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**United States Nuclear Regulatory Commission**  
Nuclear Materials Safety Branch, Region III  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

**April 21, 2011**

**Attn: Licensing Section**

Re: Application for New License for PQ Corporation  
Termination of The PQ Corporation License #37-20627-01 (03020003)

Dear Sir/ Madam,

PQ Corporation (formerly The PQ Corporation (name change only) requests that the United States Nuclear Regulatory Commission (USNRC) issue a new materials license for its facility in the state of Indiana. The Indiana facility is currently named in Condition #10 of The PQ Corporation License 37-20627-01 as 7<sup>th</sup> Street and Missouri Avenue, Jeffersonville, IN. The local post office has recently changed the address to:

PQ Corporation  
1101 Quartz Road  
Clarksville, IN 47129

*R III ACTION*

The Clarksville, IN facility currently possesses the following devices containing licensed material:

Device Manuf.	Device Model	Source Manuf	Source Model	Isotope/ Activity
TN Technologies	5205	TN Technologies	696894	Cs-137/4@ 100 mCi each Total 400 mCi

Included in this request please find the following:

- USNRC Form 313
- Appendix B from NUREG 1556, Volume #4 (6 pages)
- Training certification for Paige Simms
- Check in the amount of \$1,400.00

In addition, it is requested that License #37-20627-01 be terminated based upon the following:

- The Co-60 devices identified in Conditions #6A, 7A and 8A are possessed at the Chester, PA facility under License #PA-1067 (attached)

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- The Cs-137 KayRay/Sensall Model 7700 Series identified in Conditions 6B, 7B and 8B are possessed at the Chester, PA facility under License #PA-1067 (attached)
- Devices containing the TN Technologies Model 696894 Cs-137 capsules at 4238 Geraldine Avenue, St. Louis, MO are now possessed under NRC Materials License #24-32814-01 (attached)

Included please find NRC Form 314.

If there are any questions please contact Paige Simms at (812)-288-7186 ext. 107.

Best regards,

  
Jeff Sauffer  
Plant Manager  
PQ Corporation

## U.S. NUCLEAR REGULATORY COMMISSION

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below. *SC 03120 573698*

## Licensee

1. PQ Corporation
2. 4238 Geraldine Avenue  
St. Louis, MO 63115

3. License number 24-32814-01

4. Expiration date January 31, 2021

5. Docket No. 030-38381

Reference No.

6. Byproduct, source, and/or
- 
- special nuclear material

7. Chemical and/or physical form

8. Maximum amount that licensee may
- 
- possess at any one time under this
- 
- license

A. Cesium-137

A. Sealed sources registered  
either with NRC under 10 CFR  
32.210 or with an Agreement  
State and incorporated in a  
compatible gauging device as  
specified in Item 9 of this  
license.

A. No single source to exceed  
the maximum activity  
specified in the certificate  
of registration issued by  
the U.S. Nuclear  
Regulatory Commission or  
an Agreement State. Total  
activity 600 millicuries.

B. Americium-241

B. Sealed sources registered  
either with NRC under 10 CFR  
32.210 or with an Agreement  
State and incorporated in a  
compatible gauging device as  
specified in Item 9 of this  
license.

B. No single source to exceed  
the maximum activity  
specified in the certificate  
of registration issued by  
the U.S. Nuclear  
Regulatory Commission or  
an Agreement State. Total  
activity 60 millicuries.

9. Authorized use:

- A. For use in a Thermo MeasureTech Model 7062BP for level measurement.
- B. For use in a SPECTRO Analytical Instrument, Inc. (Formerly known as ASOMA Instruments, Inc.) Model 200 for sample analysis.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at 4238 Geraldine Avenue, St. Louis, Missouri.

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030-38381

11. Licensed material shall be used by, or under the supervision of individuals who have received the training described in the application dated October 7, 2010. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
12. The Radiation Safety Officer (RSO) for this license is Ted Freeman.
13. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.
- B. ~~Notwithstanding~~ Paragraph A of this condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- D. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- E. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the appropriate U.S. Nuclear Regulatory Commission, Regional Office referenced in Appendix D of 10 CFR Part 20. The report shall specify the source involved, the test results, and corrective action taken.
- F. Tests for leakage an/or contamination, limited to leak test sample collection shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is not authorized to perform the analysis. Analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
- G. Records of leak test results shall be kept in units of microcuries and shall be maintained for 3 years.
14. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee, except as specifically authorized.

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15. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
16. A. Each gauge shall be tested for the proper operation of the "on-off" mechanism (shutter) and indicator, if any, at intervals not to exceed 6 months or at such longer intervals as specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or the equivalent regulations of an Agreement State.
- B. Notwithstanding the periodic "on-off" mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in a locked position. The gauges exempted from this periodic test shall be tested before use.
17. The following services shall not be performed by the licensee: installation, initial radiation surveys, relocation, removal from service, dismantling, alignment, replacement, disposal of the sealed source and non-routine maintenance or repair of components related to the radiological safety of the gauge (i.e., the sealed source, the source holder, source drive mechanism, "on-off" mechanism (shutter), shutter control, shielding). These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
18. The licensee may initially mount a gauge if permitted by the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State and under the following conditions:
- A. the gauge must be mounted in accordance with written instructions provided by the manufacturer;
- B. the gauge must be mounted in a location compatible with the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State;
- C. the "on-off" mechanism (shutter) must be locked in the "off" position, if applicable, or the source must be otherwise fully shielded;
- D. the gauge must be received in good condition (i.e., package was not damaged); and
- E. the gauge must not require any modification to fit in the proposed location.

Mounting does not include electrical connection, activation or operation of the gauge. The source must remain fully shielded and the gauge may not be used until it is installed and made operational by a person specifically licensed by the U.S. Regulatory Commission or an Agreement State to perform such operations.

19. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device containing byproduct material and that do not result in the potential for any portion of the body to come into contact with the primary beam or in increased radiation levels in accessible areas.
- B. The licensee may not maintain, repair, or replace any of the following device components: the sealed

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- B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, "on-off" mechanism (shutter), shutter control, or shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.
20. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels in accessible areas around, above, and below the gauge with the shutter open. This survey shall be performed only by persons authorized to perform such services by the U.S. Regulatory Commission or an Agreement State.
21. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.
22. The licensee shall assure that the shutter mechanism of each device is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify, as appropriate, its "lock-out" procedures whenever a new device is obtained to incorporate the device manufacturer's recommendations.
23. Except for maintaining labeling as required by 10 CFR Part 20, or 71, the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission before making any changes in the sealed source, device or source-device combination that would alter the description or specifications as indicated in the respective certificate of registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.
24. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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24-32814-01

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25. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

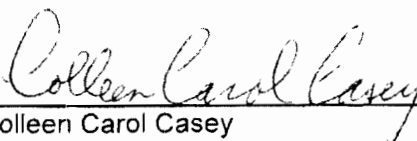
A. Application dated October 7, 2010 (with attachments); and,

B. Letters dated October 7, 2010 (with attachment) and December 21, 2010 (with attachment).

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date JAN 06 2011

By



Colleen Carol Casey  
Materials Licensing Branch  
Region IIII

USNRC FORM 314



NRC FORM 314  
(12-2010)  
10 CFR 30.38(k)(1); 40.42(p)(1);  
70.38(g)(1); and 72.34(k)(5)(1)(i)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0028

EXPIRES: 10/31/2013

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 Information Services Branch (7-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [infocollects.Resource@nrc.gov](mailto:infocollects.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NECB-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.

CERTIFICATE OF DISPOSITION OF MATERIALS

LICENSEE NAME AND ADDRESS

The PQ Corporation  
PO Box 840  
Valley Forge, Pennsylvania 19482-0840

LICENSE NUMBER

37-20627-01

DOCKET NUMBER

030-20003

LICENSE EXPIRATION DATE

December 31, 2014

- ☐ This license has expired. ☒ A. LICENSE STATUS (Check the appropriate box)  
☒ 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:  
Licensed material has been transferred to licensed facilities in PA and MO. New application in place for IN
- ☐ b. Disposal of radioactive materials:
- ☐ 1. Directly by the licensee:
- ☐ 2. By licensed disposal site:
- ☐ 3. By waste contractor:

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: \_\_\_\_\_ 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
Paige Simms	Radiation Safety Officer	812-288-7186 x 107	Paige.Simms@pqcorp.com

Mail all future correspondence regarding this license to:  
1101 Quartz Road Clarksville, IN 47129

C. CERTIFYING OFFICIAL

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

PRINTED NAME AND TITLE	SIGNATURE	DATE
Jeff Sauffer, Plant Manager		4-21-11 3-29-11

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.



**PQ Corporation**

P.O. Box 669  
Jeffersonville, IN 47131-0669

**CERTIFIED MAIL™**



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Nuclear Materials Safety Branch, Region III  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352