



# Radioactive Materials (RAM) Program

New / Renewal Medical License Checklist

Licensee \_\_\_\_\_ Lic. # \_\_\_\_\_

- Submit 1 copy only.** Number all pages sequentially that are submitted for review.
- Review the NUREG-1556 Volume 9 It can be used as guidance to complete this checklist: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/>.
  - Submit all Policy and Procedures to the Nevada Radiation Control Program.
- Submit the Application** signed by executive management or a person authorized to sign original documents.
  - If the licensee is an IC participant, all information is minimum Official Use Only. Treat all information regarding this licensee with the appropriate caution and sensitivity.
- Financial Assurance, Decommissioning and Emergency Plans:**
  - If financial assurance is required, submit documentation required by NAC 459.1955.
  - If emergency Plan is required per NAC 459.1951, submit the plan required by NAC 459.195.
- Mark all materials below that are requested, and submit the use for each selection.

**Radioactive Material**

**Form**

**Max Quantity**

<input type="checkbox"/> Any radioactive material permitted by 10 CFR 35.100	Any	As needed
<input type="checkbox"/> Any radioactive material permitted by 10 CFR 35.200; <b>except gases, generators and PET radioisotopes</b>	Any	As needed
<input type="checkbox"/> PET _____ permitted by 10 CFR 35.200	Liquid (or other form)	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq) per dose
<input type="checkbox"/> Gases _____ permitted by 10 CFR 35.200	Gas	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq) per dose
<input type="checkbox"/> Strontium/Rubidium-82 generators & Strontium-85 as a contaminant	Solid & liquid	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq)
<input type="checkbox"/> Iodine-131 permitted by 10 CFR 35.300	Sodium iodide capsules (commitment to capsules for a reduced bioassay condition)	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq) per dose
<input type="checkbox"/> Strontium-89 permitted by 10 CFR 35.300	Liquid (Metastron®)	____ millicuries ( ____ GBq); ____ millicuries ( ____ MBq) per dose
<input type="checkbox"/> Samarium-153 permitted by 10 CFR 35.300	Liquid (Quadramet®)	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq) per dose
<input type="checkbox"/> Yttrium-90 permitted by 10 CFR 35.300	Liquid Ibritumomab Tiuxetan (Zevalin®)	____ millicuries ( ____ GBq); ____ millicuries ( ____ GBq) per dose
<input type="checkbox"/> Radium-223 permitted by 10 CFR 35.300	Liquid (Xofigo®)	____ millicuries ( ____ MBq); ____ millicuries ( ____ MBq) per dose

\*Medical Use - Sealed sources (Manufacturer and Model Number)

