

License: 53-00515-01
Docket: 000-06839
Control: 601657



Hawaii Agriculture Research Center

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27 February 2018

Ms. Jacqueline "Jackie" D. Cook
Senior Health Physicist
US Nuclear Regulatory Commission Region IV
Division of Nuclear Materials Safety
Materials Licensing and Inspection Branch
1600 East Lamar Blvd., Arlington, TX 76011

Re Docket: 30-06839 and Control: 601657

Dear Ms. Cook:

To provide clarification to your letter dated 26 January 2018, I have reproduced your comments/questions below and added my responses in blue:

1. In looking at the program scope from the last inspection dated September 23, 2016 (NRC Form 591M Part 3), it appears that only small amounts of carbon-14 and tritium and in reviewing you[r] renewal letter dated June 30, 2015 inventory list, this material and exempt quantities of nickel-63 are in storage and in sealed steel drums ready for disposal.

Please note that your current license authorizes phosphorus-32, phosphorus-33, sulfur-35, and chromium-51 on your license in Items 6.A., 6.B., 6.E., and 6.F., resp.

Please clarify this discrepancy.

Our current license (Amendment No. 73) allows for 50, 30, 29, and 10 millicuries of phosphorus-32, phosphorus-33, sulfur-35, and chromium-51, resp. Well over 10 half lives have elapsed since our last purchase of such material. Thus, HARC no longer possesses regulatable quantities of these materials.

2. Please submit a detailed description of all efforts made to dispose of the licensed material, including telephone calls, letters, facsimiles, personal contacts, etc.
See supporting documents: 1) 20Jul-25Sep'17Emails.doc (17JulNotes.jpg, 17Jul20OutsideBarrels.jpg, 17Jul20Barrels.jpg, 17Sep1NRCnoteLicExp.pdf), 2) 18May'14-20Jul'17Emails.doc

Note, usually files are named by the last 2 digits of the year, month, day, descriptor; however, sometimes they are named as day, month, last 2 digits of the year, descriptor.

NON-PUBLIC

- ☐ A.3 Sensitive-Security Related
☐ A.7 Sensitive Internal
☐ Other: _____

Reviewer: gmc Date: 2/28/18

601657

Personnel: 1) Dr. Mel Jackson (HARC RSO until 30 June 2017 when he left HARC); 2) Dr. Blake Vance (HARC Asst. Director); 3) Mr. Ron Frick (Gamma Corp., former HARC RSO, approved as HARC RSO per Amendment No. 73); 4) Dr. Heather McCafferty (HARC authorized user who had assisted with packing the material to be disposed, no longer a HARC employee); 5) Dr. Ming-Li Wang (HARC authorized user who had assisted with packing the material to be disposed); 6) Rich Gallego (Thomas Gray and Associates, Inc.); 7) Jason C. Dykert (Health Physicist, Inspection Branch, US NRC, Region IV).

3. Please note that in Item 3 of your renewal application dated October 31, 2017, you listed the location of storage authorized in Condition 10.A. of your license; however, currently your license authorizes another storage location in Condition 10.B. of your license.

In addition, please note that in the program scope from your routine inspection on July 18, 2013 (NRC Form 591M Part 3), the storage location in Condition 10.B. of your license is described as where you have 6 drums of radioactive waste and a trash compactor that is contaminated which you have packaged for disposal.

Please clarify this discrepancy.

In 2006, HARC purchased a 108-acre parcel in Kunia which it had leased for the previous half century. The general address of HARC's R&D agriculture parcel in Kunia is described in Condition 10.A. Upon taking ownership, it began to relocate its operation from Aiea to Kunia in a 2-step process. The first step involved setting up its Chemistry lab (including chromatograph with sealed source Ni-63 electron capture detector (ECD)) in a pre-existing building, the Multi-Purpose Building (MPB, aka Bldg. B). Construction was initiated on a biotech lab where the certificate of occupancy was issued upon completion in 2009. Therein, 6 drums of radioactive waste and a trash compactor are now stored in a locked inner room of the lab (Bldg. A). It appears the discrepancy stems from not having removed Item 10.B in amendment #71.

From: Ronald Frick <rfrick@gammacorp.com>
Date sent: Tue, 30 Jan 2018 10:30:07 -1000
Subject: Locations of use
To: "bvance@harc-hspa.com" <BVance@harc-hspa.com>

Hi Blake,

I was looking back at the old applications to figure out what the two different locations of use were listed in item 10.

