

April 15, 2011

Mr. Paul H. Johnson
Vice President
Contracts and Administration
Passport Systems, Inc.
70 Treble Cove Road
North Billerica, MA 01862

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING PASSPORT
SYSTEMS, INC'S APPLICATION FOR A SPECIAL NUCLEAR MATERIALS
LICENSE (TAC NO. L33082)

Dear Mr. Johnson,

We completed a detailed review of your application for a special nuclear materials license, dated November 25, 2010 (Agencywide Documents Access and Management System Accession Number ML110600726), and supplemental submission, dated February 8, 2011, and have identified the need to make a request for additional information (RAIs) before we can complete the review. Due to the general nature of these RAI's, this may be the first round of RAIs that the U.S. Nuclear Regulatory Commission's (NRC's) staff will need to complete their technical review. Your response to the additional information requested in the Enclosure should be provided within 30 days of the date of this letter.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390 of the NRC's "Rules of Practice," a copy of this letter and the Enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions regarding this letter, please contact me at (301) 492-3220 or via e-mail to Richard.Thompson@nrc.gov.

Sincerely,

/RA/

Richard D. Thompson, Project Manager
Fuel Manufacturing Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No. 70-7022

Enclosure:
Request for Additional Information

Mr. Paul H. Johnson
Vice President
Contracts and Administration
Passport Systems, Inc.
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North Billerica, MA 01862

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APPLICATION FOR A SPECIAL NUCLEAR MATERIALS LICENSE (TAC NO. L33082)

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Docket No. 70-7022

Enclosure:
Request for Additional Information

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**Request for Additional Information (RAI)
in Connection With the Application for a
Special Nuclear Materials License by
Passport Systems, Inc.**

General

1. The application appears to have inconsistent statements with regards to the materials for which a license is requested (Section 5 of the application), Section 10.IV, and also the exemption request for criticality accident alarm system. Please explain these statements and/or resolve them.
2. Explain where and how the materials will be handled and used consistent with 10 CFR 70.22 (a)(2). Verify that storage will be limited to the designated restricted area when not in use.
3. Verify that there is no other special nuclear materials (SNM) (other than designated on the application) in the facility or areas where the SNM will be used, handled, or stored.

Radiation Protection

1. Please provide, as supplemental information, the Radiation Protection (RP) Program document for the Massachusetts License. This information is needed consistent with 10 CFR 70.22 (a)(8).
2. Explain the construction and sealing of the UO₂ and U₃O₈ canisters. Verify that the canisters cannot be opened and are airtight. This information is needed consistent with 10 CFR 70.22 (a)(7).
3. Verify that it is Passport's intention to treat all SNM objects as sealed sources with respect to the material remaining sealed/unopened and will be routinely leak tested for contamination monitoring. This information is needed consistent with 10 CFR 70.22 (a)(8).
4. Explain Passport's experience with internal exposure monitoring and how this would occur in the event of material release and ingestion/inhalation. This information is needed consistent with 10 CFR 70.22 (a)(8).
5. The listing of instruments on page 11 of the RP Program does not contain any alpha detectors. Explain how a GM detector will be sensitive enough to monitor for Pu contamination or if other instrumentation is available beyond that listed. This information is needed consistent with 10 CFR 70.22 (a)(8).

Nuclear Criticality Safety

1. Please provide the Criticality Safety Evaluation for the material being used, stored, and handled as well as the models used to determine k_{eff} . This information should be submitted as supplemental information and will be used in evaluating the criticality accident alarm system's exemption request.

Enclosure

2. Explain how the mass of SNM in each object, as well as the density was determined. This information is needed consistent with 10 CFR 70.22 (a)(4)
3. Please verify that the UO_2 and U_3O_8 materials are cohesive and will not separate or disperse in water. This information is needed consistent with 10 CFR 70.22 (a)(4).
4. Explain how the canisters containing the UO_2 and U_3O_8 materials are constructed and sealed. This information is needed consistent with 10 CFR 70.22 (a)(7).

Fire Safety RAIs for Passport Systems:

1. Describe how and where the sources are utilized. What physical temperature are the sources when they are being used? Is there any combustible material present near a source when it is are being used? What are the procedures in the event of a fire when the source is being used?
2. Describe each facilities's building construction, fire area determination (interior rated walls), electrical installation, emergency lighting, life safety/egress, ventilation, and lightning protection.
3. Is the radioactive material stored/used at multiple locations on the site? What amount(s) is/are located where? Describe any physical barriers separating the radioactive material from a single fire incident. Do these barriers have a fire rating?
4. Describe each facilities' fire protection features (suppression, alarm, detection, fire-rated walls/opening protection). Are smoke/heat detection and/or alarm systems monitored offsite?
5. Describe any inspection, testing, and maintenance of fire protection systems at each facility.
6. Describe, for each facility, any potential combustible loading, possible fire scenarios, the potential consequences, and any mitigative controls. What consideration has been given to the impact from external events that could cause a fire (earthquake, tornado, airplane crash, fuel leak, etc)?
7. Are there any hazardous chemicals or processes which may contribute to the fire hazards in areas the sources are stored or utilized?
8. Is the facility compliant with NFPA 45, Standard for Fire Protection in Laboratory Facilities, and/or NFPA 801, Standard for Fire Protection for Facilities Handling Radioactive Materials?
9. Describe the frequency and scope of any training for facility workers in response to a fire (fire extinguisher, safe shutdown, evacuation, etc.)?
10. Where is the responding fire department located? Describe the responding fire department's qualifications and training for dealing with a fire involving radioactive

materials. Describe any pre-fire plan coordination with the responding fire department(s) (fire drills, preparation for hazardous materials response, etc.).

11. Will the sources ever be transported offsite? If so, what fire protection measures are in place for safe transportation of the sources?