

APPENDIX D2

**RADIONUCLIDE NESHAP
40 CFR 61 Subpart I**

PRE CAA90 40 CFR “PART 61” NESHAPS

REGULATION STATUS

On 30 Dec 96 (61 FR 68972), EPA significantly amended the 40 CFR 61 Subpart I Radionuclide NESHAP. Effective 30 Dec 96, this NESHAP **no longer** affects operations licensed by the Nuclear Regulatory Commission (NRC) or NRC Agreement States. NRC licensees that are **no longer** affected by this rule include:

- Facilities licensed to use or possess nuclear materials such as hospitals, medical research facilities, radiopharmaceutical manufacturers, laboratories, etc.
- Facilities engaged in the conversion of uranium ore to produce electric power, e.g., uranium mills, fuel fabrication plants.

Subsequent corrections and amendments are reflected in the latest version of the Code of Federal Regulations, Volume 40, Part 61, Subpart I.

Background

This NESHAP was originally published in the Federal Register on 15 Dec 89 (54 FR 51654). The title of this NESHAP as published in 1989 was:

Subpart I--National Emissions Standards for Radionuclide Emissions From Facilities Licensed by the Nuclear Regulatory Commission and Federal Facilities not Covered by Subpart H

Subpart H covers Department of Energy (DOE) facilities. In 1989, Subpart I affected all Nuclear Regulatory Commission (NRC) licensees and other unlicensed radionuclide sources located at “non-DOE” Federal facilities. During the following three years, there was a flurry of regulatory activity. EPA issued various stays of applicability for some NRC licensees and extended the stays various times. However, EPA was required by court order to withdraw the stays and Subpart I became fully effective on 16 Nov 92.

On 5 Sep 95 (60 FR 46206), EPA amended the NESHAP to exempt **only** the nuclear power reactors which are licensed by the NRC. EPA did not change the title of the NESHAP at that time.

On 30 Dec 96 (61 FR 68972), EPA amended the NESHAP to exempt **all** NRC-licensees. EPA issued this amendment using the authority provided by CAA90 §112(d)(9). EPA is convinced that the NRC licensee program protects public health as effectively as the NESHAP. The title of this NESHAP as amended on 30 Dec 96 is:

Subpart I--National Emission Standards for Radionuclide Emissions From Federal Facilities Other Than Nuclear Regulatory Commission Licensees and Not Covered by Subpart H

What do the 30 Dec 96 changes mean to DOD? Prior to this amendment, NRC-licensed sources on Federal facilities were subject to this NESHAP. As of 30 Dec 96, NRC-licensed sources on non-DOE Federal Facilities are no longer affected by this NESHAP. Since the changes became effective in 1996, previously affected NRC

licensed sources do not need to submit a Subpart I compliance report for 1996. However, records and reports for previous years must still be maintained for 5 years.

RULE SUMMARY

Applicability

This NESHAP applies to radionuclide sources that are both:

1. located on non-DOE Federal facilities, and
2. not licensed by the NRC.

The following radionuclide sources are exempt:

- Disposal at facilities regulated by 40 CFR 191 B.
- Uranium mill tailings pile after disposal under 40 CFR 192. Note: uranium mill tailings piles are regulated by 40 CFR 61 subpart W.
- Low energy accelerators

<p><i>Actual text: Sec. 61.100 Applicability.</i></p>

<p><i>The provisions of this subpart apply to facilities owned or operated by any Federal agency other than the Department of Energy and not licensed by the Nuclear Regulatory Commission, except that this subpart does not apply to disposal at facilities regulated under 40 CFR part 191, subpart B, or to any uranium mill tailings pile after it has been disposed of under 40 CFR part 192, or to low energy accelerators.</i></p>
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Many Federal facility sources are no longer subject to this NESHAP. For example, according to the Naval Environmental Health Center, many radionuclide sources at medical facilities are licensed by the NRC. Thus, these sources are no longer subject to Subpart I.

This NESHAP still affects Federal facilities. For example, radionuclide sources associated with the Naval Nuclear Propulsion Program are not licensed by the NRC, and therefore remain subject to this NESHAP.

