

Howard K. Shapar
 Licensing and Compliance
 Office of the General Counsel
 Donald A. Wassbauer, Chief
 Source and Special Nuclear Materials Branch
 Division of Licensing and Regulation
**DETERMINATION OF DE MINIMIS CONCENTRATIONS OF SOURCE AND SPECIAL
 NUCLEAR MATERIALS**

LRe JCD

Attached for your concurrence is a letter which we propose to send to Clevite Corporation which authorizes possession, use, and transfer of facilities and equipment contaminated with enriched uranium without the requirement for a license for Clevite or for persons receiving the facilities and equipment from them. Also attached is a memorandum to the files dated September 19, 1962, which summarizes the correspondence and actions which have taken place since we were advised by letter of April 18, 1962, from Clevite that they did not wish to renew their Special Nuclear Material License SNM-183 under which they had engaged in the fabrication of fuel elements containing uranium enriched in the U-235 isotope.

By our letter dated May 28, 1962, Clevite was advised that after decontamination of their facilities and equipment had been completed they should submit to us a report indicating the levels of fixed and removable uranium contamination existing in the facilities, and were told that the following levels should not be exceeded:

1. For alpha radioactivity
 - a. 25,000 d/m/100cm² peak
 - b. 5,000 d/m/100cm² average
 - c. 1,000 d/m/100cm² maximum removable by wiping the area with a dry filter or soft absorbent paper.

2. Beta and Gamma
 - a. 1.0 millirad per hour maximum at one centimeter from any contaminated surface measured with a beta-gamma survey meter through a tissue equivalent absorber of not more than 7 mg/cm².
 - b. 0.2 millirad per hour average, measured as above.

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- c. 1,000 d/m/100cm² maximum removable by wiping the area with a dry filter paper or soft-absorbent paper.

These limits are those contained in a proposed revision to 10 CFR, Parts 20, 40, and 70 for natural or depleted uranium, natural thorium, uranium enriched in the U-235 isotope, U-238 or Th-232. These are also the limits provided to Union Carbide Corporation by letter of May 10, 1962, in which you concurred, in connection with the release of properties, buildings and equipment at the "old" mill at Rifle, Colorado, and their ore concentrator at Green River, Utah.

This action was based upon a memorandum from Gerald Charnoff, OGC, to Harold L. Price dated January 26, 1959, in which it was concluded that radioactive contamination on various items of equipment, including both source material and special nuclear material, could be considered de minimus. In such circumstances it was decided that the radioactive material involved was not special nuclear material within the meaning of the Atomic Energy Act and accordingly was not required to be licensed. This action was in accordance with Manual Chapter 5182, dated August 30, 1956, and earlier actions of the Commission referred to in the 1/26/59 memo.

The only question presented in this instance is whether or not we should inferentially define de minimus quantities of SNM and source material in terms of levels of fixed and removable uranium contamination. This position follows that taken in the past in Manual Chapter 5182. Furthermore, it is consistent with the proposed amendment to the Part 70. Accordingly, we believe the proposed action represents the correct interpretation.

It should be noted that Clevite and other source and special nuclear material licensees may not wish to renew their licenses and may very well wish to transfer equipment to other persons.

In accordance with the conversations between you, Mr. Lowenstein and Mr. Connor, we have changed the Clevite letter to reflect an infernal, ad hoc approach.

Attachments:
as stated

Office of the General Counsel

Assistant Director for
Materials Standards

	LR	OGC	LR
OFFICE ▶	JCD	OGC	LR
SURNAME ▶	Johnson	Connor	Nussbaumer
DATE ▶	11/13/62	11/14/62	11/14/62

- c. 1,000 d/n/100cm² maximum removable by wiping the area with a dry filter paper or soft-absorbent paper.

These limits are those contained in a proposed revision to 10 CFR, Parts 20, 40, and 70 for natural or depleted uranium, natural thorium, uranium enriched in the U-235 isotope, U-238 or Th-232. These are also the limits provided to Union Carbide Corporation by letter of May 10, 1962, in which you concurred, in connection with the release of properties, buildings and equipment at the "old" mill at Rifle, Colorado, and their ore concentrator at Green River, Utah.

