From: Bose, Satya R.
To: Ullrich, Elizabeth; Russell, Erica A.
Subject: RE: HU Requested Re-Submission of Information to Amend License 08-00386-19
Date: Friday, June 29, 2012 11:28:36 AM

Dear Ms. Ullrich:

Thank you so much for your prompt response. I am out of the country on vacation and this two weeks deadline cannot be met. Therefore, I will need additional time to provide you with the additional information.
Regards- Dr. Bose

Satya R. Bose, Ph.D., DABR
Director of Radiation Safety & Radiation Safety Officer
& Chief Medical Physicist, Radiation Oncology
Howard University Health Sciences
Washington DC 20059
Phone: (202) 806-7216
Fax: (202) 806-5432)

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From: Ullrich, Elizabeth [Elizabeth.Ullrich@nrc.gov]
Sent: Thursday, June 28, 2012 2:27 PM
To: Russell, Erica A.
Cc: Bose, Satya R.
Subject: RE: HU Requested Re-Submission of Information to Amend License 08-00386-19

Dr. Bose and Ms. Russell,

The following letter was placed in our mail-out process today, but I am sending the text electronically so you can decide how and/or when you can respond. This action is 62 days old today, and we are required to complete the action within 90 days, so I request that you either provide the required information within 2 weeks, or let me know that you need additional time. If you need additional time, we will void this action, and re-open a new action when you have the necessary information.

Thanks,
Betsy
Betsy Ullrich, MS, CHP
Senior Health Physicist, RI
US NRC
475 Allendale Road
King of Prussia, PA 19406
(610) 337-5040 (office)
(484) 919-8348 (NRC cell)
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Docket No. 030-11063License No. 08-00386-19
Control No. 577439

Wayne Frederick, Sr., M.D.
Deputy Vice-Provost for Health Sciences
Howard University
6th and Bryant Streets NW
Radiation Safety, Annex II - room 211
Washington, DC 20059

SUBJECT: HOWARD UNIVERSITY, REQUEST FOR ADDITIONAL INFORMATION CONCERNING APPLICATION FOR AMENDMENT TO LICENSE, CONTROL NO. 577439

Dear Dr. Frederick:

This is in reference to the letters dated April 26 and June 21, 2012 requesting to amend Nuclear Regulatory Commission License No. 08-00386-19 to release the waste facility at 510 College Street. In order to continue our review, we need the following additional information:

1. All three waste facility diagrams provided (the "Summary" page, the contamination survey page, and the radiation survey page) show the shorter dimension (from the door to the back wall) to be 24 feet 6 inches, and the longer dimension (from side wall to side wall) to be 19 feet. In addition, the three diagrams are different sizes and shapes, although all are rectangular and show the door in the middle of the front wall. Because the diagrams provided appear to be incorrect and are inconsistent, this information cannot be accepted as is. State if the dimensions shown on your diagram of the waste facility at 510 College Street are labeled correctly but the diagram is drawn incorrectly and not to scale; or if the dimensions shown on your diagram of the facility are labeled incorrectly and the diagram is not drawn to scale. Alternately, provide corrected diagrams.

2. The "dose rate and count rate survey" results are not adequate to meet the NRC requirement to demonstrate that the total residual contamination levels do not exceed NRC release criteria, and are not adequate to meet the NRC requirements for scanning surveys.

a. Static measurements should be performed as described in NUREG-1575, Revision 1, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) Chapter 6.4.1 "Direct Measurements". Appropriate instrument selection is also described in Chapter 6. Results must be reported in disintegrations per minute per 100 square-centimeters area (dpm/100cm2). Direct measurements for total residual contamination resulting from beta emitters must be performed close to the surface; however, you reported that measurements were made at 3 inches above ground level. Provide results of surveys for total residual contamination that were performed with appropriate equipment and procedures.

b. Scanning surveys should be performed as described in NUREG-1575, Revision 1, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) Chapter 6.4.2, "Scanning Surveys." Scanning surveys for beta emitters must be performed close to the surface; however, you reported that measurements were made at 3 inches above ground level. Based on the information provided in your letters, it is not clear if your scan surveys were performed at 3 inches above ground level, or 4 feet above ground level; in either case, the scan surveys were not close enough to the floor to detect beta emitters. Provide results of scan surveys that were performed with appropriate equipment and procedures.

The MARSSIM document can be found online through the NRC web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1575/.

3. For each Ludlum instrument used in your surveys, provide the manufacturer name and model number, serial number, type of instrument and detector, and the most recent calibration date for the instrument. Also provide information showing that the instrument and detector were sufficiently sensitive to detect the radiation levels necessary for the surveys, such as calculations of the minimum detectable activity or lower limit of detection. Although the manufacturer was listed for the Ludlum survey meters, the number listed could not be found in the Ludlum catalogue. In addition, although Item 5 of the June 21 letter stated that the minimum detectable activity was attached, that information could not be found in the attachments.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov<http://www.nrc.gov>; select Nuclear Materials; Med, Ind, & Academic Uses; then Licensee Toolkits, see our toolkit index page. 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 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 577439. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-5040.

