<u>Do not use the following checklist to write your application</u>. The following checklist is to help you verify that you have included the information necessary for your radioactive materials application before you upload the document. There are specific details in the guidance document not included in the checklist that are applicable to the application. If the checklist is used to write the application, your application's processing may be delayed.

The checklist is a high-level overview and does not necessarily include specific details for each item. It is meant to ensure only that you addressed each item necessary for the application. Details are discussed and provided for each individual item in the guidance document. The guidance document should have been used to write the application because it includes the details of what information is necessary to determine that the licensed materials will be used safely and will be properly secured. The checklist will help you to review your application to make sure that you have not forgotten to submit information regarding an item for the application.

Using the checklist, please review your application. When you have verified that you have included the information requested for an application, please proceed and follow the instructions to upload your application through the application portal and pay the application fee. Your application is not complete until the application is uploaded **AND** the fee is paid.

For future applications and payments, please make note of the following:

Renewal applications must be received by the DWMRC at least 30 days prior to the expiration date listed on the license. If not, your license may expire and you may be required to store or dispose of your radioactive materials until you can be issued a new radioactive materials license.

Annual fees are due each year on the month and day stated in the expiration date. If the license expires on March 31, 2025, an annual fee would be due on March 31, 2021, March 31, 2022, and so on. For this example, there would be no annual fee required on March 31, 2025 since a renewal is due that year.

If you have questions, please feel free to contact a member of the Radioactive Materials Section at 801-536-0200.

#### Checklist for Application to Produce RAM Using an Accelerator

#### Items 1 through 4: Locations & Responsible Individuals

Item No. and Title	Suggested Response	
Item 1: License Action	You clearly stated what type of action you are requesting and provided the license number if the request involves an existing radioactive materials license:	
Type	A NEW LICENSE application;	[]
	• An AMENDMENT (change) to one or more item(s) of an existing license. [Information for only the item(s) being changed are required to be submitted;]	[]
	OR	
	• A LICENSE RENEWAL Application for an existing Radioactive Materials License. [MUST BE RECEIVED by DWMRC at least 30 days prior to expiration date stated on license].	[]
Item 2: Name and Mailing Address of	• The legal name of applicant as registered with the UT Division of Corporations and Commercial Code is on the request. If operating under a "Doing Business As" company, the corporation's name and the DBA name is provided: Example: ABC, Inc. DBA Company Operating Name"	[]
Applicant	Full Mailing Address for applicant, including zip code, is provided.	[]
	If separate Billing Address is necessary, Billing Address is provided.	[]
Item 3: Address(es)	• <u>All</u> "Location of Use" physical address(es) or location description(s)* (3 mi W of Power Plant on Hwy 10, City, UT) are provided.	[]
Where Licensed Materials Will be Used or	Information showing or describing exact location of licensed materials are marked as protected [Sensitive-Security Related Information Protected Under 63G-2-201(3)(b)].	[]
Possessed	Indication of use of devices at temporary job sites was provided.	[]
	* P.O. Boxes are not accepted for locations of use. Locations of Use are locations where materials are stored, used, prepared, etc excluding temporary job sites.	
Item 4: Person(s) to be	Name of Individual(s) to contact for additional information for the application or clarification are provided	[]
Contacted About the Application	• Contact information for the named individual(s) provided — Telephone numbers (cell & office), email address(es)	[]
	• A completed Delegation of Authority Form for each individual who is not a member of management but who is authorized to act on behalf of the applicant/licensee was provided.	[]

Item 5: Radioactive Materials to be Possessed & Quantities

Item No.	Suggested Response	Yes	Response/ Description Attached
5.	RADIOACTIVE MATERIAL Unsealed and Sealed Radioactive Material		
	For unsealed materials:		
	The applicant provided an element name with mass number, chemical and/or physical form, and a maximum requested possession limit for each radionuclide produced.		
	The applicant identified the largest quantity of each radionuclide to be possessed at one time under the license, including produced, stored, and waste materials.		
	For potentially volatile materials (e.g., I-123):		
	The applicant specified whether the materials to be possessed will be free (volatile) or bound (nonvolatile) and the requested possession limit for each form.		
	For sealed radioactive materials and discrete sources of radium-226:		
	The applicant identifed each radionuclide (element name and mass number) that will be used in each source.		
	➤ The applicant provided the manufacturer's or distributor's name and model number for each sealed source, device, or source/ device combination requested. If the manufacturer and distributor are no longer in service, a copy of the SSD registration certificate may be requested from the DWMRC, the NRC or the issuing Agreement State.		
·	The applicant confirmed that each sealed source, device, or source/device combination is registered as an approved sealed source, device, or discrete source by NRC or an Agreement State, and will be possessed and used in accordance with the conditions specified in the registration certificate. The applicant provided the SSD registration certificate number, if available. (Do		
	not Submit Copy of Sheet).		_
	The applicant confirmed that the activity per source and maximum activity in each device will not exceed the maximum activity listed on the approved certificate of registration issued by the NRC or by an Agreement State.		
<u> </u>			

