

# **Enclosure 1**

## **Checklist to Ensure That Radioactive Materials Will Be Used As Intended**

**[NUREG-1556, Volume 20, Appendix C]**

**ML063480221**

## C.6 Checklist to Ensure that Radioactive Materials Will Be Used As Intended

Applicability: The Checklist is applicable to materials license reviewers and is not intended for reviewers who authorize sources for reactor programs.

### Instructions to Reviewers:

The Checklist modifies the process of issuing a specific license. Refer to the Implementation Guidance (ML063480256) which contains requirements and specific guidance to achieve the two essential objectives, below:

1. to ensure that a new applicant (e.g., an entity that has never had a license before or is unknown) requesting a specific license or a licensee requesting transfer of control to a new applicant and all applicants requesting risk significant quantities of certain radioactive materials (all forms, sealed and unsealed) indicated in the Checklist (Step 1, Table of Risk Significant Quantities) and that have not been subject to a Security Order or the additional requirements for increased controls will not be approved until the NRC or an Agreement State has determined with reasonable assurance that the requested materials will be used as intended (e.g., as authorized in a specific license), and
2. to notify the NRC Office of Federal and State Materials and Environmental Management Programs (FSME), Division of Materials Safety and State Agreements (DMSSA), Source Safety and Security Branch (SSSB) of a request for a specific license for a type of use that is under a Security Order or subject to the additional requirements for increased controls.

Complete the Checklist, as follows. Complete Step 1 (Radioactive Materials and Quantities Requested) for **all** applications. If the responses in Items A and B are "NO", do not complete Step 2 or Step 3. If Item A or B is "YES" then complete Step 2 (Screening Criteria) as per the next paragraph. If the applicant requested a type of use that is under a Security Order then complete Step 3 (Notify NRC Headquarters), Item A, without delay. SSSB will contact the applicant directly to provide the instructions about the requirements for initial access authorization for Safeguards Information. SSSB will issue the Security Orders to the applicant when the NRC regional office or the Agreement State issues the specific license to the applicant. Security Orders for certain types of use are indicated on the NRC web site at the following link, <http://www.nrc.gov/reading-rm/doc-collections/enforcement/security/index.html>.

Complete Step 2 (Screening Criteria) to identify inconsistencies between the safety-related information in the application and additional sources of information about the applicant that are already publicly available. For each criterion, indicate the publicly available information that was considered and whether there is a concern for a potential security risk and the basis for the concern. The screening criteria may be used during a licensing site visit to document the additional review of an applicant. If a particular screening criterion is "not applicable" for the review of a particular application, just indicate "NA" in the last column instead of leaving it blank.

Complete Step 3, Item B, to notify SSSB without delay after making the decision to apply or void the additional requirements for increased controls. Refer to the "Guide for Applying the Additional Requirements for Increased Controls," (ML063470434) which is available in the Increased Controls Toolbox.

Complete Step 3, Item C, without delay if the reviewer is not reasonably assured that the requested materials will be used as intended. SSSB will coordinate an additional evaluation of the applicant with the Office of Nuclear Security and Incident Response (NSIR).

**NOTE**—If the case is turned over to NSIR, do not contact the applicant until further notice. In particular, do not attempt a licensing site visit while NSIR is completing an additional

evaluation of an applicant. Following a determination that there is no security risk, SSSB will notify the reviewer to proceed with the licensing process. The additional evaluation, site visit (if needed), and reply to the reviewer will be completed within 60 days so that the licensing process is not significantly delayed.

Sign, date, and place each completed form in ADAMS as the Official Agency Record (OAR), profiled as Sensitive and Non-Publicly Available, except when all responses are "NO" for Step 1, the profile should be marked as Non-Sensitive and Non-Publicly Available. Alternatively, when all responses for Step 1 are "NO," it is acceptable to annotate the licensing action summary sheet to certify that Step 1 was completed.

**DOCKET FILE INFORMATION**  
**C.6 Checklist to Ensure That Radioactive Materials Will Be Used as Intended**  
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**Applicant Information:**

**Control No. XXXXXXXX**

Name:	Type of Request: New, Renewal, or Amendment Program Code(s):
Location:	License No.: <span style="float: right;">Docket No.:</span>

**STEP 1–Radioactive Materials and Quantities Requested:**

<b>Instructions for Step 1:</b> Complete Step 1 for all applications. If Step 1, Items A and B, are "NO" then do not complete Step 2. Sign and date the completed form and add it to ADAMS as Non-Sensitive and Non-Publicly Available. If a "YES" response is indicated for Item A or Item B, add the completed form to ADAMS as Sensitive and Non-Publicly Available, and complete Step 2 (Screening Criteria). If the type of use is subject to a Security Order complete Step 3, Item A, without delay. If the additional requirements for increased controls will be applied or voided, complete Step 3, Item B, without delay.	YES or NO
A. The applicant is an entity or a licensee transferring control to an entity that has never had a license or is unknown.	
B. The applicant is requesting certain radionuclides and quantities that equal or exceed the Risk Significant Quantity (TBq) values in the table, below, as "highlighted" by the reviewer <b>and</b> has not been subject to a security order or additional requirements for increased controls.	