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The only question presented in this instance is whether or not we should inferentially define de minimus quantities of SNM and source material in terms of levels to fixed and removable uranium contamination. This position follows that taken in the past in Manual Chapter 5182. Furthermore, it is consistent with the proposed amendment to the Part 70. Accordingly, we believe the proposed action represents the correct interpretation.

It should be noted that Cleveite and other mill operators do not intend to renew their source and special nuclear licenses and may very well transfer equipment to other persons.

In accordance with the conversation between you, Mr. Lowenstein and Mr. Connor, we have changed the Cleveite letter to reflect an informal, ad hoc approach.

Attachment:
As stated

Office of the General Counsel

Assistant Director for
Materials Standards

OFFICE ▶	LR	LR	OGC	LR	
SURNAME ▶	JCDelaney/ey	Rogers	<i>[Signature]</i>	Nussbaumer	
DATE ▶	11/7/62	11/ /62	11/ /62	11/ /62	

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Howard K. Snapar
Licensing and Compliance
Office of the General Counsel
Donald A. Mussbaumer, Chief
Source and Special Nuclear Materials Branch
Division of Licensing and Regulation
**DETERMINATION OF DEMINIMIS CONCENTRATIONS OF SOURCE AND SPECIAL
NUCLEAR MATERIALS**

LR:JCD

Attached for your concurrence is a letter which we propose to send to Cleveite Corporation which authorizes possession, use, and transfer of facilities and equipment contaminated with enriched uranium without the requirement for a license for Cleveite or for persons receiving the facilities and equipment from them. Also attached is a memorandum to the files dated September 19, 1962, which summarizes the correspondence and actions which have taken place since we were advised by letter of April 18, 1962, from Cleveite that they did not wish to renew their Special Nuclear Material License SNM-183 under which they had engaged in the fabrication of fuel elements containing uranium enriched in the U-235 isotope.

By our letter dated May 28, 1962, Cleveite was advised that after decontamination of their facilities and equipment had been completed they should submit to us a report indicating the levels of fixed and removable uranium contamination existing in the facilities, and were told that the following levels should not be exceeded:

1. For alpha radioactivity
 - a. 25,000 d/n/100 cm² peak
 - b. 5,000 d/n/100 cm² average
 - c. 1,000 d/n/100 cm² maximum removable by wiping the area with a dry filter or soft absorbent paper.
2. Beta and Gamma
 - a. 1.0 millirod per hour maximum at one centimeter from any contaminated surface measured with a beta-gamma survey meter through a tissue equivalent absorber of not more than 7 mg/cm².
 - b. 0.2 millirod per hour average, measured as above.

not sent

- e. 1,000 d/m/100 cm² maximum removable by wiping the area with a dry filter paper or soft-absorbent paper.

These limits are those contained in a proposed revision to 10 CFR, Parts 20, 40, and 70 for natural or depleted uranium, natural thorium, uranium enriched in the U-235 isotope, U-238 or Th-232. These are also the limits provided to Union Carbide Corporation by letter of May 10, 1962, in which you concurred, in connection with the release of properties, buildings and equipment at the "old" mill at Rifle, Colorado, and their ore concentrator at Green River, Utah. Subsequent action resulted in your determination that the quantities of source material contained on certain contaminated equipment to be transferred by Union Carbide to a person not holding an AEC license were de minimis. Several licensees, including Cleveite, have indicated their intention not to renew their source and special nuclear material licenses, and since the above limits are applicable to all cases involving uranium enriched in the U-235 isotope, normal and depleted uranium, natural thorium, U-238 and Th-232, we would like your concurrence that for the purposes of requiring licenses under Parts 40 or 70 for possession of contaminated facilities, equipment, buildings, etc., the above materials in concentrations that do not exceed these limits are de minimis. If you so concur, please sign this memorandum below and return it to me. The Office of the Assistant Director for Materials Standards has concurred below that the above concentrations do not present a hazard to health and safety.

Attachment:
As stated

Office of the General Counsel

Robert B. Kagan
Assistant Director for
Materials Standards

OFFICE ▶	LR <i>Delaney</i>	LR <i>JN</i>	G.C.C.		
SURNAME ▶	<i>Delaney</i>	<i>McNussbaumer</i>	<i>JBC</i>		
DATE ▶	10/18/62	10/18/62	10/31/62		