Item 5: Radioactive Materials to be Possessed & Quantities (Continued)

Item No.	Suggested Response	Yes	Response/ Description Attached
5.	RADIOACTIVE MATERIAL Unsealed and Sealed Radioactive Material (Continued)		
	The applicant provided all available information identified in 10 CFR 32.210(c) if the sealed source, device, or source/device combination is not registered and was manufactured before October 23, 2012. The applicant provided sufficient additional		0
	information to demonstrate under R313-22-32(6) that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. The provided information included		
	a description of the source or device, a description of its radiation safety features, the intended use and associated operating experience with the source, device, or source/device combination, and the results of a leak test.		<b>-</b>
	The applicant provided the manufacturer, model number, radionuclide, and quantity for calibration and reference sources with less than 1 millicurie beta/gamma and 10 microcuries alpha. [R313-22-32(6)(iii)].		
	➤ Licensees who request a possession limit in excess of the quantities specified in R313-22-90, "Schedule C Quantities of Radioactive Materials Requiring Consideration of the Need for an Emergency Plan for Responding to a Release," must submit an emergency plan, as specified in R313-22-32(8).		
	Financial Assurance and Recordkeeping for Decommissioning	_	_
	The applicant committed that pursuant to R313-22-35(7)(a), the applicant will maintain records important to decommissioning and transfer the records to a DWMRC, an NRC, or Agreement State licensee before licensed activities are transferred or assigned, in accordance with R313-19-34(2).		
	Furthermore, pursuant to R313-12-51(6), prior to license termination, the applicant committed to forward the records required by R313-22-35(7)(a) to the DWMRC before the license is terminated."		
	AND		
	If financial assurance is required, the applicant submitted evidence of financial assurance following the guidance of NUREG–1757, Volume 3.	٥	٥

#### Items 6 Through 11: Proposed Use of Materials, Training and Experience, Facilities and Equipment, Radiation Protection Program, and Waste Disposal

Item No.	Suggested Response	Yes	Response/ Description Attached
6.	PURPOSE FOR WHICH LICENSED MATERIAL WILL BE USED  The applicant committed that accelerator produced radioactive		
	materials will be possessed and stored in accordance with DWMRC requirements. The applicant has also specified the proposed uses for all other radioactive material that is not accelerator-produced, (e.g., calibration of instruments).	_	
7.	INDIVIDUALS RESPONSIBLE FOR THE RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE		
	The applicant submitted an organizational chart describing the management structure, reporting paths, and flow of authority between executive management and the radiation safety officer (RSO).		
	Radiation Safety Officer		
	The applicant provided the following:		
	<ul> <li>the name of the proposed RSO who will be responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures;</li> </ul>	_	o
	<ul> <li>information demonstrating that the proposed RSO is qualified by training and experience</li> </ul>		
	Individuals Authorized to Handle Licensed Material		
	The applicant provided the following:		
	<ul> <li>name of each proposed individual with the types and quantities of licensed material, including the activated targets and activated products, to be possessed and handled</li> </ul>		
٠	<ul> <li>information demonstrating that each proposed individual is qualified by training and experience to possess and handle the requested licensed materials</li> </ul>		ت .
8.	TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS		
	Occupationally Exposed Individuals and Ancillary Personnel The applicant submitted a description of the radiation safety training program, including topics covered, groups of workers, assessment of training, qualifications of instructors, and the method and frequency of training.	٥	