<input type="checkbox"/> Strontium-90 permitted by 10 CFR 35.400	*Sealed sources (Manufacturer and Model Number)	_____ millicuries ( _____GBq)
<input type="checkbox"/> Palladium-103 permitted by 10 CFR 35.400	*Sealed sources (Manufacturer and Model Number)	_____ curie ( _____ GBq); _____ millicuries ( _____GBq) per seed
<input type="checkbox"/> Iodine-125 permitted by 10 CFR 35.400	*Sealed sources (Manufacturer and Model Number)	_____ curie ( _____ GBq); _____ millicuries ( _____ MBq) per seed
<input type="checkbox"/> Iodine-125 permitted by 10 CFR 35.400	*Sealed sources (Manufacturer and Model Number)	_____ curies ( _____ GBq)
<input type="checkbox"/> Cesium-131 permitted by 10 CFR 35.400	*Sealed sources (Manufacturer and Model Number)	_____ curie ( _____ GBq); _____ millicuries ( _____ GBq) per seed
<input type="checkbox"/> Gadolinium-153 permitted by 10 CFR 35.500	*Sealed sources (Manufacturer and Model Number)	_____ curies ( _____ GBq); _____ millicuries ( _____ GBq) per source
<input type="checkbox"/> Iridium-192 permitted by 10 CFR 35.600	*Sealed sources (Manufacturer and Model Number)	<b>21 curies (777 GBq)</b>
<input type="checkbox"/> Cobalt-60 permitted by 10 CFR 35.600	*Sealed sources (Manufacturer and Model Number)  <b><i>Teletherapy or Stereotactic</i></b>	_____ curies ( _____ GBq); _____ millicuries ( _____ GBq) per source
<input type="checkbox"/> Phosphorous-32 permitted by 10 CFR 35.1000	*Sealed sources (Manufacturer and Model Number)	_____ curies ( _____ GBq); _____ millicuries ( _____ GBq) per source assembly
<input type="checkbox"/> Strontium-90/ Yttrium-90 permitted by 10 CFR 35.1000	*Sealed sources (Manufacturer and Model Number)	_____ curie ( _____ GBq); _____ millicuries ( _____ MBq) per source
<input type="checkbox"/> Yttrium-90 permitted by 10 CFR 35.1000	*Microsphere sealed sources (Manufacturer and Model Number) <b><i>TheraSphere® or SIR-Spheres</i></b>	_____ curies ( _____ GBq); _____ millicuries ( _____ GBq) per vial
<input type="checkbox"/> Cobalt-57	Sealed sources	_____ millicuries ( _____ GBq); _____ millicuries ( _____ GBq) per source
<input type="checkbox"/> Cesium-137	Sealed sources	_____ millicuries ( _____ GBq); _____ millicuries ( _____ GBq) per source
<input type="checkbox"/> Yttrium-90	Liquid	_____ millicuries ( _____ GBq)
<input type="checkbox"/> Any radioactive material permitted by 10 CFR 35.65	Any form permitted by 10 CFR 35.65	As permitted by 10 CFR 35.65
<input type="checkbox"/> Depleted Uranium	Metal	_____ kilograms
<input type="checkbox"/> Other:	Form:	_____ Units:

- Sealed sources:** Policy & Procedure –
  - Submit a complete current inventory with the date & Radiation Safety Officer (RSO) initials  
Include: Manufacturer, model no. & serial no., nuclide & activity and storage location
  - Commit to a physical inventory every 6 months and maintain for **3 years**.
  - Commit to Leak Testing as  $\leq 6$  months / maintain records per NAC 459.307 and submit:
    - Include the name of the company supplying kits and analyzing the leak tests.
    - If they are self-analyzed, submit Licensee's procedures for analysis.
    - List of Users to perform leak tests other than the RSO and submit their training.
- Storage and use facility:** address and diagram
  - Addresses of the business office & use facility
  - Complete facility diagram: direction N $\uparrow$ , labeled immediate/surrounding rooms and hallways, storage area, secure areas, occupancy factor and scale.
  - For generators, PET, or HDR: Submit shielding report and commitments to shielding
  - Describe means of preventing access to unauthorized personnel, locks, key pads etc.
  - Submit a copy of the Landlord Acknowledgement of Responsibilities Related to Radioactive Materials form available at: [http://dpbh.nv.gov/uploadedFiles/dpbhngov/content/Reg/Radoactive-Mtl/Docs/LandlordAcknowledgementForm\(11-17-15\).pdf](http://dpbh.nv.gov/uploadedFiles/dpbhngov/content/Reg/Radoactive-Mtl/Docs/LandlordAcknowledgementForm(11-17-15).pdf).
  - Submit a copy of State or local business license with the storage address.
- RSO:** Review 10 CFR 35.50 & NUREG 1556 requirements. (*The alternate RSO is not required*)
  - Submit an organizational chart and a Delegation of Authority form with signatures from senior management for the RSO to act on the license:  
[http://dpbh.nv.gov/uploadedFiles/dpbhngov/content/Reg/Radoactive-Mtl/Docs/RSO\\_DelegationAuthority.pdf](http://dpbh.nv.gov/uploadedFiles/dpbhngov/content/Reg/Radoactive-Mtl/Docs/RSO_DelegationAuthority.pdf).
  - Submit current RAM license from NV, NRC or other state, must be named as RSO for same uses, or
  - New RSO and ARSO submit NRC Form 313A (RSO) Recentness of training per 10 CFR 35.59
- AU:** or change in Authorized use request. (*Submit a complete list of all AU's and uses.*)
  - Submit a current RAM license from NV, NRC or other state showing the AU for same uses.
  - Submit the appropriate NRC Form 313A for the uses requested, signed by the Preceptor.
  - For a new 10 CFR 35.300, submit at least 3 AU supervised cases in last 6 months.
  - Submit a copy of approved Specialty Board Cert. (10 CFR 35 subpart D, E, G, or H)
  - Submit a current Nevada Medical Examiners Board/NV Board of Osteopathy card for each AU.
- AMP:** addition or change in Authorized use: (35.400 & 600)
  - Submit a current RAM license from NV, NRC or other state listing the AMP for same uses.
  - Submit a NRC Form 313A (AMP) form for the uses requested, signed by the Preceptor.
  - Submit a specialty Board Certification copy (10 CFR 35.51)
- Dosimetry:** NUREG 1556 Vol. 9 Rev. 2 - Appendix M
  - Provide the name of your dosimetry provider (must be NVLAP approved) and list the exchange frequency.
  - Explain the type of dosimetry used (WB & finger) (film & TLD)
  - Commitment to maintain Control Badges and records indefinitely
  - If the licensee does not use dosimetry due to 10% rule; they need to submit proof that they are below the 10% annual exposure limit.
- ALARA Program:**
  - Commit to an annual review of the Radiation Protection Plan, including the Written Directive Policy
  - Submit a copy of the written directive, a sample for each type of therapy.
  - Commit to posting "Caution Radioactive Material" and "Caution Radiation Area" signs appropriately
  - Commit to posting the current NRC1 "Notice to Employees" signage
  - If required**, Commit to Radiation Safety Committee meetings and maintaining minutes for 5 years
  - Commit to ALL staff that pack, ship or determine shipping of RAM will obtain HAZMAT training
- Training:** NUREG 1556 Vol. 9 Rev. 2 - Appendix J
  - Commit to an annual training assessment and implementation per NUREG 1556 Vol. 9
  - Commit to training & dosimetry records to be on site for Agency Techs/Students that are on site.
  - Submit current HAZMAT training certificate to ship hazardous materials (49 CFR required)

