

**Hill, Carol**

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**From:** Hammond, Michelle  
**Sent:** Monday, December 01, 2014 8:50 AM  
**To:** Hill, Carol  
**Subject:** FW: Amendment request  
**Attachments:** LARS Amendment Request letter November 2014.pdf

Please setup this action and **assign it to me**. It is complicated and may need a TAR. (per Jack and Jackie)

Thanks.

**From:** Tracey Martinson [<mailto:tamartinson@alaska.edu>]  
**Sent:** Tuesday, November 25, 2014 4:17 PM  
**To:** Hammond, Michelle  
**Subject:** Amendment request

Dear Ms. Hammond,

Please find attached a letter requesting an amendment to our NRC license (#50-02430-07).

Sincerely,  
Tracey Martinson

On Mon, Nov 17, 2014 at 10:26 AM, Hammond, Michelle <[Michelle.Hammond@nrc.gov](mailto:Michelle.Hammond@nrc.gov)> wrote:

Hello Dr. Martinson,

Jackie forwarded me your questions below about removing a location. I will be working with on this amendment request with guidance from our management and Senior Health Physicists.

Please submit a formal amendment request (signed & dated on company letterhead) and include the specific considerations listed below in this e-mail. Feel free to scan it and e-mail it to me as a \*pdf attachment. Once I receive it, we can begin a formal technical review and I will be in contact with you regarding the special circumstances and the best path forward.

Thanks so much.

Best Regards,

**PUBLIC**

- Immediate Release
- Normal Release

**NON-PUBLIC**

- A.3 Sensitive-Security Related
- A.7 Sensitive Internal
- Other: \_\_\_\_\_

Reviewer: JAC Date: 1/7/15

Michelle M. Hammond, M.Sc.

Health Physicist

Region IV-Division of Nuclear Materials Safety, Branch B

office) 817-200-1127

fax) 817-200-1188



**From:** Tracey Martinson [<mailto:tamartinson@alaska.edu>]

**Sent:** Wednesday, November 12, 2014 6:27 PM

**To:** Cook, Jackie

**Subject:** Steps needed to remove a location from our license

Hi Jackie,

Use of radioisotopes at one of our facilities has stopped, and we would like to take steps to remove that location from our license. It is the Large Animal Research Station. At this site, some animals (muskoxen and caribou) were dosed with tritiated water and/or various C-14 tracer compounds, per our license. The animals were held in a confined area for up to 24 hours (or maybe more in some cases, depending on the experiment). They are believed to have excreted or exhaled much of what they were dosed with before being let back out into the other pastures, but they probably continued to release small amounts of  $^{14}\text{C}$  and  $^3\text{H}$  to the ground once they were sent out to other areas. It's unlikely that this contaminated any groundwater or caused any other hot spots, but trace amounts would have soaked into the top surface layer and been taken up by plants or metabolized by bacteria and fungi.

The last researcher to have done any of this work is now using deuterium instead and has told me that he has no plans to use tritium or  $^{14}\text{C}$  in the future. The UAF administration is now looking at the possibility of moving some reindeer there, and possibly of selling the reindeer for meat. The reindeer are part of an agricultural research station that we operate, and are used for studies in reindeer husbandry (no isotopes). Once the work is done on the reindeer, they would like to be able to sell them to members of the public for consumption.

So, I am wondering what steps we need to take to have the property decommissioned and released for unrestricted use. I was thinking that one way of showing that grazing on the property will not result in there being radioactivity in the meat would be to analyze various tissue samples from euthanized animals that had been living there. The caribou and muskoxen at LARS are typically born there and live their entire lives there. This seems to be an efficient way to address the issue of whether or not meat from animals grazing at LARS would be contaminated more than sampling the vegetation would.

One question that I had was whether or not we would be required to submit a Decommissioning Plan in order to release the property for unrestricted use? The property will remain in our possession and be used for animal research (no isotopes), but the administration is wondering about being able to consume meat from animals that are raised there.

Sincerely,  
Tracey

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Tracey Martinson, Ph.D., C-OHC  
Industrial Hygienist/Radiation Safety Officer  
Environmental Health, Safety, & Risk Management  
University of Alaska Fairbanks  
1855 Marika Road  
(907) 474-6771

585635



[www.uaf.edu/safety](http://www.uaf.edu/safety)

**ENVIRONMENTAL, HEALTH, SAFETY  
and RISK MANAGEMENT**

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PO Box 758145  
Fairbanks, Alaska 99775-8145  
(907) 474-5413  
(907) 474-5489 fax

Michelle Hammond, Health Physicist  
Region IV—Division of Nuclear Materials Safety, Branch B  
1600 E. Lamar Blvd.  
Arlington, TX 76011-4511

November 25, 2014

Dear Ms. Hammond,

Use of radioisotopes at our Large Animal Research Station (LARS) has ceased, and we would like to amend our license and remove that facility as a use location. Specific details regarding the use of isotopes at the facility can be found in Appendix A of our license application.