Item No.	Suggested Response	Agree to Use	Response/ Description Attached
9.	FACILITIES AND EQUIPMENT		
	The applicant described the facilities and equipment to be made available at each location where radioactive material will be produced, possessed, or used (see Appendix D of guidance document for topics that should be included). The applicant included the following in the application:		
	<ul> <li>a description of the areas assigned for the production, transfer, storage, preparation, shipping, security, and measurement of radioactive material,</li> </ul>		
	<ul> <li>a description and diagrams showing the locations of delivery lines, shielded areas and equipment (e.g., hot cells, waste), the proximity of radiation sources to unrestricted areas, and other items related to radiation safety,</li> </ul>	_	
	<ul> <li>a description and diagram of the ventilation system, including representative equipment such as hot cells, glove boxes, or fume hoods. Pertinent airflow rates, differential pressures, filtration equipment, and monitoring systems should be described in terms of the minimum performance to be achieved. Confirm that such systems will be employed for the use or storage of radioactive materials that have the probability of becoming airborne,</li> </ul>	٥	
	<ul> <li>verification that ventilation systems ensure that effluents are ALARA, are within the dose limits of R313-15-301, and are within the ALARA constraints for air emissions under R313-15-101(4).</li> </ul>		
10.	RADIATION SAFETY PROGRAM Audit Program	requi	sponse is red to be itted with
	No response is required. The licensee's program for auditing its radiation safety program may be reviewed during inspection		lication

Item No.	Suggested Response	Yes	Response/ Description Attached
10	RADIATION SAFETY PROGRAM (Continued) Radiation Monitoring Instruments		
	The applicant provided one of the following:		
	The applicant provided a description of the instrumentation, including the type of instrument and probe and the instrument's intended purpose in performing required surveys. Additionally, the applicant committed to use instruments that meet the radiation-monitoring instrument specifications published in Appendix F of NUREG–1556, Vol. 21, "Program-Specific Guidance About Possession License for Production of Radioactive Materials Using an Accelerator."		
	OR		
	The applicant provided a description of alternative equipment and procedures for ensuring that appropriate radiation monitoring equipment will be used during licensed activities and that proper calibration of radiation survey equipment will be performed at the required frequency. The applicant also committed that calibrations will be performed by licensees specifically authorized to provide this service.		
	If the applicant chose this option, the applicant provided:		
	вотн		
	A description of the instruments that will be used to quantitatively measure the radioactivity in the products, process, and effluents. Include the calibration procedures that will be followed to ensure the accuracy of those measurements.		
	AND		
	A description of method(s) that may be used to determine the concentration of radioactive air effluents that are released in order to demonstrate compliance with the R313-15-101(4) constraint on air emissions. For real time monitoring of radioactive air effluents, provide a description of the detector and the methodology that will be used to calculate the air effluent release concentrations.	. 0	

Item No.	Suggested Response	Agree to Use	Response/ Description Attached
10.	RADIATION SAFETY PROGRAM (Continued) Radiation Monitoring Instruments		
	The applicant provided the following:		
	The applicant provided a commitment to develop, implement, and maintain procedures for ensuring accountability of licensed materials at all times."		
	AND		
	The applicant provided a commitment to conduct physical inventories of sealed sources of licensed material at intervals not to exceed 6 months.		
	Occupational Dose		
	The applicant provided the following:		
	A commitment that the applicant has developed and will implement and maintain written procedures for monitoring occupational doses that meet the requirements in R313-15-501, R313-15-502, R313-15-201, R313-15-202, R313-15-203, R313-15-204,		_
	R313-15-207, R313-15-208, and R313-15-1106, as applicable.		
	AND		
	The applicant provided the criteria for issuing extremity dosimeters, self-reading dosimeters, and alarming dosimeters.		
	AND		
	The applicant described how internal doses would be evaluated in a timely fashion if an accidental airborne release were to occur.		
	AND		
	The applicant provided one of the following:		
	The applicant provided a commitment to maintain, for inspection by the DWMRC documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in R313-15-502(1).		_
	OR		
	The applicant committed to provide and require the use of individual monitoring devices (dosimetry). Also, the applicant committed that all personnel dosimeters that require processing to determine the radiation dose will be processed and evaluated by an NVLAP-accredited processor.		

Item No.	Suggested Response	Agree to Use	Response/ Description Attached
10.	RADIATION SAFETY PROGRAM (Continued) Occupational Dose (Continued)		
	OR, IN LIEU OF THESE STATEMENTS,		_
	The applicant provided a description of an alternative method for demonstrating compliance with the referenced regulations.		
	If the applicant desires the flexibility to revise their personnel monitoring program without amendment of the license, the applicant described the process they will use to revise and implement their submitted personnel monitoring program.		
	Public Dose		
	No response is required from the applicant, but records and written materials documenting compliance will be examined during inspection.		
	Safe Operating and Emergency Procedures		
	The applicant provided the following:		
	The applicant provided a commitment that before the production of licensed material, the applicant will develop and document procedures for the safe handling of radionuclides and emergencies.		П
	AND		
	The applicant committed that operating and emergency procedures will be implemented and maintained.		
	AND		
·	The applicant committed that procedures will be revised only if (i) the changes are reviewed and approved by the licensee management and the RSO in writing; (ii) the licensee staff is provided training in the revised procedures before implementation; (iii) the changes are in compliance with DWMRC regulations and the license; and (iv) the changes do not degrade the effectiveness of the program.		
	If applicable, the applicant has submitted an "Emergency Plan" as required for a license under R313-22-32(8) as a separate part of the application.		

