1. Passport Systems, Inc. requests a temporary worksite under this license for the characterization of non-intrusive cargo inspection system. Describe the inspection system to be used during this testing cycle to detect the materials on SNM-2016.

Title 10 of the *Code of Federal Regulations* (10 CFR) 70.22(a)(2) requires that an applicant describe the activity for which the special nuclear material is requested and the general plan for carrying out this activity.

Response: The special nuclear material is required to perform testing of a cargo scanner which is designed to detect special nuclear material in vehicles and cargo. The plan for carrying out this activity is that the material is placed in specifically designed cargo containers and vehicles, the vehicles/cargo is scanned, and the material is removed and placed in the next cargo/vehicle or returned to its storage location.

2. Explain the planned duration of testing and operations, i.e. clarify what testing goal will end the establishment of the temporary worksite. Describe the planned daily working schedule and if there will be multiple shifts.

10 CFR 70.22(a)(3) requires that each application contain the period of time for which the activity is requested.

Response: The testing will be performed by Passport and the Domestic Nuclear Detection Office (DNDO). This testing is expected to end no later than the end of calendar 2017 when DNDO completes their characterization test plan. The nominal testing hours are 8AM to 8PM. It is expected that this would be a single shift, however, in the event that multiple Authorized Users (AU) would cover a single shift the special nuclear material would be returned to the storage location by the AU who checked it out and then subsequently checked out by the next AU. Authorized Users are personnel who have been properly trained and approved by the RSO.

3. Describe the staff that will be conducting this work, i.e. clarify if personnel, other than Passport Systems, Inc. that will be participating in the work conducted at this temporary worksite. If there are other than Passport Systems, Inc. staff, describe their role in this work and their qualifications. Describe who will be controlling and handling the materials.

10 CFR 70.22(a)(2) requires that an applicant describe the activity for which the special nuclear material is requested and the general plan for carrying out this activity.

Response: The staff that will be conducting the work are primarily scientists and government testers. DNDO subcontracts the testing to a separate entity, for example Sensor Concepts and Applications, Inc. (SCA). For DNDO testing, SCA staff execute the testing by loading containers with cargo and test objects. Only AU are allowed to control and handle the materials.

4. The license amendment states that “the total possession at all sites shall not exceed that of the license.” Since the SNM-2016 license limits meet the definition of special nuclear material of low strategic significance, revise the Source Storage and Security section to address the “applicable sections,” as stated in 10 CFR 73.40, for this facility.

10 CFR 73.40 “Each licensee shall provide physical protection at a fixed site, or contiguous sites where licensed activities are conducted, against radiological sabotage, or against theft of special nuclear material, or against both, in accordance with the

applicable sections of this Part for each specific class of facility or material license. If applicable, the licensee shall establish and maintain physical security in accordance with security plans approved by the Nuclear Regulatory Commission".

Response: The special nuclear material is required to perform testing of a cargo scanner which is designed to detect special nuclear material in vehicles and cargo. Only AU (see #2) will be allowed to check out the sources. The special nuclear material is placed in specifically designed cargo containers and vehicles, the vehicles/cargo is scanned, and the material is removed and placed in the next cargo/vehicle or returned to its storage location. When in the cargo container the material is locked within the container and AU maintains control. The container does not leave the immediate area around the scanner facility.

When not being used to test the scanning system the sources will be secured in the 2-hour fireproof safe. The storage room will be a locked area, which only authorized personnel have access to. When the sources are stored in the secured room in a 2-hour fireproof the scanner building is locked or access controlled by Passport personnel. The building is alarmed with door entry sensors and motion sensors. When the building is not occupied and controlled by Passport personnel it is locked and the alarm is armed. Massport Police serve as the first response are present on the port 24 hours a day. The letter in Attachment 4 indicates Massport's acknowledgement of Passport's facility and their responsibility to respond.

5. The application states that sources will be stored in a secured room in a 2-hour fire resistant safe. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(a)(1) will be met.

10 CFR 73.67(a)(1) "Each licensee who possesses, uses or transports special nuclear material of moderate or low strategic significance shall establish and maintain a physical protection system that will achieve the following objectives: (i) Minimize the possibilities for unauthorized removal of special nuclear material consistent with the potential consequences of such actions, and (ii) Facilitate the location and recovery of missing special nuclear material".

