

DL-010997-01

January 9, 1997

The Applied Radiant Energy Corporation (ARECO)
ATTN: Dr. James J. Myron
Radiation Safety Officer
Venture Drive/Forest Commercial Center
P. O. Box 289
Forest, VA 24551

SUBJECT: REQUEST FOR MORE INFORMATION ABOUT A MATERIALS LICENSE RENEWAL APPLICATION (REFERENCE: 252009; 030-07099)

Dear Dr. Myron:

This refers to your revised application dated November 14, 1996, for renewal of License No. 45-11496-01.

I have reviewed the information provided and need the following additional documentation in support of your renewal application:

1. Since the quantities of methyl methacrylate (flash point of 49 degrees F) possessed and used in your operations are substantially more than authorized by 10 CFR 36.69(b), it will be necessary for you to provide us with a written safety evaluation to demonstrate that the sealed sources and related safety equipment are unlikely to be compromised by any foreseeable accident or event (i.e. fire, explosion, etc.). Your evaluation should include documentation to verify that your procedures for preparation and irradiation of wood impregnated with Methyl Methacrylate meet applicable provisions of NFPA 68 and 69 and that the irradiation process is unlikely to cause damage and/or loss of containment of cobalt 60 sealed sources used in your pool irradiator. (Note: Also, please include a description of the method and equipment used to safely vent sample canisters during irradiation. Furthermore, in view of the fact that the source plaque is sandwiched between two sample canisters during product irradiation, please specify the temperature you expect the sources to be subjected to and the duration of product irradiation. Will the expected temperatures degrade the stainless steel used in your source capsules?)
2. Sealed source leak test procedures. Based on my review of your procedure for pool water contamination monitoring and sealed source leak testing, it does not appear that the procedure is capable of detecting the presence of 0.005 microcuries of removable activity from a potentially leaking irradiator source. Therefore, please provide an analysis to confirm that your leak test procedure is capable of detecting a loss of 0.005 microcuries of activity from a leaking source in your pool irradiator.

- 3. Sealed source condition. In view of the age and uncertainty of design of your Cobalt 60 standard source strips, please provide us with a report of inspections you have performed to verify the physical condition of all sealed sources now in your pool irradiator (for example, visual inspections by viewing sources remotely, wipe tests on individual sources, or other suitable tests to confirm containment and physical integrity of sealed sources.)
- 4. Also, please confirm that any debris removed from the bottom of the pool irradiator is monitored prior to release. Records of results of monitoring should be kept to confirm that any material discarded is free of radioactive contamination.

If have questions about this letter or your license, please call me at 404/331-5617.

Sincerely,

/s/

Earl G. Wright
Senior License Reviewer
Division Nuclear Materials Safety

Docket No. 030-07099
License No. 45-11496-01

cc: Commonwealth of Virginia

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