be source – 150 microcurie
  - b. Thorium-232 – 6 microcurie
  - c. Thorium-228 – 2 microcurie
  - d. Barium-133 – 10 microcurie
2. If any of the material stated above is a sealed source, please provide the manufacturer's name and model number for each requested sealed source and device. In addition state a quantity per source.
3. You have an Americium 241:Be source sealed source listed on your license already. Please confirm if you want to increase, decrease or keep the 90 microcuries per source and 360 microcurie total.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 6:30 p.m. EST, Monday through Friday (except Federal holidays).

We will continue our review upon receipt of this information. Please reply to my attention and refer to Mail Control No. 576380. You may attach your response as a PDF document via e-mail, or fax it to 817-200-1188. If you have any technical questions regarding this deficiency letter, please call me at (817) 200-1596.

If we do not receive a reply from you by **Monday, February 6, 2012** we will assume that you do not wish to pursue your amendment request and this action will be voided without prejudice to the resubmission of an amendment request.

Sincerely,

Lizette Roldán-Otero, Ph.D.  
U.S. NRC Region IV  
Health Physicist  
817-200-1596

## Roldan, Lizette

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**From:** Lewis, Edward J [Edward.Lewis@usd.edu]  
**Sent:** Wednesday, February 08, 2012 1:12 PM  
**To:** Roldan, Lizette  
**Subject:** FW: REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380

Hello Lizette,

An update to the earlier request, there will actually be multiple 228-Th 0.28 uCi sources. The custom source actually consists of two lines of 0.28uCi, two meters long. Please update the request to state that we would like to add four (4) 228-Th 0.28uCi sources with a total of 1.12uCi.

Thank you very much!

Edward (Ted) Lewis, Director  
Environmental Health and Safety  
University of South Dakota  
605/677-6265  
[Edward.lewis@usd.edu](mailto:Edward.lewis@usd.edu)

**From:** Lewis, Edward J  
**Sent:** Monday, February 06, 2012 7:59 AM  
**To:** Roldan, Lizette  
**Subject:** RE: REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380

Hello Lizette,

Here is the information I have been able to obtain regarding the sources that we wish to add to our license:

228Th 1.0 uCi Type D Disk Eckert & Ziegler GF-228-D ✓  
228Th 0.28 uCi line Eckert & Ziegler VZ-3631-001 (custom source)  
133Ba 10 uCi button Eckert & Ziegler GF-133-D ✓  
241Am 23 uCi button Eckert & Ziegler GF-241-D ✓

Regarding the Am sources we want to keep the three sources at 90uCi each and add the above 23uCi source. I believe that these are all of the sources we are looking to add.

Thanks for your assistance, please call me know if you need any other information.

Thanks,

~tEd~

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**From:** Roldan, Lizette [Lizette.Roldan@nrc.gov]  
**Sent:** Wednesday, February 01, 2012 11:06 AM  
**To:** Lewis, Edward J  
**Subject:** REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380

## Roldan, Lizette

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**From:** Lewis, Edward J [Edward.Lewis@usd.edu]  
**Sent:** Monday, February 13, 2012 12:42 PM  
**To:** Roldan, Lizette  
**Subject:** RE: REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380

Sorry for the confusion! The sources are all Th-228. The custome sealed source is that which is stated in the February 8th e-mail.

Thanks!

~tEd~

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**From:** Roldan, Lizette [Lizette.Roldan@nrc.gov]  
**Sent:** Monday, February 13, 2012 11:08 AM  
**To:** Lewis, Edward J  
**Subject:** RE: REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380

Hi Ted,

I noticed that in your initial response you request 6 microcuries of Th-232 and 2 microcuries of Th-228, however in your response dated February 6, 2012 (below) you only mention Th-228, one of them being the custom source you further clarify upon in email dated February 8, 2012 (below).

1. Please clarify if the sources you want are both Th-228 as stated n email dated February 6, 2012 OR if one of them should be Th-232.
2. If one of them is Th-232 please specify the manufacturer and model number for the Th-232 and confirm if the maximum possession limit is 6 microcuries as previously requested.
3. Please restate the Th-228 sealed source you wish to possess. If it is the custom source clarified in email dated February 8, please state so.

I am trying to minimize any errors and make sure I authorize on the license exactly what you ask for. **Please respond by close of business today, February 13, 2012.**

Thanks,

***Lizette Roldán-Otero, Ph.D.***

Health Physicist  
U.S. Nuclear Regulatory Commission  
1600 E. Lamar Blvd.  
Arlington, TX 76011-4511  
Office: 817-200-1596  
Fax: 817-200-1188

**From:** Lewis, Edward J [mailto:Edward.Lewis@usd.edu]  
**Sent:** Wednesday, February 08, 2012 1:12 PM  
**To:** Roldan, Lizette  
**Subject:** FW: REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT REQUEST CONTROL 576380