

CPG Sec. *555.880 Guidance Levels for Radionuclides in Domestic and Imported Foods*

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I. INTRODUCTION

The purpose of this document is to present guidance levels for radionuclide activity concentration, called derived intervention levels (DILs), which FDA has adopted to help determine whether domestic food in interstate commerce or food offered for import into the United States presents a safety concern. This Compliance Policy Guide (CPG) rescinds and replaces CPG Sec. 560.750 Radionuclides in Imported Foods — Levels of Concern (CPG 7119.14).

FDA's guidance documents, including this guidance, do not establish legally enforceable responsibilities. Instead, guidances describe the Agency's current thinking on a topic and should be viewed only as recommendations, unless specific regulatory or statutory requirements are cited. The use of the word *should* in Agency guidances means that something is suggested or recommended, but not required.

II. BACKGROUND

In the Federal Register of June 25, 1986 (51 FR 23155), after the Chernobyl nuclear accident, FDA issued a Compliance Policy Guide (CPG) Sec. 560.750 Radionuclides in Imported Foods — Levels of Concern (CPG 7119.14) (hereinafter 1986 FDA guidance), which establishes guidance levels called "Levels of Concern" (LOCs) for radionuclide activity concentration in food offered for import. FDA staff considers the 1986 guidance levels when deciding whether to recommend detention of food offered for import into the United States. In the Federal Register of August 13, 1998 (63 FR 43402), FDA announced the availability of a new document entitled "Accidental Radioactive Contamination of Human Food and Animal Feeds: Recommendations to State and Local Agencies" (hereinafter 1998 FDA document). The 1998 FDA document provides broader and more current information regarding radionuclides in food, and recommends new guidance levels for radionuclide activity concentration in food called Derived Intervention Levels, or DILs.

III. DISCUSSION

In this CPG, FDA has adopted DILs that were recommended in the 1998 FDA document as guidance levels for radionuclide activity concentration in food offered for import. FDA also has adopted these same guidance levels for radionuclide activity concentration for domestic food in interstate commerce. Previously, FDA had not established guidance levels for radionuclide activity concentration for domestic food in interstate commerce. In addition, the scope of coverage of the 1986 FDA guidance, which included food accidentally contaminated with radionuclides, has been expanded in this CPG to food that is accidentally or intentionally contaminated with radionuclides. These changes were made to ensure that FDA staff has appropriate guidance to address an incident involving food accidentally or intentionally contaminated with radionuclides, whether in domestic interstate commerce or offered for import. This CPG rescinds and replaces the 1986 guidance (i.e., CPG Sec. 560.750 Radionuclides in Imported Foods — Levels of Concern (CPG 7119.14)). The 1998 FDA document is unaffected by this CPG. Consistent with the terminology used in the 1998 FDA document, guidance levels for radionuclide activity concentration in this CPG are called DILs. DILs is an internationally used term that replaces the previous FDA term "Levels of Concern" (LOCs).

IV. REGULATORY ACTION GUIDANCE

FDA uses DILs to help determine whether domestic food in interstate commerce or food offered for import into the United States presents a safety concern. Analytical methods used to determine radionuclide activity concentration are referenced in FDA's Compliance Program entitled "Toxic Elements in Food and Foodware and Radionuclides in Food" which is available on [FDA's website](#). FDA determines whether foods contain unsafe levels of radionuclides on a case-by-case basis, considering the totality of the circumstances and the extent to which those circumstances depart from the assumptions that underlie the derivation of DILs. The DILs adopted in this CPG are not binding on FDA, the regulated industry, or the courts. In any given case, FDA may decide to initiate an enforcement action against food with concentrations below the DILs or decide not to initiate an enforcement action against food with concentrations that meet or exceed the DILs. The appropriate Program Field Office is to contact CFSAN/Office of Compliance/Division of Enforcement (HFS-605) for a preliminary assessment regarding the use of a DIL in a given case. The DILs that FDA may use to help determine whether foods contain unsafe levels of radionuclides are listed in the following table:

Derived Intervention Levels (DILs) for Each Radionuclide Group for Food in Domestic Commerce and Food Offered for Import^{a,b}

Radionuclide Group	DIL (Bq/kg)
Strontium-90	160
Iodine-131	170

Radionuclide Group	DIL (Bq/kg)
Cesium-134 + Cesium-137	1200
Plutonium-238 + Plutonium-239 + Americium-241	2
Ruthenium-103 + Ruthenium-106 ^c	$(C_3 / 6800) + (C_6 / 450) < 1$

^aThe DIL for each radionuclide group is applied independently. Each DIL applies to the sum of the concentrations of the radionuclides in the group at the time of measurement.

^bApplicable to foods as prepared for consumption. For dried or concentrated products such as powdered milk or concentrated juices, adjust by a factor appropriate to reconstitution, and assume the reconstitution water is not contaminated. For spices, which are consumed in very small quantities, use a dilution factor of 10.

^cDue to the large differences in DILs for Ruthenium-103 and Ruthenium-106, the individual concentrations of Ruthenium-103 and Ruthenium-106 are divided by their respective DILs and then summed. The DIL for the Ruthenium group is set at less than one. C3 and C6 are the concentrations, at the time of measurement, for Ruthenium-103 and Ruthenium-106, respectively.

SPECIMEN CHARGES:

For legal actions based on analytical determination that radionuclides are present in the food:

Domestic seizure:

The article is adulterated within the meaning of *21 U.S.C. 342(a)(1)* in that it bears or contains an added poisonous or deleterious substance, namely radionuclides, which may render the article injurious to health.

Import detention:

The article is subject to refusal of admission pursuant to *21 U.S.C. 381(a)(3),* in that it appears to be adulterated within the meaning of *21 U.S.C. 342(a)(1)* because it bears or contains an added poisonous or deleterious substance, namely radionuclides, which may render the article injurious to health.

For legal actions based on evidence that the situation or environment associated with the food may have caused the food to be contaminated with radionuclides:

Domestic seizure:

The article is adulterated within the meaning of *21 U.S.C. 342(a)(4)* because it was prepared, packed, or held under insanitary conditions in which contamination with radionuclides may have rendered the article injurious to health.

Import detention:

The article is subject to refusal of admission pursuant to *21 U.S.C. 381(a)(3),* in that it appears to be adulterated within the meaning of *21 U.S.C. 342(a)(4)* because it was prepared, packed, or held under insanitary conditions in which contamination with radionuclides may have rendered the article injurious to health.

¹This guidance has been prepared by the Office of Plant and Dairy Foods in the Center for Food Safety and Applied Nutrition (CFSAN) at the U.S. Food and Drug Administration.

Material between asterisks is new or revised.

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