**Table of Risk Significant Quantities** (Category 2 Quantities, IAEA Safety Guide No. RS-G-1.9, Categorization of Radioactive Sources, August 2005)

Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )	Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )
Am-241	0.6	16	Pm-147	400	11,000
Am-241/Be	0.6	16	Pu-238	0.6	16
Cf-252	0.2	5.4	Pu-239/Be	0.6	16
Cm-244	0.5	14	Ra-226 <sup>2</sup>	0.4	11
Co-60	0.3	8.1	Se-75	2	54
Cs-137	1	27	Sr-90 (Y-90)	10	270
Gd-153	10	270	Tm-170	200	5,400
Ir-192	0.8	22	Yb-169	3	81

<sup>1</sup> The primary values are TBq. The curie (Ci) values are for informational purposes only.

<sup>2</sup> The Atomic Energy Act, as amended by the Energy Policy Act of 2005, authorizes NRC to regulate Ra-226 and NRC is in the process of amending its regulations for discrete sources of Ra-226.

Calculations of the Total Activity or the Unity Rule were completed. NOTE–If an amendment of an existing license is being requested, the calculations will include the previously authorized quantities for the radionuclide(s).	YES , NO, or Not Applicable (NA)
Total Activity–multiple activities are requested for a single radionuclide and the sum of the activities equals or exceeds the Risk Significant Quantity (TBq) for the radionuclide.	
Unity Rule–multiple radionuclides are requested and the sum of the ratios equals or exceeds unity, e.g., [(total activity for radionuclide A) ÷ (risk significant quantity for radionuclide A)] + [(total activity for radionuclide B) ÷ (risk significant quantity for radionuclide B) + etc. ÷ etc. ] ≥ 1.0.	

**Signature and Date for Step 1:**

\_\_\_\_\_

License Reviewer and Date

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**STEP 2–Screening Criteria:**

**Control No. XXXXXXXX**

<p><b>Instructions for Step 2:</b> Complete Step 2 for any application that yielded a “YES” response in Step 1, Item A or Item B. Use safety information in the application as well as sources of information that are outside of the application. Document the review of each applicable screening criteria below. If a criterion is not applicable in a particular case, mark “NA” in the last column for that criterion. Otherwise, provide a preliminary indication in the last column as to whether an additional evaluation may be needed to reasonably assure that the requested materials will be used as intended. Summarize the review at the bottom of the table and sign, date, and place the completed form as the OAR in ADAMS, as Sensitive and Non-Publicly Available.</p>		
Refer to the Guidance (ML063480256) for each criterion, below.	Review Notes	Indicate YES, NO, or NA
A. Request for Materials		
B. Former Licensee or Authorized User		
C. Ownership/Senior Management		
D. Radiation Safety Officer		
E. Authorized User		
F. Fee Payment		
G. Financial Assurance		
H. Deficiency Correspondence		
I. Contacts to the Applicant		
J. Public Web Sites		
K. Pre-Licensing Visit		
L. Security		
<b>Summary</b>	Within the context of the entire set of screening criteria, the reviewer was <b>not</b> reasonably assured that the requested radioactive materials will be used as intended and an additional evaluation of a potential security risk is needed. <b>[NOTE–If “YES” is indicated in the last column then complete Step 3, Item C, without delay.]</b>	
<b>Supporting rationale for an additional evaluation.</b>		

**Signatures and Dates for Step 2:**

\_\_\_\_\_ License Reviewer and Date    \_\_\_\_\_ Supervisor and Date

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**STEP 3—Notify NRC Headquarters at FSME/DMSSA (SSSB): Control No. XXXXXXXX**

**Instructions for Step 3:** Mark the type of notification below and attach a copy of the additional information, as appropriate. Place the completed form with attachments as the OAR in ADAMS, as Sensitive and Non-Publicly Available. Designated staff will reply to the incoming email or TAR package and indicate the proposed action(s) and schedule to closure.

- A. Security Orders      The cognizant supervisor sent an email to [SECURITY\\_ORDERS@NRC.GOV](mailto:SECURITY_ORDERS@NRC.GOV) requesting SSSB to prepare Orders to accompany the specific license and providing the applicant's contact information. A copy of the email is attached.
- B. Increased Controls      The cognizant supervisor sent an email to [SECURITY\\_ORDERS@NRC.GOV](mailto:SECURITY_ORDERS@NRC.GOV) requesting SSSB to update the National Source Interim Inventory to apply or void the increased controls. The following update information was provided: license number, docket number, license name, address (city, state, and zip code), main contact name, title of contact, phone number, email (if available), date the license condition is effective, ADAMS accession number. A copy of the email is attached.
- C. Request for additional evaluation of the applicant      As per NUREG-1556, Volume 20, Section 4.14, Technical Assistance Request—Materials Licensees, the cognizant supervisor sent a TAR package to SSSB after Step 2 was completed. Based on a preponderance of inconsistent information, the reviewer was not reasonably assured that radioactive material will be used as intended. The package included the TAR form, the completed Step 2 form, and the relevant information from the application. The TAR package from an Agreement State supervisor was routed through the NRC Regional State Agreements Officer as per Management Directive 5.7, "Technical Assistance for Agreement States," (revised November 19, 2004).

**Signatures and Dates for Step 3:** \_\_\_\_\_  
License Reviewer and Date      Supervisor and Date