- Commit that all persons employed at this facility to engage in Radiation Therapy and Radiological Imaging are properly licensed pursuant to NRS Chapter 653 or are exempt from the requirement to obtain such licensure pursuant to NRS 653.430.
- Submit a facility attestation that all persons employed at this facility to engage in Radiation Therapy and Radiological Imaging are properly licensed pursuant to NRS Chapter 653 or are exempt from the requirement to obtain such licensure pursuant to NRS 653.430.

[https://dpbh.nv.gov/uploadedFiles/dpbh.nv.gov/content/Reg/Mammography/dta/Forms/Attestation\\_of\\_Employee\\_Training\\_Rev.092021.pdf](https://dpbh.nv.gov/uploadedFiles/dpbh.nv.gov/content/Reg/Mammography/dta/Forms/Attestation_of_Employee_Training_Rev.092021.pdf)

**Safe Injection Training:** NRS 653.550(1)(a)

- Submit an attestation of Safe Injection Training into your account profile in the Centralized Licensing, Inspections and Certification System – CLICS that all persons engaged in injection practices have performed safe injection training pursuant to NRS Chapter 653 or are exempt from the requirement to perform such training pursuant to NRS 653.550(1)(a).

[https://dpbh.nv.gov/uploadedFiles/dpbh.nv.gov/content/Reg/Mammography/dta/Forms/Attestation\\_of\\_Safe\\_Injection\\_Training\\_Rev.072021\(4\).pdf](https://dpbh.nv.gov/uploadedFiles/dpbh.nv.gov/content/Reg/Mammography/dta/Forms/Attestation_of_Safe_Injection_Training_Rev.072021(4).pdf)

**Radiation Monitoring:**

- Submit meter manufacturer, model #, serial #, probes, and use (Rate -v- contamination)
- Submit the name of the company performing the calibration
- Commit to calibration annually and to maintain records for 3 years.