Response: The "Source Storage and Security" section has been modified to include the following:

> When the sources are stored in the secured room in a 2-hour fireproof the scanner building is locked or access controlled by Passport personnel. The building is alarmed with door entry sensors and motion sensors. When the building is not occupied and controlled by Passport personnel it is locked and the alarm is armed. Massport Police serve as the first response and are present on the port 24 hours a day. Massport police has guaranteed that they would respond to an alarm (See Attachment 5). Massport police would assess the potential of unauthorized access to the material and potential removal and coordinate with Passport personnel. The building is located within the Conley port terminal which has restricted access to personnel. The port controls access using the TWIC (Transportation Worker Identification Credential) Card Biometric Access Control System. TWIC cards are only issued to individuals that have met screening requirements set by the Transportation Security Administration. Additionally personnel are required to apply for and obtain Massport Identification cards.

6. The application states that sources will be stored in a secured room in a 2-hour fire resistant safe. Revise this section to include a detailed description of how the requirements of 10 CFR

73.67(a)(2) will be met.

10 CFR 73.67(a)(2) "To achieve these objectives, the physical protection system shall provide: (i) Early detection and assessment of unauthorized access or activities by an external adversary within the controlled access area containing special nuclear material; (ii) Early detection of removal of special nuclear material by an external adversary from a controlled access area; (iii) Assure proper placement and transfer of custody of special nuclear material; and (iv) Respond to indications of an unauthorized removal of special nuclear material".

Response: The "Source Storage and Security" section has been modified as per #5. In addition, as described in #2, and added to the "Source Use" section, during use to test the scanner

> The AU is responsible for the material being placed in specifically designed cargo containers and vehicles. The AU is also responsible for maintaining control of the material while the vehicles/cargo is scanned, and the material is removed and placed in the next cargo/vehicle or returned to its storage location.

7. The application states that sources will be stored in a secured room in a 2-hour fire resistant safe**.** Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(f)(1) will be met.

10 CFR 73.67(f)(1) *Fixed site requirements for special nuclear material of low strategic significance*. "Each licensee who possesses, stores, or uses special nuclear material of low strategic significance at a fixed site or contiguous sites, except those who are licensed to operate a nuclear power reactor pursuant to Part 50, shall: Store or use the material only within a controlled access area".

Response: The "Source Storage and Security" section has been modified as described in #5.

8. The application states that sources will be stored in a secured room in a 2-hour fire resistant safe. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(f)(2) will be met.

10 CFR 73.67(f)(2) *Fixed site requirements for special nuclear material of low strategic significance*. "Each licensee who possesses, stores, or uses special nuclear material of low strategic significance at a fixed site or contiguous sites, except those who are licensed to operate a nuclear power reactor pursuant to Part 50, shall: Monitor with an intrusion alarm or other device or procedures the controlled access areas to detect unauthorized penetrations or activities".

Response: The "Source Storage and Security" section has been modified as described in #5.

9. The application states that sources will be stored in a secured room in a 2-hour fire resistant safe. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(f)(3) will be met.

10 CFR 73.67(f)(3) *Fixed site requirements for special nuclear material of low strategic significance*. "Each licensee who possesses, stores, or uses special nuclear material of low strategic significance at a fixed site or contiguous sites, except those who are

licensed to operate a nuclear power reactor pursuant to Part 50, shall: Assure that a watchman or offsite response force will respond to all unauthorized penetrations or activities".

Response: The "Source Storage and Security" section has been modified as described in #5. Massport police has guaranteed that they would respond to an alarm (See Attachment 5). Massport police would assess the potential of unauthorized access to the material and potential removal and coordinate with Passport personnel.

10. The application states that sources will be stored in a secured room in a 2-hr fire resistant safe. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(f)(4) will be met.

10 CFR 73.67(f)(4) ***Fixed site requirements for special nuclear material of low strategic significance*****. "Each licensee who possesses, stores, or uses special nuclear material of low strategic significance at a fixed site or contiguous sites, except those who are licensed to operate a nuclear power reactor pursuant to Part 50, shall: Establish and maintain response procedures for dealing with threats of thefts or thefts of this material. The licensee shall retain a copy of the current response procedures as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the procedures were established. Copies of superseded material must be retained for three years after each change".**

Response: Passport has modified their procedures to include a response procedure in the case of threats of theft or theft.

11. The application states that transportation of sources to and from the facility will be handled by Department of Energy (DOE), or personnel trained to DOE standards. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(g)(1) will be met.