Since 1984, some animals (muskoxen and caribou) at LARS have been dosed with tritiated water, various  $^{14}\text{C}$  tracer compounds, and/or other short-lived isotope tracers ( $^{103}\text{Ru}$ ,  $^{141}\text{Ce}$ ,  $^{51}\text{Cr}$ ), per our license (50-02430-07). The animals were held in a confined area for a number of hours immediately following dosing in order to facilitate collection of body fluids or respiratory gases, depending on the experiment. They are believed to have excreted or exhaled much of what they were dosed with before being let out into the other pastures, but they probably continued to release small amounts of  $^{14}\text{C}$  and  $^3\text{H}$  to the ground once they were let out to graze in other areas. It is unlikely that this contaminated any groundwater or caused any other hot spots, but trace amounts would have soaked into the top surface layer and been taken up by plants or metabolized by bacteria and fungi. The last researcher to have done any of this work is now using deuterium instead and has confirmed that he has no plans to use tritium or  $^{14}\text{C}$  in the future.

The University of Alaska Fairbanks administration is now considering the possibility of transferring some reindeer from our agricultural research station (a completely separate facility) to LARS. The reindeer are used for reindeer husbandry studies, and these studies do not involve the use of radioisotopes. Once work is completed for a particular animal, the administration is interested in the possibility of selling the meat to members of the public for human consumption. Currently, the animals raised at LARS are not permitted for human consumption.

LARS will remain in our possession and continue to be used to raise muskoxen and caribou for research purposes. Release of the site for unrestricted use would allow us to conduct reindeer research there and to sell the meat to the public for human consumption. None of the previously dosed animals (muskoxen and caribou) will be sold as food.

Sincerely,

A handwritten signature in black ink that reads 'Tracey A. Martinson'. The signature is written in a cursive style and is positioned above the printed name.

Tracey A. Martinson  
Radiation Safety Officer



DATE  
01/06/2015

NAME AND ADDRESS OF APPLICANT AND/OR LICENSEE  Tracey A. Martinson, Ph.D., Radiation Safety Officer University of Alaska Fairbanks P.O. Box 758145 Fairbanks, AK 99775-8145	LICENSE NUMBER 50-02430-07
	MAIL CONTROL NUMBER 585635
	LICENSING AND/OR TECHNICAL REVIEWER CH

This is to acknowledge the receipt of your:

LETTER and/or  APPLICATION      DATED: 11/25/2014

The initial processing, which included an administrative review, has been performed.

AMENDMENT    TERMINATION    NEW LICENSE    RENEWAL

- There were no administrative omissions identified during our initial review.
- This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.
- Your application for a new NRC license did not include your taxpayer identification number. Please fill out NRC Form 531, located at the following link:

<http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>

Send the completed NRC Form 531, by facsimile, to the following number: (301) 415-5387

A copy of your action has been emailed to our License Fee and Accounts Receivable Branch, in our Headquarters office in Rockville, MD. You will be contacted separately if there is a fee issue involved.

Your application has been assigned the above listed **MAIL CONTROL NUMBER**. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

Region IV  
U. S. Nuclear Regulatory Commission  
DNMS/NMSB - B  
1600 E. Lamar Boulevard  
Arlington, TX 76011-4511  
(817) 200-1103 or (817) 200-1140

✓ 1/6

BETWEEN:

Accounts Receivable/Payable  
and  
Regional Licensing Branches

[ FOR ARPB USE ]  
INFORMATION FROM WBL

Program Code: 01110  
Status Code: Pending Amendment  
Fee Category: 3L 3P 4A  
Exp. Date:  
Fee Comments:  
Decom Fin Assur Req: Y

## License Fee Worksheet - License Fee Transmittal

### A. REGION

#### 1. APPLICATION ATTACHED

Applicant/Licensee: ALASKA, UNIV OF FAIRBANKS  
Received Date: 12/01/2014  
Docket Number: 3001179  
Mail Control Number: 585635  
License Number: 50-02430-07  
Action Type: Amendment

#### 2. FEE ATTACHED

Amount: \_\_\_\_\_

Check No.: \_\_\_\_\_

#### 3. COMMENTS

Signed: \_\_\_\_\_

*Carl L Heie*

Date: \_\_\_\_\_

*1/6/15*

### B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / / )

1. Fee Category and Amount: \_\_\_\_\_

#### 2. Correct Fee Paid. Application may be processed for:

Amendment: \_\_\_\_\_

Renewal: \_\_\_\_\_

License: \_\_\_\_\_

3. OTHER \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_