**Dose Calibrator:**

- Commit to calibration in accordance with National Standards or per manufacturer’s instructions:

TEST REQUIRED	FREQUENCY
Accuracy	at installation, then annually thereafter
Constancy	at installation, then daily thereafter
Linearity	at installation, then quarterly thereafter
Geometry	at Installation; after repair, loss of power or moving instrument

- Commit to maintain record for 3 years
- If no dose calibrator is used per 10 CFR 35.63. Commit- *“We will use decay correction for the unit dose from the radiopharmacy prescription.”*

**Area Surveys:** NUREG 1556 Vol. 9 Rev. 2 - Appendix R

- Area surveys for each day and area where material is used, include Trigger Level
- Weekly Wipe (Contamination) survey, include the Trigger Level
- Commit to maintain records for 3 years

**Safe Use of Unsealed Material:** NUREG 1556 Vol. 9 Rev. 2 - Appendix T

- Submit the Policy and Procedure

**Emergency and Spill Procedures:** NUREG 1556 Vol. 9 Rev. 2 - Appendix N

- Submit the Policy and Procedure
- State of Nevada Emergency numbers and RSO contact information

Radiation Control Program (8:00AM–5:00PM M-F)	(775) 687-7550
Radiation Control Program 24 hr Emergency Number	(877) 438-7231
Nevada Highway Patrol (24 hrs)	(775) 687-0400

**Order & Receipt of Materials:** NUREG 1556 Vol. 9 Rev. 2 - Appendix O

- Submit the Policy and Procedure

**Opening Packages containing RAM:** NUREG 1556 Vol. 9 Rev. 2 - Appendix P

- Submit the Policy and Procedure

**Waste management:** NUREG 1556 Vol. 9 Rev. 2 - Appendix W

- Commitment-“Radioactive Waste and sealed sources will be transferred to a low level waste facility, returned to the manufacturer or transferred to a specific licensee authorized to possess the material.”
- Submit Decay in Storage Policy and Procedure (t1/2 <120 day is allowed)
- Commitment to maintain records of receipt, transfer, and disposal of all sealed sources received and possessed under the license

- Commitment that license termination will be conducted in compliance with Nevada Administrative Code (NAC) 459.200.
- Commit to abiding by the conditions and limitations as stated in "Licensing Guidance: Microsphere Brachytherapy Sources and Devices" Revision 9, dated February 12, 2016", which apply to use of the Yttrium-90 Sirtex Medical Limited SIR-Spheres® and TheraSphere® microspheres used for permanent implantation therapy.
- Service Providers and Services:**
  - Identify current or planned service providers and services that involve the use of radioactive material at the use location listed on this license (nuclear pharmacies, nuclear medicine technologists, medical physicist, dose calibrator calibrations, nuclear medicine camera calibrations, QA/QC checks, etc.).
    - Name of the service provider and services provided.
    - Identify if the service provider will be working under this RML or their own RML and provide the license number.
  - Identify who will procure and receive licensed material (sealed or unsealed sources).
  - Describe the transfer of licensed material to and from the service provider.
  - Describe how spills and/or emergencies will be handled and reported.
  - Describe how licensed material will be returned to storage or disposed of as waste.
  - For service providers working under this RML:
    - Commit to maintaining a list of all service provider personnel who've worked under this license.
    - Commit to maintaining records of licensee specific training on the following:
      - Safe Use of Unsealed Licensed Material, Emergency and Spill Procedures with contact information for RSO.
      - How the service provider coordinates receipt and return of licensed material.
      - Other applicable licensee procedures.
    - Commit to maintaining records of personnel monitoring, including written annual reports when appropriate.
- Gases (Xe-133):**
  - Commit to manufacturer recommendations for QC/QA
  - Commit to monthly checks of machinery (hoods, traps, etc.)
  - Commit to annual checks of ventilation calibration (- pressure) and posting
  - Submit the name of the company testing the ventilation systems for RAM gases
  - Commit to annual calibration of velometer/anemometer
- Radium-223 Xofigo:**
  - Submit AU verification as authorized for 35.300, or training per 35.396.
  - Submit the policy and procedure for the ordering, handling & use, and disposal of Ra-223.
  - Submit the written directive for Ra-223
  - Commit to following the full prescribing Information for Xofigo provided by Bayer revised on 3/2016 or most current revision and submit a copy of the full prescribing information.
  - Commit to performing annual calibrations of dose calibrators dial settings using a National Institute of Standards and Technology (NIST) traceable Radium -223 standard and submit the calibration procedure.
- Manual Brachytherapy Facility: (10 CFR 35.400)**
  - Submit the Policy and Procedure (P & P) for security of devices
  - Submit the P & P for Emergency equipment; include a list of what is available
  - Submit the P & P for inventory and leak testing sources, if applicable
- Rubidium (Rb-82) generator:**
  - Request the minimum required licensing nuclides and amounts: Strontium (Sr)-82 = 200 mCi, Rubidium (Rb)-82 = 200mCi and Sr-85= 1Ci (as a contaminant).This allows for generator exchange.
  - Submit the Manufacturer, model number, nuclide activity for each of the check sources.
  - Commit to the current Quality Control Procedures developed by the manufacturer and approved by the U.S. Food and Drug Administration (FDA) as revised March 2012 or later.
  - Commit to and submit a copy of the current Bracco Diagnostics "Infusion System User Guide".
  - Commit to and submit a copy of the current Prescribing Information (PI) for the CardioGen-82 generator.
  - Submit the manufacturer and model number for the dose calibrator.
  - Submit the quality control procedures for the dose calibrator for performing the standard testing.