10 CFR 73.67(g)(1) ***In-transit requirements for special nuclear material of low strategic significance*****. "Each licensee who transports or who delivers to a carrier for transport special nuclear material of low strategic significance shall: (i) Provide advance notification to the receiver of any planned shipments specifying the mode of transport, estimated time of arrival, location of the nuclear material transfer point, name of carrier and transport identification; (ii) Receive confirmation from the receiver prior to commencement of the planned shipment that the receiver will be ready to accept the shipment at the planned time and location and acknowledges the specified mode of transport; (iii) Transport the material in a tamper indicating sealed container; (iv) Check the integrity of the containers and seals prior to shipment; and (v) Arrange for the in-transit physical protection of the material in accordance with the requirements of 10 CFR 73.67(g)(3), unless the receiver is a licensee and has agreed in writing to arrange for the in-transit physical protection".**

Response: All shipments are coordinated with receiving site to ensure mode of transportation, shipment arrival, and logistical concerns are understood. Shipment will be made only after authorization to ship has been granted by POC at receiving site and license is verified.

All radioactive material will be packed with tamper-indicating seals in accordance with DOE (e.g. Y-12) site-level procedures. Seal numbers are documented on packing list, verified before shipment, and communicated to receiving point of contact. An agreement with DOE regarding the custody and protection of material during shipping is provided as Attachment 5.

12. The application states that transportation of sources to and from the facility will be handled by DOE, or personnel trained to DOE standards. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(g)(2) will be met.

10 CFR 73.67(g)(2) "Each licensee who receives quantities and types of special nuclear material of low strategic significance shall: (i) Check the integrity of the containers and seals upon receipt of the shipment; (ii) Notify the shipper of receipt of the material as required in § 74.15 of this chapter; and (iii) Arrange for the in-transit physical protection of the material in accordance with the requirements of 10 CFR 73.67(g)(3), unless the shipper is a licensee and has agreed in writing to arrange for the in-transit physical protection".

Response: Tamper-indicating seals are verified against shipper documentation immediately within receipt of special nuclear material. Shipper is notified via email or fax upon receipt of material. For instances in which DOE personnel receive material at an NRC licensee facility, material is transferred to NRC licensee possession via chain of custody form. An agreement with DOE regarding the custody and protection of material during shipping is provided as Attachment 3.

13. The application states that transportation of sources to and from the facility will be handled by DOE, or personnel trained to DOE standards. Revise this section to include a detailed description of how the requirements of 10 CFR 73.67(g)(3) will be met.

10 CFR 73.67(g)(3) "Each licensee, either shipper or receiver, who arranges for the physical protection of special nuclear material of low strategic significance while in transit or who takes delivery of such material free on board the point at which it is delivered to a carrier for transport shall: (i) Establish and maintain response procedures for dealing with threats or thefts of this material. The licensee shall retain a copy of the current response procedures as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the procedures were established. Copies of superseded material must be retained for three years after each change; (ii) Make arrangements to be notified immediately of the arrival of the shipment at its destination, or of any such shipment that is lost or unaccounted for after the estimated time of arrival at its destination; and (iii) Conduct immediately a trace investigation of any shipment that is lost or unaccounted for after the estimated arrival time and notify the NRC Operations Center within one hour after the discovery of the loss of the shipment and within one hour after recovery of or accounting for such lost shipment in accordance with the provisions of 10 CFR 73.71".

Response: Passport has modified their procedures to include a response procedure in the case of threats of theft or theft. Passport will coordinate an immediate response during transit with the appropriate shipping organizations. For example, Emergency scenarios for shipments made by Y-12 personnel are handled using Y-12 site-level procedures for safety and security of special nuclear materials. Y-12 Plant Shift Superintendent's office is on call at all times for

reporting of shipping anomalies and safety or security concerns. An agreement with DOE regarding the custody and protection of material during shipping is provided as Attachment 3.

14. Reporting Requirements. Revise this section to include a detailed description of how the requirements of 10 CFR 73.71(b)(1) will be met.

Applicable Requirements: 10 CFR 73.71(b)(1) “Each licensee subject to the provisions of §§ 73.20, 73.37, 73.50, 73.51, 73.55, 73.60, or 73.67 shall notify the NRC Operations Center within 1 hour of discovery of the safeguards events described in paragraph I(a)(1) of appendix G to this part”.

Response: Passport has modified the reporting requirements in it Nuclear Material Control Plan to include: “ Passport personnel shall notify the NRC Operations Center within 1 hour of discovery of the safeguards events described in paragraph I(a)(1) of appendix G of 10 CFR 73.”