Key Definitions

Effective dose equivalent means the sum of the products of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quality of radiation and its distribution in the body of reference man. The unit of the effective dose equivalent is the “rem”. For purposes of this subpart doses caused by radon-222 and its decay products formed after the radon is released from the facility are not included. The method for calculating effective dose equivalent and the definition of reference man are outlined in the International Commission on Radiological Protection's Publication No. 26.

Radionuclide means a type of atom which spontaneously undergoes radioactive decay.

Major Source of Radionuclides is not yet defined. The definition of “major source” of HAPs in CAA §112 recognizes that the tons per year thresholds are not appropriate for radionuclides. The definition seems to encourage EPA to develop a definition of a major source of radionuclides based on other criteria. EPA had planned to develop a unique definition of a major source of radionuclides. However, in Nov 96, EPA removed their effort to develop this definition from their semi-annual regulatory agenda. EPA does not plan to develop such a definition in the near future.

Standards

Facilities must comply with a dual exposure standard. The most exposed individual must not receive more than the effective dose equivalent (EDE) limits shown in the table below.

Basis	Effective Dose Equivalent Limit
Total Radionuclides (Including Iodine)	10 mrem/yr
Iodine Only	3 mrem/yr

Radionuclide emissions can be either monitored, measured, or estimated using methodology referenced in §61.107. The emissions must then be modeled using EPA’s “COMPLY” software or other approved software to determine compliance with the exposure limits.

Owners of affected facilities must submit annual emission reports except as follows. Facilities that exceed an EDE limit must submit monthly reports. Facilities whose emissions are less than 10 percent of the EDE limits do not need to submit a report.

Title V Permit Considerations

If your facility is required to have a Title V permit, you should address sources affected by this NESHAP in your permit. Facilities who obtained or applied for Title V permits prior to the 30 Dec 96 amendments may want to revise the application or permit to remove any NRC licensed sources.

What if a facility is not otherwise required to have a Title V permit but does have a source subject to this NESHAP? Does this facility need to obtain a Title V permit? This question arises because Title V permits are generally required under 40 CFR Part 70 for all major sources (criteria pollutants and HAPs) **and** area sources (nonmajor sources) that are subject to a CAA §111 or §112 standard.

The answer to the question is found in Part 70. It is up to each State to decide how to handle nonmajor sources, until such time as EPA completes a rulemaking on this issue. Section 70.3(b)(1)-(2) of Part 70 reads as follows:

(b) Source category exemptions. (1) All sources listed in paragraph (a) of this section that are not major sources, affected sources [Editor’s note: this refers to affected sources

*under Title IV Acid Rain provisions.], or solid waste incineration units required to obtain a permit pursuant to section 129(e) of the Act, **may be exempted by the State** from the obligation to obtain a part 70 permit **until such time as the Administrator completes a rulemaking** to determine how the program should be structured for nonmajor sources and the appropriateness of any permanent exemptions in addition to those provided for in paragraph (b)(4) of this section.*

*(2) In the case of nonmajor sources subject to a standard or other requirement under either section 111 or section 112 of the Act **after July 21, 1992** publication, the Administrator will determine whether to exempt any or all such applicable sources from the requirement to obtain a part 70 permit at the time that the new standard is promulgated.*

Since Subpart I was promulgated prior to 21 Jul 92, States are allowed to exempt radionuclide sources located on facilities which are nonmajor from the Title V program. Most States are choosing to exempt nonmajor sources from Title V if they have the option. Keep in mind that facilities which are subject to Title V for other (non-radionuclide) reasons, should address radionuclide sources in the permit. Title V permits should address all federally applicable requirements such as the Asbestos NESHAP, the Dry Cleaning NESHAP, the accidental release provisions, etc.

Nonmajor (area) source standards promulgated after 21 Jul 92 should contain guidance regarding whether affected area sources must obtain a Title V permit. Recent NESHAPs that affect area sources allow States to defer Title V permitting for 5 years. This will hopefully be enough time for EPA to issue a Part 70 rulemaking for nonmajor sources.

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