- Submit the daily step by step PET (Sr-82, Sr-85, and Rb-82) quality control procedures for the dose calibrator.
- Submit the procedures for the storage and disposal of Sr-85 waste. Include procedures for daily surveys of the Sr-85 generator waste and the disposal of the Sr-85 generator waste shall be documented.
- Submit proof of the manufacturer's initial training for all of the AU's, RSO's and the users (technologists).
- Commit to anyone who uses or supervises the use of the generator will receive device specific training by the manufacturer prior to initial use.
- Commit to the Certified/Registered Nuclear Medicine Technologists who use the generator and the RSO must annually receive the manufacturer's refresher or recertification training for this device.
- Commit to completing the Sr-82/Sr-85 Testing worksheet, Calibration worksheet, Volume Tracking worksheet and the Monthly Receipt/Return Worksheet to include the generator lot number, serial number and calibration date.
- Commit to each generator the licensee shall maintain an on-going record of all eluate volumes (washing, testing and dosing volumes) including a summary of the cumulative volume of eluate.
- Commit to measuring and calculating the Strontium 82 (Sr-82)/ Rubidium 82 (Rb-82) and Strontium 85 (Sr-85)/Rb-82 concentrations using an approved dose calibrator set on its most sensitive microcurie (uCi) scale and record all values with at least one significant figure and at least two places to the right of the decimal place according the following schedule below.
  - A. Daily on days of use prior to administration; and
  - B.1. Additional daily test at the midpoint of the day should the initial test concentrations of Sr-82 reach 0.002 uCi per millicurie (mCi) of Rb-82; or
  - 2. The initial test concentrations of Sr-85 reach 0.02 uCi per mCi of Rb-82; or
  - 3. When 14 liters of total eluate has passed through the generator at the time points determined by the day's elution volumes where tests are performed at every 750 milliliters eluate use for that day. (i.e., one additional test when 750 milliliters of eluate is used during the day, a second additional test when 1,500 milliliter of eluate is used during the day and an additional test for each 750 milliliters of eluate used during the day.
- Commit to stop using the generator on patients at the expiration limits listed below:
  - A. 17 liters for the generator's cumulative eluate volume; or
  - B. 42 days post generator calibration date; or
  - C. An eluate concentration of Sr-82 of equal to or greater than 0.01 uCi per mCi of Rb-82; or
  - D. An eluate concentration of Sr-85 of equal to or greater than 0.10 uCi per mCi of Rb-82.
- Commit to following the manufacturer's annual preventative maintenance schedule for the Infusion Cart System and complete all of the recommended corrective actions.
- Commit to participating in the manufacturer's generator and infusion cart system online monitoring programs to determine use or stability of these products.
- Commit to reporting to the RAM Program any generator leaks, generator or cart failures, and each occurrence when the eluate concentration of Sr-82 equals or exceeds 0.02 uCi per mCi of Rb-82 or the eluate concentration of Sr-85 equals or exceeds 0.20 uCi per mCi of Rb-82.
- Commit to all records of these tests and reports shall be maintained for three years and be available for inspection by the RAM Program.
- Commit to not sharing this generator with any other licensees, AU's or PET trailers.
- Submit the P & P for inventory and leak testing sources, if applicable
- RUBY-FILL (Rubidium Rb-82) generator:**
  - Request the minimum required radionuclides and amounts: Strontium (Sr)-82 = 250 mCi, Rubidium (Rb)-82 = 250 mCi and Sr-85= 2 Ci (as a contaminant). This allows for generator exchange.
  - Commit to following the current Quality Control Procedures developed by the manufacturer and approved by the U.S. Food and Drug Administration (FDA) for the RUBY Rubidium Elution System™ User Manual as revised April 2019 or later.
  - Commit to following the RUBY Rubidium Elution System™ user manual and maintaining records necessary to demonstrate compliance.
  - Submit a copy of the Full Prescribing Information (FPI) for the RUBY-FILL (Rubidium Rb-82) generator.
  - Commit to following the Full Prescribing Information (FPI) for the RUBY-FILL (Rubidium Rb-82) generator and maintain records to demonstrate compliance.
  - Commit to using the RUBY Rubidium Elution System™ including the dose calibrator included in the system.

