



CONVERSATION RECORD

NAME OF PERSON(S)/TITLE CONTACTED OR IN CONTACT WITH YOU <b>Kelly Wegener, James R. Weldy &amp; Jerrod Cassidy</b> RSO, -08 lic.    RSO, -06 lic.    HP staff		DATE OF CONTACT 09/05/2018	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 kelly.wegener@dow.com; jrweldy@dow.com		TELEPHONE NUMBER 989-636-1440		
ORGANIZATION <b>Dow Corning Corporation; The Dow Chemical Co.</b> (-08 & -12 licenses)    (-06 license)		DOCKET NUMBER(S) (Weldy) & 989-496-1386 (Wegener) 030-04858 & 030-10509; 030-04783		
LICENSE NAME AND NUMBER(S) 21-08362-08 & 21-08362-12; 21-00265-06		MAIL CONTROL NUMBER(S) <b>609202 &amp; 609203; 609200</b>		

**SUBJECT**  
Additional Information Request concerning the licensee's request to terminate the above-referenced -08 and -12 U.S. NRC radioactive materials licenses and to amend the -06 license, including to incorporate activities and locations authorized under the -08 and -12 licenses and to list Ms. Wegener as RSO

**SUMMARY AND ACTION REQUIRED (IF ANY)**

This record concerns the licensee's June 18, 2018 letter (NRC Accession No. ML18178A382) requesting changes to the above referenced licenses including to: (I) terminate NRC License No. 21-08362-12 (the "-12" license); (II) revise the materials and possession limits on the NRC License No. 21-00265-06 (the "-06" license), to incorporate sealed sources authorized on the "-12" license; (III) add the Saginaw Rd., Midland, Michigan location of use from the "-12" license to the "-06" license; (IV) to revise the Radiation Safety Officer (RSO) listed on the "-06" license to Kelly Wegener; (V) to revise the Radiation Safety Committee (RSC) Chairperson listed on the "-06" license to Karen Mann; (VI) to revise the materials, possession limits, and authorized uses on the "-06" license to incorporate authorized materials and uses on the "-08" license; (VII) to terminate the "-08" license; and (VIII) to add the 2200 W Salzburg Rd., Auburn, Michigan location of use from the "-08" license to the "-06" license.

Upon review, we have noted that this request is lacking specific details needed to complete the review. As discussed, please see attached for information needed to complete our review of your request.

Please provide the requested information within 14 days of this message (on or before September 21, 2018). Include a signed and dated cover letter transmitting your response. Submission of your response as a pdf file attached to an email or via facsimile to 630-515-1078 will allow for the quickest processing. Please call or email me with any questions you may have, or if you are unable to respond by the date suggested above. Thank you for your prompt attention to this matter.

**NAME OF PERSON DOCUMENTING CONVERSATION**  
Sara A. Forster, M.S., Health Physicist, Materials Licensing Branch, DNMS, RIH office, sara.forster@nrc.gov

<b>SIGNATURE</b> <i>Sara A. Forster</i>	<b>DATE OF SIGNATURE</b> 09/07/2018
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CONVERSATION RECORD (continued)

LICENSE NAME AND NUMBER(S)	MAIL CONTROL NUMBER(S)
21-08362-08 & 21-08362-12; 21-00265-06	609202 & 609203; 609200

SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)  
**ADDITIONAL INFORMATION NEEDED FOR CONTINUED REVIEW**

**I. For Termination of NRC Lic. No. 21-08362-12:**

- (1) In accordance with Title 10 of the *Code of Federal Regulations* Section 30.36(j), please provide a signed, dated and completed NRC Form 314, or equivalent. For your convenience, a copy of this form is attached. As discussed, please attach a copy of your current inventory and provide a history of use for sources used under any authorized materials not included in that inventory (e.g. americium-241 Thermo Fisher Scientific x-ray fluorescence analyzers identified in Subitem Nos. 6.L. through 9.L. to NRC Lic. No. 21-08362-12 ("the -12" license) Amendment No. 29, including any disposition.
- (2) Please provide a history of leaking sources - if any - for materials used or stored under the license. Attach copies of the most recent leak test results for sources identified in the inventory to be transferred, above.
- (3) Please confirm that all sources listed in the above-referenced inventory have been or will be transferred to NRC Lic.No. 21-00265-06 (the "-06 license"), or otherwise provide final disposition (i.e. waste disposal records, other transferees, etc.) for sources listed in that inventory.

**II. For amendment of materials listed on NRC Lic. No. 21-00265-06 to include authorizations for inventory and uses from NRC Lic. No. 21-08362-12:**

- (1) Please confirm that no changes are needed to the "-06 license," Subitem Nos. 6.E., 7.E., 9.E., 6.J., 7.J., and 9.J. to authorize sealed sources and devices to be transferred from the "-12 license."
- (2) Please provide updated possession limits for the amended "-06 license," Subitem Nos. 8.E. and 8.J.

**III. For addition of the Saginaw Rd. location of use from NRC License No. 21-08362-12 to NRC Lic. Lic. No. 21-00265-06:**

Please provide a facility diagram (i.e. layout and sample use or storage area) to show where materials will be used or stored under the "-06" license. The diagram should show any locked doors, cabinets, shielding, or other safety features, as applicable.

**IV. For listing Kelly Wegener-Gave as Radiation Safety Officer (RSO) on NRC Lic. No. 21-00265-06:**

- (1) Please indicate the name (Wegener or Wegener-Gave) you wish to list on NRC Lic. No. 21-00265-06 (the "-06" license).
- (2) Please attach a copy of Ms. Wegener's Training certificate from the Fixed Gauge RSO course showing her non-routine maintenance and RSO training as shown in attached NUREG 1556, Vol. 4 pages.
- (3) Please attach a copy of Ms. Wegener's Training certificate from a portable gauge course showing training as shown in attached NUREG 1556, Vol. 1 pages.

**CONVERSATION RECORD (continued)**

LICENSE NAME AND NUMBER(S)	MAIL CONTROL NUMBER(S)
21-08362-08 & 21-08362-12; 21-00265-06	609202 & 609203; 609200

**SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)**

(4) Please provide a copy of a memorandum of understanding/delegation of authority (MOU/DOA), sample attached, dually signed & dated by Ms. Wegener and a duly authorized management representative, designating Ms. Wegener as RSO, outlining her duties & authority, and demonstrating Ms. Wegener's acceptance of those duties.

(5) Please update applicable procedures included in your April 26, 2017 application and or October 6, 2017 letter, indicated in Subitems 26.A. and 26.B. of the "-06" license. In the alternative, you may submit a request for the flexibility to modify procedures in accordance with NUREG 1556, Vol. 11, rev. 1 guidance. (See attached sheets for information needed to support such a request.)

**V. For listing Karen Mann as the Radiation Safety Committee (RSC) Chairperson on NRC Lic. No. 21-00265-06:**

Please provide a copy of a memorandum of understanding/delegation of authority (MOU/DOA), dually signed & dated by Ms. Mann and a duly authorized management representative, designating Ms. Mann as RSC Chairperson, outlining her duties & authority, and demonstrating Ms. Mann's acceptance of those duties.

**VI. For amendment of materials listed on NRC Lic. No. 21-00265-06 to include authorizations for inventory and uses from NRC Lic. No. 21-08362-08:**

- (1) Please confirm that no changes are needed to the "-06" license, Item Nos. 6. through 9.
- (2) In the alternative, please indicate any additional authorized uses or activities that should be added.

**VII. For Termination of NRC Lic. No. 21-08362-08:**

(1) In accordance with 10 CFR 30.36(j), please provide a signed, dated and completed NRC Form 314, or equivalent. For your convenience, a copy of this form is attached. As discussed, please provide a complete history of use at the Salzburg Road location of use, including maximum possession by isotope and form, last use date, final disposition date, and confirmation that all materials used or stored under this license have been disposed.

(2) If all primary activities have stopped, please provide final status surveys for all areas where radioactive materials were used or stored under the license including wipe test and area survey results, instrument calibration documentation, and names of individuals performing the final surveys.

NOTE: The "-08" license excludes certain authorizations for decommissioning activities. If such decommissioning activities are not currently authorized, you may be unable to provide requested final surveys, absent amendment to the "-08" license.

(3) In the alternative to providing final status surveys, you may request to have the license placed in "Standby," incident to decommissioning and final disposal of all licensed material. Please also provide a designated responsible individual and any other changes to your license you may be requesting (i.e. suspension of license requirement for RSC oversight, etc.), in this case.

**CONVERSATION RECORD (continued)**

LICENSE NAME AND NUMBER(S)

MAIL CONTROL NUMBER(S)

21-08362-08 & 21-08362-12; 21-00265-06

609202 & 609203; 609200

SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

**VIII. For addition of the Salzburg Rd. location of use from NRC License No. 21-08362-08 to NRC Lic. Lic. No. 21-00265-06:**

- (1) Please provide a facility diagram (i.e. layout and sample use or storage area) to show where materials will be used or stored under the "-06" license. The diagram should show any locked doors, cabinets, shielding, or other safety features, as applicable. It should also show any special handling areas, waste holding areas, animal use areas, and a sample facility diagram. The diagram should be drawn to scale and indicate where sewerage, air vent, refrigerators, cabinets, and work areas are located.
- (2) Please update and submit any financial assurance associated with the "-06" license to assure that the additional facilities are covered.
- (3) In the alternative, or in the case that the Salzburg Rd. location of use is no longer being used for principal licensed activities, you may withdraw your request to add this location of use to the license.

## 8.7.2 Radiation Safety Committee

Regulations: 10 CFR 33.13(c)(1), 33.13(c)(3)(iii)

**Criteria:** Type A broad scope licensees must establish an RSC that works with executive management and the RSO in implementing the radiation safety program. Type B and Type C broad scope licensees are not required to establish an RSC.

### Discussion:

...

The licensee should select a chairperson for the committee. There are several factors to consider when making this selection. An individual with a knowledge of radiation safety issues, good leadership abilities, the authority and credibility by virtue of his or her position within the facility, and a desire to serve as chairperson will facilitate the effectiveness of the RSC. Additionally, the individual chosen as the chairperson must have the time to devote to the position in addition to other responsibilities he or she might have within the facility. Executive management should delegate a level of authority to the position so that the chairperson is effective.

...

For Type A broad scope licensees or applicants for a Type A broad scope license that desire the flexibility to make certain program changes and changes to certain procedures as discussed in Section 1 of this document, the RSC, along with executive management and the RSO, will review and approve program and procedural changes in accordance with criteria developed and approved by the RSC. The criteria for reviewing and approving such changes should include provisions for training staff before implementing new procedures and ensure that the proposed changes will not degrade the effectiveness of the currently approved program. Additionally, the audit program should include an evaluation process that will ensure that changes have been properly implemented by the staff and will determine the effectiveness of changes made in achieving program goals.

**Response from Applicant:** Applicants for a Type A broad scope license should submit the following:

- description of the duties and responsibilities of the RSC
- criteria used for selecting members of the RSC, including what members and the number of members constituting a quorum. Members should be indicated by position title, rather than by name
- criteria and procedure describing the approval process used by the RSC and RSO for authorizing new users and new uses

Please assure that any procedures are updated to reflect changes to the RSO and facilities. In the alternative you may request flexibility to update your program without amendment.

In addition, applicants for a Type A broad scope license that request the flexibility to make some program changes and revise some procedures previously approved by the NRC without amendment of the license should submit the following:

- a description of the duties and responsibilities of the RSC, including:
  - review and approval of permitted program and procedural changes prior to implementation
  - implementation of program and procedural changes
  - audit of licensed operations to determine compliance
  - appropriate actions taken when noncompliance is identified, including analysis of the cause, corrective actions, and actions to prevent recurrence
- a description of the process for procedure and program review and approval, including documentation of the specific change (At a minimum, documentation should state the reason for the change and summarize the radiation safety matters that were considered prior to approval of the change.)

### 8.7.3 Radiation Safety Officer

**Regulations:** 10 CFR 30.33(a)(3), 10 CFR 33.13(c)(2), 10 CFR 33.14(b)(1)

**Criteria:** 10 CFR Part 33, "Specific Domestic Licenses of Broad Scope for Byproduct Material," requires that Type A and Type B broad scope licensees must have a radiological safety officer, more commonly known as an RSO, who is qualified by training and experience in radiation protection and who is available for advice and assistance on radiological safety matters. The RSO's training and experience should be applicable to and generally consistent with the types and quantities of licensed material listed on the license for which the individual's authorization as an RSO is requested. ...

**Discussion:** Each Type A and Type B program that uses byproduct materials must appoint an RSO who is responsible for radiation safety and compliance with the regulations for the use of byproduct material. ... In a Type A broad scope license, the RSO is a member of the RSC and works closely with the RSC and executive management to implement the radiation safety program. ...

#### Duties and Responsibilities

For all broad scope licenses, the RSO must ensure that the licensee's radioactive material is used and stored safely and securely according to approved policies and procedures, and that all regulatory requirements are met. The RSO must have full access to all activities that involve the use of byproduct material and the authority to terminate any activity in which health and safety appear to be compromised without consulting with executive management or the RSC. The applicant should submit a "Radiation Safety Officer Delegation of Authority" signed by executive management. Appendix D of this NUREG contains a model "delegation of authority" that the NRC considers acceptable.

- In a Type A broad scope licensed program, the RSO typically performs a preliminary review of proposed new uses and users, prior to formally discussing the proposal with the RSC. The RSC grants the formal approval of new users and uses in a Type A broad scope license.

...

The RSO performs audits of all areas of use and individuals who are authorized to use byproduct material to ensure work is done in accordance with the license, regulations, and user permit conditions. Specific duties and responsibilities of the RSO include but are not limited to:

- monitoring and surveys of all areas in which radioactive material is used
- overseeing ordering, receipt, surveys, and delivery of byproduct material
- packaging, labeling, surveys, etc., of all shipments of byproduct material leaving the institution
- monitoring programs, including determining the need for and evaluating bioassays, monitoring personnel exposure records, and developing corrective actions for those exposures approaching maximum permissible limits
- developing and implementing an ALARA program
- training all personnel
- overseeing the waste disposal program
- monitoring inventory and leak tests of sealed sources
- overseeing decontamination

- investigating incidents, responding to emergencies and notifying the appropriate agencies
- for licensees possessing an aggregated Category 1 or Category 2 quantity of radioactive material, participating in the development and implementation of a security program for radioactive material in accordance with 10 CFR Part 37 (a "Category 1 quantity of radioactive material" and a "Category 2 quantity of radioactive material" are defined terms in 10 CFR 37.5, and the radionuclides referenced in these 10 CFR 37.5 definitions are listed in Appendix A to 10 CFR Part 37)
- maintaining all required records

The applicant or licensee may not transfer the responsibilities of the RSO to other individuals. Many tasks and duties associated with managing the program may be assigned or delegated to other qualified individuals. The responsibility for these tasks and duties, however, lies with the RSO. The NRC does recognize that a qualified individual will have to fill in for the RSO when the RSO will be away for short periods of time for professional conferences, vacation, or illness. However, this should not occur for extended or indefinite periods of time. The applicant or licensee should have a plan in place for contacting the RSO in the event of an emergency.

When selecting an RSO, the applicant should keep in mind the duties and responsibilities of the position and select an individual who is qualified to serve. The RSO will need sufficient technical knowledge to understand, in general, the majority of the work being done with byproduct materials under his or her responsibility. The NRC recognizes that an RSO may not be an expert in all areas that might be involved in a broad scope program. The RSO should be qualified by training and experience to perform the duties required for the position. Executive management should ensure that enough time is allocated to the individual selected as the RSO to carry out the responsibilities of the position.

### **RSO Qualifications and Training**

In order to demonstrate adequate training and experience, the RSO should have: (1) at a minimum, a college degree at the bachelor level, or equivalent training and experience in the physical or biological sciences or in engineering; and (2) training and experience commensurate with the scope of proposed activities. Training should include the following subjects:

- radiation protection principles
- characteristics of ionizing radiation
- units of radiation dose and quantities
- radiation detection and measurement instrumentation
- biological hazards of exposure to radiation (appropriate to types and forms of licensed material to be possessed and used)
- NRC regulatory requirements and standards
- hands-on use of radioactive materials commensurate with the uses proposed by the applicant

The amount of training and experience will depend on the type, form, quantity, and proposed use of the licensed material requested. For instance, in addition to a college degree, RSOs at most broad scope licensees should be specialists in the field of radiation protection and may need at least 40 hours of radiation safety training specific to their job duties, as well as a year of experience with similar types, forms, quantities, and uses of radioactive material before the individual is qualified to be an RSO.

The RSO designee should have obtained the above training in formal course(s) designed for RSOs, presented by an academic institution, commercial radiation safety consulting company, or a professional organization of radiation protection experts. In addition, the proposed RSO's experience should be sufficient to identify and control the anticipated radiation hazards. For example, the RSO should have experience planning and conducting evaluations, surveys, and measurements similar to those required by the licensee's radiation safety program.

The applicant should also be aware of specific regulatory requirements for the RSO that may apply to its licensed program. For example, 10 CFR Part 35 contains specific requirements for an RSO in a medical program. However, an individual who qualifies as a medical RSO may not necessarily be qualified to be an RSO in a broad scope program.

Chapters 3 and 4 of NUREG-1516, "Management of Radioactive Material Safety Programs at Medical Facilities," describe the role of the RSO and selection of the RSO at medical facilities, but it also contains information pertinent to all broad scope programs.

**Response from Applicant:**

Please indicate Kelly Wegener or Kelly Wegener-Gave. Please provide fixed and portable gauge training certificates, including non-routine maintenance, as available. Please attach an MOU/DOA.

For Type A, Type B, and Type C applicants:

- Submit the name of the proposed RSO.
- Describe the training for the proposed RSO that demonstrates the individual is qualified to perform the duties required under the license.
- Address the RSO's experience in performing each of the duties listed in the "Duties and Responsibilities" section, when and where the experience was gained, and the type, form, and quantity of radionuclides involved.
- Submit a statement delineating the RSO's duties and responsibilities.
- Submit a radiation safety officer delegation of authority memorandum signed by the licensee's executive management.

Applicants should provide specific information about the proposed RSO's training and experience that is relevant to the requested licensed material types, forms, and quantities requested in the application

**Suggested Format for Providing Information Requested in Items 5 Through 11 of U.S. Nuclear Regulatory Commission Form 313**

Instructions: If an applicant checks a box in the column marked "Description Attached," then they must provide that information on separate sheets.

Item No.	Suggested Response	Description Attached
5.	<p><b>RADIOACTIVE MATERIAL ... Sealed Byproduct Material</b></p> <p>A separate listing should be submitted for sealed sources needed in larger quantities than described in the atomic number 1 through 83 request. Applicants must provide the manufacturer's name and model number for each requested sealed source and device so that the NRC can verify that they have been evaluated in a SSD registration certificate or specifically approved on a license. Applicants must also provide the maximum activity per source and the total possession limit.</p>	[ ]

Please provide updates to any possession limits on the -06 license.



Item No.	Suggested Response	Description Attached
	<p><b>INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE (Cont'd)</b></p> <p>7. In addition, applicants for a Type A broad scope license that request the flexibility to make some program changes and revise some procedures previously approved by the NRC without amendment of the license should submit the following:</p> <ul style="list-style-type: none"> <li>• a description of the duties and responsibilities of the RSC, including: <ul style="list-style-type: none"> <li>– review and approval of permitted program and procedural changes prior to implementation</li> <li>– implementation of program and procedural changes</li> <li>– audit of licensed operations to determine compliance</li> <li>– the appropriate actions taken when noncompliance is identified, including analysis of the cause, corrective actions, and actions to prevent recurrence</li> </ul> </li> <li>• a description of the process for procedure and program review and approval, including documentation of the specific change. (At a minimum, documentation should state the reason for the change and summarize the radiation safety matters that were considered prior to approval of the change.)</li> </ul> <p><b>Radiation Safety Officer ... For Type A, Type B, and Type C applicants:</b></p> <ul style="list-style-type: none"> <li>• Submit the name of the proposed RSO.</li> <li>• Describe the training for the proposed RSO that demonstrates the individual is qualified to perform the duties required under the license.</li> <li>• Address the RSO's experience in performing each of the duties listed in the "Duties and Responsibilities" section in section 8.7.3, "Radiation Safety Officer," when and where the experience was gained, and the type, form, and quantity of radionuclides involved.</li> <li>• Submit a statement delineating the RSO's duties and responsibilities.</li> <li>• Submit a radiation safety officer delegation of authority memorandum signed by the licensee's executive management.</li> </ul>	<p>[ ]</p> <p>[ ]</p> <p>[ ]</p> <p>[ ]</p> <p>[ ]</p> <p>[ ]</p>
	<p>8. <b>TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS</b></p> <p>Submit a description of the radiation safety training program developed for each group of workers, .... In addition, Type A broad scope licensees or applicants that want the flexibility to revise their radiation safety training program without amendment of the license (as discussed in Chapter 1, "Purpose of Report," and Section 8.7.2, "Radiation Safety Committee," of NUREG-1556, Volume 11, Revision 1) should describe the process that will be used to revise and implement the submitted training programs.</p>	<p>[ ]</p>
	<p>9. <b>FACILITIES AND EQUIPMENT</b></p> <p>Describe the criteria the RSC or RSO, as appropriate, will use to review and approve facilities and equipment .... Sample diagrams should be provided for each classification scheme that take into consideration shielding, the proximity of radiation sources to unrestricted areas, and other items related to radiation safety.</p>	<p>[ ]</p>

Please provide overall and sample area diagrams for facilities at the Saginaw Rd. and Salzburg Rd. locations.

## Model Delegation of Authority for Radiation Safety Officer

### Model Delegation of Authority

Memo To: Radiation Safety Officer  
From: Chief Executive Officer  
Subject: Delegation of Authority

You, \_\_\_\_\_, have been appointed radiation safety officer and are responsible for ensuring the safe and secure use of radiation. You are responsible for managing the Radiation Protection Program, identifying radiation protection problems, initiating, recommending, or providing corrective actions, verifying implementation of corrective actions, stopping unsafe activities, and ensuring compliance with regulations. You are hereby delegated the authority necessary to meet those responsibilities, including prohibiting the use of byproduct material by employees who do not meet the necessary requirements and shutting down operations, when justified, to maintain radiation safety. You are required to notify management if staff does not cooperate and does not address radiation safety issues. In addition, you are free to raise issues with the U.S. Nuclear Regulatory Commission at any time. It is estimated that you will spend \_\_\_\_\_ hours per week conducting radiation protection activities.

\_\_\_\_\_  
Signature of Management Representative

\_\_\_\_\_  
Date

I accept the above responsibilities,

\_\_\_\_\_  
Signature of Radiation Safety Officer

\_\_\_\_\_  
Date

**cc: Affected department heads**

**8.7 Item 7: Individual(s) Responsible for Radiation Safety Program and Their Training and Experience**

**8.7.1 Radiation Safety Officer**

**Regulation:** 10 CFR 30.33(a)(3)

**Criteria:** RSOs must have adequate training and experience. In the past, the NRC has found successful completion of one of the following to be evidence of adequate training and experience:

- fixed gauge manufacturer's or distributor's course for users or for RSOs

**OR**

- equivalent course that meets the criteria in Appendix D of this NUREG

Additional training is required for RSOs in programs that perform nonroutine operations. This includes repairs involving or potentially affecting components related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding) and any other activities during which personnel could receive radiation doses exceeding the NRC's regulatory dose limits (e.g., installation, initial radiation survey, gauge relocation, and removal of the gauge from service). See Section 8.10.8, "Maintenance," and Appendix J to this report for more information on nonroutine operations. ...

**Response from Applicant:** Provide the following:

- name of the proposed RSO
- documentation demonstrating that the proposed RSO is qualified by training and experience (e.g., certificate of completion of the RSO's course and/or the authorized user's course)

**8.7.2 Authorized Users**

**Regulation:** 10 CFR 30.33(a)(3)

**Criteria:** The individuals using the gauges are usually referred to as "authorized users." Authorized users (AUs) must have adequate training and experience in the use of fixed gauges. In the past, the NRC has found successful completion of one of the following to be evidence of adequate training and experience:

- fixed gauge manufacturer's or distributor's course for users

**OR ...**

Applicants requesting to perform nonroutine operations, such as gauge installation; initial radiation survey; repair and maintenance of components related to the radiological safety of the gauge; gauge relocation; replacement and disposal of sealed sources; gauge alignment; or removal of a gauge from service, must provide additional training. See Section 8.10.8, "Maintenance," and Appendix J to this report for more information.

**Response from Applicant:** Provide either of the following: ...

**OR**

- a description of the training and experience for proposed AUs

## CRITERIA FOR ACCEPTABLE TRAINING FOR AUTHORIZED USERS AND RADIATION SAFETY OFFICERS

### Course Content

Classroom training may be in the form of lectures, videos, computer-based sessions, or self-study lessons that emphasize practical subjects important to the safe use of the gauge including the following:

#### Radiation Safety:

- radiation versus contamination
- internal versus external exposure
- biological effects of radiation
- types and relative hazards of radioactive material possessed
- as low as is reasonably achievable (ALARA) concept
- use of time, distance, and shielding to minimize exposure
- location of sealed source within the gauge

#### Regulatory Requirements:

- applicable regulations
- license conditions, amendments, and renewals
- locations of use and storage of radioactive materials
- material control and accountability
- annual audit of radiation safety program
- transfer and disposal
- recordkeeping
- prior events involving fixed gauges
- handling incidents
- recognizing and ensuring that radiation warning signs are visible and legible
- licensing and inspection by regulatory agency
- need for complete and accurate information
- employee protection
- deliberate misconduct

#### Practical Explanation of the Theory and Operation for Each Gauge Possessed by the Licensee:

- operating, emergency, and security procedures
- routine versus nonroutine maintenance
- lock-out procedures

#### Supervised, Hands-On Experience (On-the-Job Training) Involving:

- operating procedures
- test runs of emergency procedures
- routine maintenance
- lock-out procedures

**Note:** On-the-job training must be done under the supervision of an authorized user (AU) or radiation safety officer (RSO).

### Training Assessment

Management will ensure that proposed AUs are qualified to work independently with each type of gauge with which they may work. Management will ensure that proposed RSOs are qualified to work independently with and are knowledgeable of the radiation safety aspects of all types of gauges that may be possessed by the applicant.

### Course Instructor Qualifications

Instructors should have, at a minimum, the following:

- successful completion of a fixed gauge manufacturer's or distributor's course for users (or equivalent)
- successful completion of an 8-hour radiation safety course or RSO training course
- documentation of 8 hours of hands-on experience with fixed gauges

**Note:** Additional training is required for those applicants intending to perform nonroutine operations, such as gauge installation; initial radiation survey; repair and maintenance of components related to the radiological safety of the gauge; gauge relocation; replacement, and disposal of sealed sources; gauge alignment; or removal of a gauge from service. See Appendix J of this NUREG, "Information Needed to Support Applicant's Request to Perform Nonroutine Operations."

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

[A]pplicants wishing to perform nonroutine operations must provide the following information with their license application:

- ...
- 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.

## RSO duties, Criteria for Acceptable Training, and sample MOU/DOA document

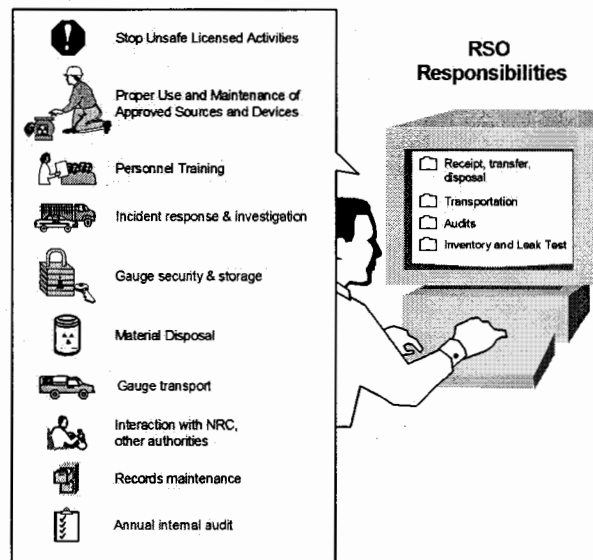
**Criteria:** Provide the name of the RSO and documentation demonstrating that the proposed RSO is qualified by training and experience (e.g., certificate of completion of the RSO's course and/or the authorized user's course) adequate training and experience. In the past, the NRC has found successful completion of one of the following to be evidence of adequate training and experience:

- portable gauge manufacturer's course for users and RSOs, with hands-on experience with portable gauges

OR

- equivalent course that meets the criteria in Appendix C of this NUREG

**Discussion:** The person responsible for the radiation protection program is the RSO. The RSO is key to overseeing and ensuring safe operation of the licensee's radiation protection program. The RSO must have adequate training to understand the hazards associated with radioactive material and be familiar with all applicable regulatory requirements. The RSO should have independent authority to stop operations that he or she considers unsafe. He or she should have sufficient time and commitment from management to fulfill his or her duties and responsibilities to ensure that radioactive materials are used in a safe manner, approved radiation safety procedures are being implemented, and the required records of licensed activities are maintained. Typical RSO duties are illustrated in Figure 8-2 and described in Appendix D of this NUREG. The NRC requires the name of the RSO to be listed on the license to ensure that licensee management always has a responsible, qualified person identified and that the named individual knows of his or her designation as RSO. Appendix D also provides a model Delegation of Authority, which should be used to further emphasize the agreement on duties and responsibilities of the RSO by management and the designated RSO.



**Figure 8-2. Typical Duties and Responsibilities of RSOs**

The RSO may delegate certain day-to-day tasks of the radiation protection program to other responsible individuals, sometimes referred to as "alternate RSOs" or "site RSOs." For example, a licensee with multiple permanent locations of use or use at temporary jobsites may appoint "site RSOs," who assist the RSO and are responsible for the day-to-day activities at these locations. Licensees may also appoint "alternate RSOs" who may "step in" as an emergency contact when the RSO is unavailable. Such "alternate RSOs" or "site RSOs" do not need to meet all RSO qualifications; however, they should be qualified, experienced authorized users who have adequate knowledge of the activities to which they are assigned. These individuals should have the same management support and decision-making authority as the RSO that is necessary to accomplish the tasks to which they have been assigned. Please note that only the primary RSO is named on an NRC license.

## CERTIFICATE OF DISPOSITION OF MATERIALS

PLEASE READ THESE INSTRUCTIONS BEFORE COMPLETING NRC FORM 314.

Subpart E of 10 CFR Part 20 establishes the radiological criteria for license terminations/decommissioning of facilities licensed under 10 CFR Parts 30, 40, 50, 60, 61, 70, and 72, as well as other facilities subject to the Commission's jurisdiction under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

### INSTRUCTIONS

#### Section B, Item 2.

Licensees should describe the specific radioactive material transfer actions. If radioactive wastes were generated in terminating this license, the licensee should describe the disposal actions taken, including the disposition of low-level radioactive waste, mixed waste, greater-than-Class-C waste, and sealed sources.

#### Section B, Item 2.a.

The information provided concerning the transfer of radioactive material to another licensee should specify the date of the transfer, the name of the licensee recipient, an individual contact name and telephone number for the licensee recipient, and the recipient's NRC or Agreement State license number.

#### Section B, Item 2.b.

For disposal of radioactive materials, licensees should describe the specific disposal method or procedure (e.g., decay-in-storage). For those cases when radioactive materials are disposed of by a licensed disposal site or by a waste contractor, the licensee should specify the name, address, and telephone number of the licensed disposal site operator or waste contractor.

#### Section B, Item 2.c.

"Residual radioactivity," as defined in 10 CFR 20.1003, means radioactivity in 'areas' (structures, materials, soils, etc.) remaining as a result of activities (licensed and unlicensed) under the licensee's control from sources used by the licensee, excluding background radiation. ALARA is defined in 10 CFR 20.1003.

### FILE CERTIFICATES AS FOLLOWS:

#### IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND CERTIFICATES TO:

LICENSING ASSISTANT SECTION  
NUCLEAR MATERIALS SAFETY BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND CERTIFICATES TO:

MATERIALS LICENSING SECTION  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

#### IF YOU ARE LOCATED IN:

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND CERTIFICATES TO:

MATERIAL RADIATION PROTECTION SECTION  
U. S. NUCLEAR REGULATORY COMMISSION, REGION IV  
1600 E. LAMAR BOULEVARD  
ARLINGTON, TX 76011-4511



### CERTIFICATE OF DISPOSITION OF MATERIALS

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollect.Resource@nrc.gov](mailto:Infocollect.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE NAME AND ADDRESS

Dow Corning Corporation  
3901 S Saginaw Rd.  
Mail No. 002  
Midland, MI 48686

LICENSE NUMBER

21-08362-12

DOCKET NUMBER

030-10509

LICENSE EXPIRATION DATE

04/30/2022

#### A. LICENSE STATUS (Check the appropriate box)

- This license has expired.
- This license has not yet expired; please terminate it.

#### B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- 1. No radioactive materials have ever been procured or possessed by the licensee under this license.
- 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner.
  - a. Transfer of radioactive materials to the licensee listed below:

The Dow Chemical Company, 1803 Bldg., Midland, MI 48674, NRC Lic. No. 21-00265-06

- b. Disposal of radioactive materials:

- 1. Directly by the licensee:

N/A

- 2. By licensed disposal site:

N/A

- 3. By waste contractor:

N/A

- c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

#### C. SURVEYS PERFORMED AND REPORTED

- 1. A radiation survey was conducted by the licensee. The survey confirms:
  - a. the absence of licensed radioactive materials
  - b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.

- 2. A copy of the radiation survey results:

- a. is attached; or  b. is not attached (Provide explanation); or  c. was forwarded to NRC on: \_\_\_\_\_

N/A

Date

- 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and

- a. The results of the latest leak test are attached; and/or  b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME	TITLE	TELEPHONE (Include Area Code)	E-MAIL ADDRESS

Mail all future correspondence regarding this license to:

#### C. CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.



## Pavon, Sandy

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**From:** Forster, Sara  
**Sent:** Friday, September 07, 2018 12:18 PM  
**To:** Song, Taehoon; Pavon, Sandy; Sandrik, Lauren  
**Subject:** FW: Additional Information Request re your letter requesting Amendment to Dow Chemical Co., NRC Lic. No. 21-00265-06, CN609200  
**Attachments:** 03610.609200.21-00265-06 etc. RFAI signed with attachments.pdf; 03120.609203.314\_Form\_Sample.pdf

Could you please scan in the attached document and return to me. Thank you!

Sara x9892

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**From:** Forster, Sara  
**Sent:** Friday, September 07, 2018 12:15 PM  
**To:** 'kelly.wegener@dowcorning.com' <kelly.wegener@dowcorning.com>; 'jrweldy@dow.com' <jrweldy@dow.com>  
**Subject:** Additional Information Request re your letter requesting Amendment to Dow Chemical Co., NRC Lic. No. 21-00265-06, CN609200

Dear Mr. Weldy and Ms. Wegener:

As discussed via telephone on September 5, 2018, additional information is needed to complete our review of your June 18, 2018 letter, requesting to amend NRC License No. 21-00265-06 ("-06" license), to terminate NRC License No. 21-08362-12 ("-12" license), and to terminate NRC License No. 21-08362-08 ("-08" license). Please note that we may be unable to terminate the "-08" license, due to its status as no longer being used for primary principal activities. Accordingly, it may be most expedient to amend your request to place that license on a standby status, to facilitate completion of other aspects of your request.

For additional guidance, please refer to the following resources:

- Title 10 of the *Code of Federal Regulations*, Part 30: <https://www.nrc.gov/reading-rm/doc-collections/cfr/part030/>
- NRC Form 314, "Certificate of Disposition of Materials": <https://www.nrc.gov/reading-rm/doc-collections/forms/nrc314.pdf>
- NUREG 1556, Vol. 1, rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses": <https://www.nrc.gov/docs/ML1617/ML16175A375.pdf>
- NUREG 1556, Vol. 4, rev. 1, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Fixed Gauge Licenses": <https://www.nrc.gov/docs/ML1618/ML16188A048.pdf>
- NUREG 1556, Vol. 11, rev. 1, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Licenses of Broad Scope": <https://www.nrc.gov/docs/ML1705/ML17059D332.pdf>

Please provide the requested information within 14 days of this message (on or before September 21, 2018). Include a signed and dated cover letter transmitting your response. Submission of your response as a pdf file attached to an email or via facsimile will allow for the quickest processing. If you are submitting via email and either (1) the message size exceeds 10 MB or (2) you do not receive confirmation that the message has been received within 5 business days, you may use the [AMRDEC Safe Access File Exchange application](#). You may access AMRDEC directly using the website:

<https://safe.amrdec.army.mil/safe/Welcome.aspx>. That site will allow you to upload the file and then direct it to be sent to my email address, [sara.forster@nrc.gov](mailto:sara.forster@nrc.gov). When at that website, you should choose the "Non-CAC Users" button to get started. When using AMRDEC to submit information, please call or email to confirm that I am in the office, as recipients must retrieve the file within 24 hours of submission. Please call or email me with any questions you may have, or if you are unable to respond by the date suggested above. Thank you for your prompt attention to this matter.

Sara A. Forster, Health Physicist Licensing Reviewer  
U.S. Nuclear Regulatory Commission - Region III  
Division of Nuclear Materials Safety  
2443 Warrenville Rd. - Ste. 210  
Lisle, IL 60532-4352  
[sara.forster@nrc.gov](mailto:sara.forster@nrc.gov)  
Direct: (630) 829-9892  
Facsimile: (630) 515-1078

