



CONVERSATION RECORD

05/31/2018

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Kelly J. Deering		DATE OF CONTACT 05/31/2018	TYPE OF CONVERSATION <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
E-MAIL ADDRESS k.j.deering@hscpoly.com		TELEPHONE NUMBER (989) 301-5810	
ORGANIZATION Hemlock Semiconductor Operations, LLC	DOCKET NUMBER(S) 030-37611		
LICENSE NUMBER(S) 21-32682-01	CONTROL NUMBER(S) 602468		

SUBJECT
License Renewal Request - Additional Information Required.

SUMMARY
You recently submitted additional information to support your request to renew your NRC license. After reviewing your response it appears that there are additional items that must be corrected or addressed. Please see Page 2 of this document for further details.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

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ACTION REQUIRED (IF ANY)
Please submit your response by June 22, 2018 and reference it to my attention as "additional information to control number 602468" to facilitate proper handling in our office. Your response must be signed and dated. As your response will likely contain security related information we request that you submit your response to us via Fax to 630-515-1078.

If you have any questions or require clarification regarding any information discussed please do not hesitate to contact me at 630-829-9712.

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NAME OF PERSON DOCUMENTING CONVERSATION
Laura B. Cender

SIGNATURE
Laura B. Cender 5/31/2018

CONVERSATION RECORD (continued)

SUMMARY: (Continued from page 1)

1. Due to changes to our licensing process Items 6-9 on your license will now appear differently going forward. Specifically, instead of allowing a blanket amount of material to be split between multiple types of devices, each device manufacturer and model will now have their own limit. For each device model listed on your license in Items 9.A. and 9.B. (or listed in Item 6.a. of your application) please provide the following information:

- a. Isotope Requested
- b. Device Manufacturer
- c. Device Model
- d. Number of devices requested.
- e. Maximum activity for any single source.
- f. Total activity requested for devices of this manufacturer and model.

Please note that you can include material that you do not currently possess, but plan to acquire at a later date.

2. Please provide a statement confirming that the RSO, designee, or vendor may collect leak test samples using a leak test kit, but analysis of the sample will be performed by a vendor that is specifically licensed by the NRC or an Agreement State to provide commercial leak testing services.
3. In your supplemental attachment to application Item 10.8 you describe a storage location where gauges will be kept when not in service. Please provide a facility diagram indicating the location of this storage location in relationship to your overall facility. This could be in the form of a sketch of the facility with the storage area listed, an architectural drawing of the facility with the storage location indicated, or a Google maps image of the facility with the storage area location indicated.
4. Please provide a statement confirming that manufacturer and distributor guidance will be followed for the following non-routine maintenance activities: gauge installation, relocation, alignment, removal from service, and return to service including initial device testing.
5. Please provide the frequency at which dosimetry is exchanged, i.e. quarterly, biannually, etc.
6. Jason Ostyn is currently specifically listed in License Condition 17.A. to perform non-routine maintenance activities. Please confirm if Mr. Ostyn should continue to be specifically listed in this condition.
7. Per our discussion today my understanding is that you are not planning to aggregate Category 2 or greater quantities of material at this time or under normal operating circumstances. As part of our conversation today we discussed the requirements of 10 CFR 37.41 (a)(3) that requires licensees provide written notification to the NRC regional office 90 days in advance of the first time they will aggregate quantities of material that equals or exceeds the Category 2 threshold.

APPENDIX J

**INFORMATION NEEDED TO SUPPORT APPLICANT'S REQUEST TO
PERFORM NONROUTINE OPERATIONS**

INFORMATION NEEDED TO SUPPORT APPLICANT'S REQUEST TO PERFORM NONROUTINE OPERATIONS

Applicants should review Section 8.10.8, "Maintenance," which discusses, in general, licensee responsibilities before any maintenance or repair is performed.

Nonroutine operations, which require specific authorization by the U.S. Nuclear Regulatory Commission (NRC) or an Agreement State, include gauge installation; initial radiation survey; repair and maintenance of radiological safety components; gauge relocation; replacement and disposal of sealed sources; gauge alignment; or removal of a gauge from service. See Figure 8-7 in Section 8.10.8.