Item 10.B (described as building 250 yards down road on left) had been added first when you had transferred the Ni-63 out to Kunia. This was added in Amendment #67.

Item 10.A is the lab where the drums are currently stored, and that was added in Amendment #68.

In amendment #69, we had requested addition of the storage trailer, but amendment #69 doesn't actually list any unique locations in addition to the ones listed in #68.

In Amendment #71, you requested removal of Ni-63 from the license, and removal of the "Chemistry instrumentation room in Building B at Kunia Substation". I am assuming this is the same building as is listed in Item 10.B of the license? I think Item 10.B should have been removed in amendment #71, but maybe there was confusion if Building B is the same location referred to in Item 10 B of the license.

Ron

From: Ronald Frick <rfrick@gammacorp.com>
Date sent: Fri, 2 Feb 2018 10:20:21 -1000
Subject: Re: (Fwd) Zip Code for Condition 10.B. on your license Hawaii
Agriculture Research Center (License # 53-00515-01)
To: "bvance@harc-hspa.com" <BVance@harc-hspa.com>

Blake,

Form 591M is the form they use for inspection results. Part 1 is given to the licensee, and part 3 has notes that are made by the inspector which would have details on the scope of the program, storage locations, people they spoke to during the inspection, etc. They don't release that information to the public. In her questions, Jackie refers to the inspection in July 2013, which would have been just after Amendment #71 was issued to remove Ni-63 from the license. Unfortunately that amendment didn't remove location 10B wfrom the license, but I assume all the ECD's were gone by July 2013. I can only assume that the inspector copied the locations that were listed on your license into her notes, even though that location wasn't being used anymore. I would let Jackie know what Amendment #71 removed authorization for Ni-63, and that location 10B should have been removed at that time. In the cover letter for amendment 71, it states that the amendment "authorizes the release for unrestricted use of the Chemistry instrumentation room in Building B at the HARK Kunia Substation in accordance with 10 CFR 20.1402, "Radiological criteria for unrestricted use" but that item wasn't removed from the license. Amendment 71 and the cover letter at attached.

Ron

4. Please describe an acceptable accountability program for assuring that the licensed material remains in secure storage and is not used (inventory at least annually). The program provides reasonable assurance that the licensee will maintain security.

Accountability Program: In an effort to comply with the above suggestion, HARC requests that the following Accountability Program be approved – the licensed material will continue to be stored in its current location, a locked room, which is not used for any other purpose. To reduce exposure and undue handling, the contents of the 6 drums will not be inventoried annually; rather, each drum will be labeled by a unique number, certification date, and signature of the certifying authorized user of HARC or HARC's RSO. A seal will be applied such that the contents of the drum cannot be accessed without detection. Only if the seal has been compromised, will the contents of the drum be inventoried. Various seals are under evaluation.

5. Please describe all planned changes to limit/decrease the licensee's radiation safety program as a result of placing the licensed material in storage. These changes may include, but are not limited to, the following:
 - A. Dosimetry services – Not applicable
 - B. Worker training programs – the Accountability Program will be explained to those concerned.
 - C. Instrument calibration service - Not applicable
 - D. Inventories – if the tamper-proof seal of any drum indicates it has been compromised, the contents of that drum will be inventoried to ascertain its contents for comparison with the last inventory of that drum.
 - E. Internal audits – Annual check of drums to determine if an inventory is required.

- F. Maintenance and visual inspection of equipment and facilities – to be conducted annually
 - G. Maintenance of records – records will be maintained per the requirements of NRC.
6. If applicable, describe a commitment to leak test sealed sources and devices containing sealed sources at least once every 10 years and within 6 months before use or transfer to an authorized recipient.
This is no longer applicable since we disposed of/transferred the sealed Ni-63 electron-capture detector (ECD).
7. Please commit: “The licensee will continue to take all actions within its ability to dispose of its material and notify NRC within 30 days if disposal is achieved.”
HARC (the Licensee) makes the following commitment: “The licensee will continue to take all actions within its ability to dispose of its material and notify NRC within 30 days if disposal is achieved.”



Blake Vance, Ph.D.
Assistant Director

c: R. Frick (RSO), Gamma Corp.
S. A. Whalen (Exec. Director), HARC

Attachments