- Commit to following the manufacturer's annual preventative maintenance schedule for the RUBY Rubidium Elution System™ and to complete all of the recommended corrective actions.
  - Identify the Nuclear Pharmacy with a medical distribution radioactive materials license (RML) which will be providing the generators and submit a copy of their RML. If you cannot obtain a copy of the RML then please submit: the RML number, the name of the agency who issued the license, and the name and phone number of the Radiation Safety Officer (RSO).
  - Submit procedures for receipt, storage, and return or disposal of the RUBY-FILL Rb-82 generators.
  - Submit the procedures for the storage and disposal of generator radioactive waste including Sr-85 waste.
  - Commit that prior to shipment of used generators, all required permits (i.e. export permits) will be obtained and that documentation of each shipment and permit will be maintained.
  - Commit to provide appropriate shielding of the radioactive waste from the generator, which contains Sr-82 and Sr-85.
  - Commit to daily surveys of the radioactive waste, that the disposal of all radioactive waste shall be documented, and that daily surveys and disposal records shall be maintained for three years and be available for inspection by the RCP.
  - Submit documentation of the manufacturer's certification training for all of AU's, RSO's, and the users (nuclear medicine technologists).
  - Commit that everyone who uses or supervises the use of the generator will complete the manufacturer's certification training, from the manufacturer for this device, prior to initial use.
  - Commit the Certified/Registered Nuclear Medicine Technologists and anyone who uses the generator and the RSO will complete the manufacturer's recertification training for this device at least every two years.
  - Commit to use only additive-free 0.9% Sodium Chloride Injection USP to elute the generator.
  - Commit to immediately stop patient infusion and permanently discontinue the use of the affected RUBY-FILL generator whenever an incorrect eluent is used.
  - Commit to providing patients instructions described in the FDA FPI.
  - Commit for each generator the licensee shall maintain an on-going record of all eluate volumes (washing, testing and dosing volumes) including a summary of the cumulative volume of eluate.
  - Commit to measuring and calculating the Strontium-82 (Sr-82) / Rubidium-82 (Rb-82) and Strontium-85 (Sr-85)/Rb-82 concentrations using an approved dose calibrator set on its most sensitive microcurie (uCi) scale and record all values with at least one significant figure and at least two places to the right of the decimal place according the following schedule below.
    1. Daily on days of use prior to administration; and
    2. Repeat every 4 patients after an Alert Limit has been detected;
      - Alert Limits:
        - 20 L total elution volume has passed through the generator column;
        - Sr-82 level reaches 0.004 uCi/mCi Rb-82;
        - Sr-85 level reaches 0.04 uCi/mCi Rb-82;
    3. Immediately after detection of the volume alert limit (20L).
  - Commit to stop using the generator on patients at the expiration limits listed below:
    - Total elution volume of 30 L has passed through the generator column;
    - Expiration date of the generator (60 days post- manufacturing);
    - An eluate Sr-82 level of 0.01 uCi/mCi Rb-82;
    - An eluate Sr-85 level of 0.1 uCi/mCi Rb-82.
  - Provide the prescribed patient dosage or prescribed dosage range for the facility.
  - Commit to having the RSO perform quarterly reviews of the quality assurance testing and patient dose records.
  - Commit to reporting to the RCP any generator leaks, generator or cart failures, any elution of a generator with an incorrect eluent, and each occurrence when the eluate concentration of Sr-82 equals or exceeds 0.02 uCi per mCi of Rb-82 or the eluate concentration of Sr-85 equals or exceeds 0.20 uCi per mCi of Rb-82.
  - Commit that all records of these tests and reports shall be maintained for three years and be available for inspection by the RAM Program.
  - Commit to not sharing this generator with any other licensees, AU's or PET trailers.
- Gamma Stereotactic Radiosurgery & Remote Afterloader Units:** (10 CFR 35.600)
- Submit the P & P for calibrations; include who will do calibrations and their training.