If we do not receive a reply from you within 14 calendar days from the date of this letter, we will assume that you require more time to gather the information requested or do not wish to pursue your application, and we will void the action. This action is without prejudice to the resubmission of an application for release of the waste facility at a future date.

From: Russell, Erica A. [mailto:erica.russell@Howard.edu]
Sent: Thursday, June 21, 2012 2:14 PM
To: Ullrich, Elizabeth
Cc: Bose, Satya R.
Subject: HU Requested Re-Submission of Information to Amend License 08-00386-19

Good Afternoon Ms. Ullrich,

Attached you will find the requested re-submission of information to amend Howard University License 08-00386-19.

Regards,

Erica A. Russell, M.A.Ed.
Howard University Health Sciences
Radiation Safety Office
p: (202) 806 -7216
erica.russell@howard.edu<mailto:erica.russell@howard.edu>
“We are what we repeatedly do. Excellence, then, is not an act but a habit.” ~ Aristotle
Howard University Health Sciences CARES
Collaboration, Accountability, Respect, Excellence, Service

From: Ullrich, Elizabeth [mailto:Elizabeth.Ullrich@nrc.gov]
Sent: Monday, June 18, 2012 6:54 PM
To: Russell, Erica A.
Cc: Bose, Satya R.
Subject: RE: HU Additional Information to Amend License 08-00386-19

Dr. Bose and Ms. Russell,

I need further clarification on a few items stated in your letter dated June 12, 2012:

1. Your letter describes the waste storage area as 3.2 feet by 12 feet (appr 38 square feet) however, the diagram (figure 1) on the summary page shows a rectangle with a long side showing the dimension of 10 feet, 11 inches, and the short side showing a dimension of 24 feet, 10 inches. There appears to be a narrow hall way that is shown 4 feet 9 inches wide, leading to the left to an wider area shown as 3 feet 2 inches wide; to the right, it leads to an area shown as 6 feet wide. I don't know how to compare this to your description of an area “3.2 feet x 12 feet”. In addition, the diagrams shown for the close out surveys show an area which is nearly square, not a long narrow area as would be described by “3.2 feet x 12 feet.”

a. Please explain what the actual dimensions of the room are, and explain what the dimensions in Figure 1 refer to, if they are not the dimensions of the waste storage area.

b. please use diagrams that show the dimensions of the room more accurately, with the location of survey points.

2. The count rate survey appears to be the survey you want to sue to document the total residual contamination levels. (Please note that the total residual contamination is more difficult to measure with a count rate meter, and would have been easier to do with a survey instrument set in scaler mode.) All the results you provided were in CPM (counts per minute), however, your results should be in DPM and should be compared to the screening values for your most conservative radionuclide with a half-life greater than 120 days; in this case, your limiting radionuclide would be carbon-14, and the screening value is 3.7 E6 dpm per 100 square-centimeters area. Please provide your results in dpm/100 sq-cm for your fixed readings.

3. The survey results for removable contamination were reported in dpm per swipe. State the area that was swiped and report the results in dpm/100 sq-cm. If the swipe results need to be adjusted, re-submit the results. (Please note that the residual removable contamination levels must not exceed 10% of the total residual contamination screening value.)

4. Plotting the results of your surveys on the diagrams provided show elevated total residual CPM in the back right-side corner of the diagram; and removable counts above background in the same area, as well as in the area near the table and door. Especially if residual activities were closer to the screening values, such plots are useful in identifying areas that may require additional attention. No response to this item is required at this time, because the removable contamination levels were well below the screening value.

5. The minimum detectable activity was not specified for the count rate meter used for total fixed residual contamination measurements, or for the gamma counter and LSC used for removable contamination levels. Please provide that information.

Please respond to this request for additional information in writing, by hard copy letter signed by management, or by pdf or facsimile of a signed letter. If you have any questions, please contact me.

Thanks,
Betsy
Betsy Ullrich
Senior Health Physicist, RI/DNMS
USNRC
(610) 337-5040 (office)
elizabeth.ullrich@nrc.gov<mailto:elizabeth.ullrich@nrc.gov>

From: Russell, Erica A. [mailto:erica.russell@Howard.edu]
Sent: Tuesday, June 12, 2012 1:03 PM
To: Ullrich, Elizabeth
Cc: Bose, Satya R.
Subject: HU Additional Information to Amend License 08-00386-19

Good Afternoon Ms. Ullrich,

Attached you will find the requested additional information to amend Howard University License 08-00386-19.

Regards,

Erica A. Russell, M.A.Ed.
Howard University Health Sciences
Radiation Safety Office
p: (202) 806 -7216
erica.russell@howard.edu<mailto:erica.russell@howard.edu>
“We are what we repeatedly do. Excellence, then, is not an act but a habit.” ~ Aristotle
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