



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 20 2002

OSWER No. 9200.1-34b

MEMORANDUM

SUBJECT: Distribution of OSWER Common Radionuclides Found at Superfund Sites Booklet for the General Public

FROM: Michael B. Cook, Director *Michael B. Cook*
Office of Emergency and Remedial Response (OERR)
Office of Solid Waste and Emergency Response

Stephen D. Page, Director *Stephen D. Page*
Office of Radiation and Indoor Air (ORIA)
Office of Air and Radiation

TO: Addressees

PURPOSE

The purpose of this memorandum is to transmit to you a final booklet entitled: "Common Radionuclides Found at Superfund Sites." The booklet provides information to help the general public understand more about the various common radionuclides that are found at Superfund sites across the nation. It answers such questions as: How can a person be exposed to the radionuclide?, How can it affect human health?, How does it enter and leave the body?, What levels of exposure result in harmful effects?, and What recommendations has the federal government made to protect human health from radionuclides? This booklet will be of interest to site decision makers and community relations coordinators at radioactively contaminated sites being addressed by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).¹

¹This booklet provides information on common radionuclides found at CERCLA sites and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). It does not alter the NCP expectations regarding treatment of principal threat waste and the use of containment and institutional controls for low level threat waste. Consistent with CERCLA and the NCP, response actions must attain or waive applicable or relevant and appropriate requirements (ARARs). CERCLA response actions for contaminated ground water at radiation sites must attain (or waive as appropriate) the Maximum Contaminant Levels (MCLs) or non-zero Maximum Contaminant Level Goals (MCLGs) established under the Safe Drinking Water Act, where the MCLs or MCLGs are relevant and appropriate for the site.

BACKGROUND

The U.S. Environmental Protection Agency (EPA) issued guidance entitled "[Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination](#)" (OSWER No. 9200.4-18, August 22, 1997). This 1997 guidance provided clarification for establishing protective cleanup levels for radioactive contamination at CERCLA sites. The guidance reiterated that cleanups of radionuclides are governed by the risk range for all carcinogens established in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) when Applicable or Relevant and Appropriate Requirements (ARARs) are not available or are not sufficiently protective. Cleanup should generally achieve a level of risk within the 10^{-4} to 10^{-6} carcinogenic risk range based on the reasonable maximum exposure for an individual. In calculating cleanup levels, one should include exposures from all potential pathways, and through all media (e.g., soil, ground water, surface water, sediment, air, structures, etc.) The guidance also provides a listing of radiation standards that are likely to be used as ARARs to establish cleanup levels or to conduct remedial actions.

This Common Radionuclides booklet is part of a continuing effort between the Office of Emergency and Remedial Response (OERR) and the Office of Radiation and Indoor Air (ORIA) to provide updated guidance for addressing radioactively contaminated sites consistent with our guidance for addressing chemically contaminated sites, except to account for the technical differences between radionuclides and chemicals. This effort is intended to facilitate compliance with the NCP at radioactively contaminated sites while incorporating the improvements to the Superfund program that have been implemented through Administrative Reforms.

Today's Common Radionuclides booklet is similar to a booklet issued by EPA entitled "Common Chemicals Found at Superfund Sites" (OSWER No. 9203.1-17, August 1994). This 1994 booklet contains information regarding common chemicals found at Superfund sites across the nation.

IMPLEMENTATION

For questions regarding radiation site policy and booklet for CERCLA cleanup actions, readers are referred to the RCRA/Superfund Call Center at 1-800-424-9346 or the Superfund Radiation web page at <http://www.epa.gov/superfund/resources/radiation/index.htm>. The subject matter specialists for this booklet are Ben Hull of ORIA and Stuart Walker of OERR.

Addressees:

National Superfund Policy Managers
Superfund Branch Chiefs (Regions I-X)
Superfund Branch Chiefs, Office of Regional Counsel (Regions I-X)
Radiation Program Managers (Regions I, IV, V, VI, VII, X)
Radiation Branch Chief (Region II)
Residential Domain Section Chief (Region III)
Radiation and Indoor Air Program Branch Chief (Region VIII)
Radiation and Indoor Office Director (Region IX)
Federal Facilities Leadership Council
OERR Center Directors and Senior Process Managers
OERR NARPM co-chairs

cc: Jim Woolford, FFRRO
Elizabeth Cotsworth, OSW
Craig Hooks, FFEO
Barry Breen, OSRE
Joanna Gibson, HOSC/OERR
Earl Salo, OGC
Jeff Josephson, Region II
Marianne Horinko, OSWER
Mike Shapiro, OSWER
Tom Dunne, OSWER
Jeff Denitt, OSWER