Any replacement components, parts, or other materials (e.g., lubricants) other than those supplied, specified, or recommended by the manufacturer or distributor need to be evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device's Sealed Source and Device (SSD) registration certificate. Licensees also need to ensure that, after maintenance or repair is completed, the gauge is tested and functions as designed before the unit is returned to routine use.

If nonroutine operations are not performed properly with attention to good radiation safety principles, the gauge may not operate as designed, and personnel performing these tasks could receive radiation doses that exceed the NRC's regulatory limits. Radionuclides and activities in fixed gauges vary widely. For illustrative purposes, in less than 1 minute, an unshielded cesium-137 source with an activity of 3.7 gigabecquerels [100 millicuries] can deliver 0.05 Sv [5 rem] to a worker's hands or fingers (i.e., extremities), assuming the extremities are 1 centimeter from the source. This dose corresponds to the threshold for extremity monitoring. Some gauges may contain sources of even higher activities with correspondingly higher dose rates.

Thus, applicants wishing to perform nonroutine operations must use personnel with specialized training for the activities intended to be performed and follow appropriate procedures consistent with the manufacturer's or distributor's instructions and recommendations that address radiation safety concerns [e.g., use of radiation survey meter, shielded container for the source, and personnel dosimetry (if required)].

Accordingly, applicants wishing to perform nonroutine operations must provide the following information with their license application:

- Describe the types of work, maintenance, cleaning, and/or repair that involve any of the following:
 - installation, relocation, or alignment of the gauge
 - components, including electronics, related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding)
 - replacement and disposal of sealed sources
 - removal of a gauge from service

- a potential for any portion of the body to come into contact with the primary radiation beam
- any other activity during which personnel could receive radiation doses exceeding NRC limits
- Identify who will perform nonroutine operations, and describe their training and experience. Acceptable training includes manufacturers' or distributors' courses for nonroutine operations or an equivalent.
- **Submit procedures for nonroutine operations. These procedures should ensure the following:**
 - doses to personnel and members of the public are within regulatory limits and are kept as low as is reasonably achievable (ALARA) (e.g., use of shielded containers or shielding)
 - the source is secured against unauthorized removal or access or is under constant surveillance
 - appropriate labels and signs are used (Lock-out procedures are adequate to ensure that no individual or portion of an individual's body can enter the radiation beam.)
 - manufacturer's or distributor's instructions and recommendations are followed
 - replacement components, parts, or other materials (e.g., lubricants) other than those supplied, specified, or recommended by the manufacturer or distributor are evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the SSD registration certificate
 - the gauge, before being returned to routine use, is tested to verify that it functions as designed and source integrity is not compromised
- Confirm that individuals performing nonroutine operations on gauges will wear both whole body and extremity monitoring devices or perform a prospective evaluation demonstrating that unmonitored individuals performing nonroutine operations are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a).
- Confirm possession of at least one survey instrument that is appropriate for measuring the types of radiation and expected dose rates from the fixed gauge(s).
- Describe steps to be taken to ensure that radiation levels in areas where nonroutine operations will take place do not exceed limits set in 10 CFR 20.1301(e.g., surveys, calculations).

Cender, Laura

From: Cender, Laura
Sent: Thursday, May 31, 2018 9:34 AM
To: 'k.j.deering@hscpoly.com'
Subject: Renewal of NRC License No. 21-32682-01 - Request for Additional Information and Record of Conversation
Attachments: 5.31.18 Conversation Record and Attachements.pdf

Hello Kelly,

Thank you for taking time out of your day to discuss your license renewal request. Attached is a record of our conversation today.

Please feel free to contact me at 630-829-9712 or via email if you have any questions. As we discussed, please submit your response via fax to our regional office at 630-515-1078.

Thank you,
Laura Cender

Laura Cender
U.S. Nuclear Regulatory Commission
Materials Licensing Branch
E-mail: Laura.Cender@nrc.gov
Phone: (630) 829-9712