Item No.	Suggested Response	Yes	Response/ Description Attached
10.	RADIATION SAFETY PROGRAM (Continued) Surveys and Leak Tests (Continued)		
	The applicant provided one of the following:		
	The applicant committed to survey their facility and maintain contamination levels in accordance with the radiation survey frequencies and contamination levels published in Appendix J of NUREG–1556, Vol. 21, "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Possession Licenses for Production of Radioactive Materials Using an Accelerator.		
	If applicable, the applicant committed to perform contamination checks on all manufactured sealed sources before distribution. In addition, the applicant committed that leak tests will be performed at the intervals approved by the DWMRC, the NRC, or an Agreement State and specified in the SSD registration certificate. The applicant also committed that leak tests will be performed by an organization authorized by the DWMRC, the NRC, or an Agreement State to provide leak testing services to other licensees or alternatively, the applicant committed to perform leak tests using a leak-test kit and the kit supplier's instructions. The applicant committed to use leak test kits supplied by an organization authorized by the DWMRC, the NRC, or an Agreement State to provide leak testing services. As an alternative to either of these leak test implementation methods, the applicant committed to implement the model leak-test program published in Appendix K of NUREG 1556, Vol. 21, "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Possession License for Production of Radioactive Materials Using an Accelerator."		
	OR		
	The applicant submitted a description of alternative equipment and procedures to evaluate a radiological hazard and determine whether there is radioactive leakage from sealed sources or plated foils.		ū
	Maintenance		
	No response is required in the application process. The results of actions taken during the maintenance and repair of facilities and equipment will be reviewed during inspection.	requi submit	sponse is ired to be ted with the blication
	actions taken during the maintenance and repair of facilities and	submit	ted

Item No.	Suggested Response	Yes	Response/ Description Attached
10.	Transportation  No response is needed from applicants during the licensing phase. However, before a licensee makes shipments of licensed materials using a Type B package, a licensee needs to have registered with the NRC as a user of the package and obtained DWMRC's approval of its QA program. Transportation activities will be reviewed during inspection.	No response is required to be submitted with the application	
	RADIATION SAFETY PROGRAM (Continued) Minimization of Contamination		
	The applicant does not need to provide a response to this item if the applicant provided responses to the following sections of the guidance document that meets the "Response from Applicant" criteria from those sections: Section 8.5.1, "Radioactive Material—Unsealed and Sealed Byproduct Material;" Section 8.9, "Facilities and Equipment;" Section 8.10.6, "Radiation Safety Program—Safe Operating and Emergency Procedures;" Section 8.10.7, "Radiation Safety Program—Surveys and Leak Tests;" and Section 8.11, "Waste Management."	No response is required to be submitted with the application	
	OR		
	The applicant submitted procedures to conduct decontamination of a facility contaminated by a leaking sealed source or contaminated by unsealed material with a half-life greater than 120 days.		٥
	WASTE MANAGEMENT		
	The applicant provided one of the following:		
	The applicant committed to use the model waste procedures and guidelines published in Appendix M to NUREG–1556, Vol. 21 "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Possession Licenses for Production of Radioactive Material Using an Accelerator."	.0	<u> </u>
	OR		

Item No.	Suggested Response	Yes	Response/ Description Attached
11.	Waste Management (Continued)		
	The applicant does not intend to submit its own alternative compliance demonstration method, nor to use the model waste procedures and guidelines published in Appendix M of the guidance document, but wishes instead to use only selected model procedures and guidelines. Therefore, the applicant has committed to use specific model waste procedures that are published in Appendix M to NUREG–1556, Vol. 21, "Consolidated Guidance About Material Licenses: Program-Specific Guidance About Possession Licenses for Production of Radioactive Material Using an Accelerator"and has specified the procedures the applicant commits to follow such as (i) decay-in-storage, (ii) incineration, (iii) compaction, or (iv) disposal of liquids into sanitary sewerage.		
	If applicable, the applicant has requested authorization for extended interim storage of waste. The applicant followed NRC IN 90-09, "Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees," dated February 1990, for guidance and submitted the requested information with the application.		