



## CONVERSATION RECORD

NAME OF PERSON(S)/TITLE CONTACTED OR IN CONTACT WITH YOU <b>Ronald Mateas, Corporate Manager, Environmental Programs &amp; Radiation Safety Officer (RSO)</b>		DATE OF CONTACT <b>11/02/2018</b>	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 <b>ron.mateas@ea.epson.com</b>		TELEPHONE NUMBER <b>(562) 290-5252</b>		
ORGANIZATION <b>Epson America, Inc., 3840 Kilroy Airport Way, Long Beach, CA 90806</b>		DOCKET NUMBER(S) <b>030-37819</b>		
LICENSE NAME AND NUMBER(S) <b>04-32710-01</b>		MAIL CONTROL NUMBER(S) <b>610100</b>		
SUBJECT <b>Additional Information Request concerning the licensee's request to renew the referenced U.S. NRC radioactive materials license, including to allow continued possession and use of krypton-85 gas in electron tubes in projector lamps manufactured by Masushita Electric Industries Co. LTD &amp; Iwasaki Electric.</b>				
SUMMARY AND ACTION REQUIRED (IF ANY) <p>This record concerns the licensee's October 1, 2018 application (NRC Accession No. ML18275A396) requesting renewal of the above-listed radioactive materials license for a manufacturing and distribution (Program Code 3214) license for possession of krypton-85 in electron tubes incident to exempt distribution of the same as permitted by NRC Lic. No. 04-23970-01E</p> <p>Upon review, we have noted that the application omits information requested in the NRC's NUREG 1556 Vol. 12, rev. 1, "Program-Specific Guidance About Possession Licenses for Manufacturing and Distribution," guidance volume dated May 2018. As discussed, please see attached for information needed to complete our review of your request.</p> <p>As we will discuss in the next 5 to 10 business days, please provide the requested information within 28 days of this message (on or before November 30, 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.</p>				
NAME OF PERSON DOCUMENTING CONVERSATION <b>Sara A. Forster, M.S., Health Physicist, Materials Licensing Branch, DNMS, RIII office, sara.forster@nrc.gov</b>				
SIGNATURE <i>Sara A. Forster</i>			DATE OF SIGNATURE <b>11/02/2018</b>	

CONVERSATION RECORD (continued)

LICENSE NAME AND NUMBER(S)

04-32710-01

MAIL CONTROL NUMBER(S)

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SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

ADDITIONAL INFORMATION NEEDED FOR CONTINUED REVIEW

I. For general resubmission of the renewal application:

- (1) Please resubmit the NRC Form 313, signed and dated by you or by other Senior Management official from Epson America, Inc. or other individual designated to sign on that official's behalf;
- (2) Please include the licensee's mailing address as submitted in the October 1, 2018 application.
- (3) Where possible, in the interest of making radioactive materials license documents public, where possible, pursuant to Title 10 of the *Code of Federal Regulations* (CFR) Section 9.15, please indicate whether the Suite Number is necessary in Condition 10 to the license, to avoid confusion, etc., or whether the Authorized Use location may be limited on the license to the street address.

II. For the authorization for possession of krypton-85 in electron tubes in projector lamps incident to the exempt distribution of those lamps, including of those lamps installed in projectors:

- (1) Please resubmit the request for radionuclide (krypton-85) and maximum overall possession limit (0.27 millicuries). No revision to information provided in your application, is needed.
- (2) Please clarify the form of the material for which you are requesting possession. (i.e. gas in electron tubes in projector lamps, maximum activity per electron tube or per projector lamp, manufacturer names, and model numbers, as applicable).
- (3) Please clarify the use and possession of the material for which you are requesting possession (i.e. for possession and storage incident to conditions specified in NRC License No. 04-23970-01E, including in projectors and as replacement lamps.)
- (4) Concerning 8.5.2 - Financial Assurance and Recordkeeping for Decommissioning, please confirm the statement:

*"Pursuant to 10 CFR 30.35(g), 10 CFR 40.36(f), and 10 CFR 70.25(g) and 10 CFR 70.51(b)(3), as appropriate, we will maintain records important to decommissioning and will transfer these records to an NRC or Agreement State licensee before licensed activities are transferred or assigned, in accordance with 10 CFR 30.34(b), 10 CFR 40.46, and 10 CFR 70.36, as appropriate. Furthermore, pursuant to 10 CFR 30.51(f), 10 CFR 40.61(f), and 10 CFR 70.51(a), as appropriate, prior to license termination, we will forward the records required by 10 CFR 30.35(g), 10 CFR 40.36(f), and 10 CFR 70.25(g), as appropriate, to the appropriate NRC regional office."*

**CONVERSATION RECORD (continued)**

LICENSE NAME AND NUMBER(S)

04-32710-01

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SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

**ADDITIONAL INFORMATION NEEDED FOR CONTINUED REVIEW**

**III. For listing Individual(s) Responsible for Radiation Safety Program and their Training and Experience:**

- (1) Please confirm that the Radiation Safety Officer (RSO) for this license is Ronald Mateas, or otherwise list the name and experience of the RSO to be listed on the license. Sample RSO training criteria may be found in NRC's NUREG 1556 Vol. 12, rev. 1, Section 8.7.1, pp. 8-19 to 8-20.
- (2) Please provide a copy of a Memorandum of Understanding/Delegation of Authority (MOU/DOA) document, signed and dated by both the licensee's Management Representative and the RSO. At a minimum, the MOU/DOA should indicate the RSO's responsibilities and authority for the licensed and authority for the licensed program and that RSO's acceptance of those duties. Sample RSO duties together with a sample MOU/DOA form may be found in NRC's NUREG 1556 Vol. 12, rev. 1, Appendix E, pp. D-1 to D-3. A copy of this appendix is attached for your reference.
- (3) Please confirm that the sole Authorized User (AU) for this license is Ronald Mateas, or otherwise list the name and experience of each AU to be listed on the license. Sample AU training criteria may be found in NRC's NUREG 1556 Vol. 12, rev. 1, Section 8.7.2, pp. 8-21 to 8-23.

**IV. For Individual(s) working in or Frequenting Restricted Areas (Occupationally Exposed Individuals and Ancillary Personnel):**

Please refer to NRC's NUREG 1556, Vol. 12, rev. 1, Section 8.8, pp. 8-23 to 8-24 and Appendix E, pp. E-1 to E-5 to prepare and submit a description of the above-referenced licensee's radiation safety training program, including:

- (1) groups of workers;
- (2) frequency of training (e.g. before assuming duties, when duties change, annually, etc.);
- (3) topics covered, for each group of worker;
- (4) training method (e.g. lecture, demonstrations, videotape, self-study, etc.);
- (5) instructor qualifications (e.g. Radiation Safety Officer, Authorized User, etc.); and
- (6) how training is assessed.

**V. For authorizing use and storage of byproduct material at the licensee's 2350 Stafford Rd., Plainfield, IN 46168, location:**

- (1) Please provide a description for the area where licensed material will be used or stored in accordance with NRC's NUREG 1556 Vol. 12, rev. 1, (a) Section 8.9, pp. 8-25 to 8-27 and/or (b) (b) Appendix F, pp. F-1 to F-3;

**CONVERSATION RECORD (continued)**

LICENSE NAME AND NUMBER(S)

04-32710-01

MAIL CONTROL NUMBER(S)

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SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

**ADDITIONAL INFORMATION NEEDED FOR CONTINUED REVIEW**

**V. For authorizing use and storage of byproduct material at the licensee's 2350 Stafford Rd., Plainfield, IN 46168, location (continued from previous page):**

- (2) Your response should include a diagram of the area where the material will be used or stored, showing street address, room or suite numbers, any physical barriers (doors, walls, windows, shielding, etc.), and dimensions or scale of each area of use highlighted in the submitted facility diagrams;

NOTE: Diagrams should be drawn to fit on an 8 1/2" x 11" sheet of paper.

- (3) Your response should include any areas where materials are received, used, stored, measured, or disposed;
- (4) Please describe how the area is secured (key, keycard, code, etc.), with a description of individuals (Radiation Safety Officer (RSO), Authorized Users (AUs), housekeeping, etc.) who will be able to access, or who will routinely access, the requested area; and
- (5) Finally, please describe any safety features (handling equipment, spill containment, etc.) available at the location where radioactive material will be used and stored.

**VI. For Updates to your Radiation Safety program, in accordance with guidance provided in NUREG 1556, Vol. 12, rev. 1, Items 8.10.3 through 8.10.6, pp. 8-31 through 8-49:**

- (1) As discussed, please clearly state any change that is being requested. In the alternative, please confirm that - other than the expiration date - no changes to your radiation safety program are being requested.

- (2) Concerning Item 8.10.3 - Material Receipt and Accountability, please confirm the statement:

*"We will develop, implement, and maintain procedures for ensuring accountability of licensed materials at all times."*

- (3) Concerning Item 8.10.4 - Occupational Dose - please resubmit your confirmation of the statement:

*"We will maintain, for inspection by the NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502."*

NOTE: You may resubmit the statement contained in the October 1, 2018 application; no changes changes are required, for this item.

**CONVERSATION RECORD (continued)**

LICENSE NAME AND NUMBER(S)

04-32710-01

MAIL CONTROL NUMBER(S)

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SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

**ADDITIONAL INFORMATION NEEDED FOR CONTINUED REVIEW**

**VI. For Updates to your Radiation Safety program, in accordance with guidance provided in NUREG 1556, Vol. 12, rev. 1, Items 8.10.3 through 8.10.6, pp. 8-31 through 8-49 (continued):**

(5) Concerning Item 8.10.6 - Safe Use of Radionuclides, Security, and emergency procedures - please confirm the statements:

(a) *"Procedures for safe use, security of materials, and emergencies will be developed and documented before receipt of licensed material. Operating and emergency procedures will be implemented and maintained."* **AND**

(b) *"Procedures will be revised only if:*

*"(i) the changes are reviewed and approved by the licensee management and the RSO in writing;*

*"(ii) the licensee staff is provided training in the revised procedures prior to implementation;*

*"(iii) the changes are in compliance with NRC regulations and the license; and*

*"(iv) the changes do not degrade the effectiveness of the program."*

**VII. For Updates to your waste management program, in accordance with guidance provided in NUREG 1556, Vol. 12, rev. 1, Item 8.11, pp. 8-57 through 8-63, Please confirm the statement:**

*"We will use the model waste procedures and guidelines published in Appendix P to NUREG 1556, Vol. 12, rev. 1, Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Possession Licenses for Manufacturing and Distribution."*

## **Radiation Safety Officer Duties and Responsibilities**

The radiation safety officer's (RSO's) duties and responsibilities include ensuring radiological safety, security, and compliance with both U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Transportation (DOT) regulations and the conditions of the license. Typically, the RSO's duties and responsibilities include the following:

- Ensure that licensed material possessed by the licensee is limited to the types and quantities of licensed material listed on the license.
- Maintain documentation that demonstrates that the dose to individual members of the public does not exceed the limit specified in Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1301.
- Ensure security of radioactive material, and for licensees possessing an aggregated Category 1 or Category 2 quantity of radioactive material, develop and implement a security program for radioactive material in accordance with 10 CFR Part 37.
- Post documents as required by 10 CFR Parts 19.11 and 21.6.
- Ensure that licensed material is transported in accordance with applicable NRC and DOT requirements.
- Ensure that radiation exposures are as low as is reasonably achievable (ALARA).
- Oversee all activities involving radioactive material, including monitoring and surveys of all areas in which radioactive material is possessed or possessed and used.
- Act as liaison with NRC and other regulatory authorities.
- Provide necessary information on all aspects of radiation protection to personnel at all levels of responsibility, pursuant to 10 CFR Parts 19 and 20, and any other applicable regulations.
- Oversee proper delivery, receipt, and conduct of radiation surveys for all shipments of radioactive material arriving at or leaving from the facility, as well as packaging and labeling all radioactive material leaving the facility.
- Distribute and process personnel radiation-monitoring equipment, determine the need for and evaluate bioassays, monitor personnel radiation exposure and bioassay records for trends and high exposures, notify individuals and their supervisors of radiation exposures approaching established limits, and recommend appropriate remedial action.
- Conduct training programs and otherwise instruct all personnel in the proper procedures for handling radioactive material prior to possession or possession and use, both at periodic intervals (refresher training), and as required by changes in procedures, equipment, and regulations.

- Supervise and coordinate the radioactive waste disposal program, including effluent monitoring and recordkeeping on waste storage and disposal records.
- Oversee the storage of radioactive material not in current use, including waste.
- Perform or arrange for leak tests on all sealed sources and calibration of radiation survey instruments.
- Maintain an inventory of all radionuclides possessed under the license, and limit the quantity to the amounts authorized by the license.
- Immediately terminate any unsafe condition or activity that is found to be a threat to public health and safety or property.
- Supervise decontamination and recovery operations.
- Maintain other records not specifically designated above (e.g., records of receipts; transfers; and surveys, as required by 10 CFR 30.51 and 10 CFR 20, Subpart L, "Records").
- Hold periodic meetings with and provide reports to licensee management.
- Perform periodic audits of the Radiation Safety Program to ensure that the licensee is complying with (i) all applicable NRC regulations; (ii) the terms and conditions of the license (e.g., leak tests; inventories; possession or possession and use limited to trained, approved users); (iii) the content and implementation of the Radiation Safety Program to achieve occupational doses and doses to members of the public that are ALARA, in accordance with 10 CFR 20.1101; and (iv) the requirement that all records be properly maintained.
- Ensure that the results of audits, identification of deficiencies, and recommendations for change are documented (and maintained for at least 3 years) and provided to management for review, and ensure that prompt action is taken to correct deficiencies.
- Ensure that the audit results and corrective actions are communicated to all personnel who possess or possess and use licensed material.
- Ensure that all incidents, accidents, and personnel exposure to radiation in excess of ALARA or Part 20 limits are investigated and reported to NRC and other appropriate authorities, if required, within the required time limits.
- Maintain an understanding of, and up-to-date copies of, NRC regulations, the license, and revised licensee procedures, and ensure that the license is amended whenever there are changes in licensed activities, responsible individuals, or information or commitments provided to NRC during the licensing process.
- Develop, implement, maintain, and distribute, as appropriate, up-to-date operating, emergency, and security procedures.

## 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 Safety 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