- Commit to performing manufacturer's recommended QC prior to any patient cases.
- Commit to follow the manufacturer's recommendations for routine and extended maintenance on the unit; a copy of the manual shall be available to each person using, or having responsibility for the use of, the device
- Submit the description of the warning systems/controls (locks, signs, alarms, warning lights and interlocks)
- Submit the description of the video and intercom communication/surveillance
- Submit the description of the steps to prevent two machine operations in a single treatment room.
- Submit the P & P for security of devices and a description of the security measures used
- Submit the P & P for Emergency equipment
- Submit the P & P for inventory and leak testing sources, if applicable
- Commit to radiation surveys and tests that shall be performed before initiation of a high dose rate (HDR) remote afterloader/Gamma Stereotactic treatment program, and subsequent to each installation of a sealed source.
- Commit to the HDR remote afterloader/Gamma Stereotactic unit will not be relocated to a new facility without prior approval of the plans and details by the RAM Program.
- Commit to any changes made in the treatment room shielding, location of the unit within the treatment room, or use of the high dose rate remote afterloader/Gamma Stereotactic unit that could result in increased radiation levels in areas outside the treatment room shall be evaluated by a radiation survey and reported to the RCP within 30 days.
- Commit to submitting an inventory change to the RAM Program if +/- from permanent inventory.

**Investigational New Drugs & Uses: (10 CFR 35.1000)**

- Y-90 Microsphere must request the brand of therapy (TheraSphere / SIR-Spheres); and
  - AU must be interventional radiologist or authorized for 35.300 or 35.400 uses; and
  - AU must have manufactures training with 3 simulated case studies (In vitro); and
  - AU must have 3 clinical cases (In Vivo) under the supervision of an AU or Manufactures trainer.
  - RCP will approve each user after all criteria have been met. (See link below)  
<http://pbadupws.nrc.gov/docs/ML1217/ML12179A353.pdf>
- For all investigational new drugs (IND) commit to abiding by FDA protocols/regulations.
- Commit to following the IND Plans

**Mobile Imaging: NUREG 1556 Vol. 9 Rev. 2 - Appendix V**

- Explain the use and transportation:
  - A coach (self-contained, materials stay with vehicle); or Include the VIN for the coach
  - A van (materials & camera will enter use locations) Include the address for each use location.
- Submit a Memorandum of Understanding (MOU) for each location of use.
- Submit a facility diagram for each site, including the BASE.
- Commitment: "Radioactive Materials will be transported in accordance with U.S. DOT regulations."
- Commit to all of the Rb-82 Generator section above.

\*\*Use this link to use the Materials Control & Security Checklist (10 CFR part 37) if applicable:

[http://dpbh.nv.gov/Reg/RAM/dta/Forms/Radioactive\\_Material\\_Program\\_\(RAM\)\\_-\\_Forms/](http://dpbh.nv.gov/Reg/RAM/dta/Forms/Radioactive_Material_Program_(RAM)_-_Forms/)

**CERTIFICATION**

The Applicant understands that all commitments that are marked above are binding and considered part of the license application; if not applicable, DO NOT mark. All applicable items that require submission must accompany the application, license fee and this checklist.

\_\_\_\_\_  
CERTIFYING OFFICER — PRINTED NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE