INTERIM REPORT

ACCESSION NO. _____

ORNL/HASRD-56

Contract Program or Project Title:	Assessment of the Radiation Doses Resulting from Releases of Radon-222 and Radium-226 from Uranium Mining and Milling Activities
Subject of this Document:	Technical Progress
Type of Document:	Monthly Progress Report September 1979
Author(s), Affiliation and Address:	C. C. Travis, L. M. McDowell-Boyer, and A. P. Watson Health and Safety Research Division*
Date of Document:	October 30, 1979
NRC Individual and NRC Office or Division to Whom Inquiries Should be Addressed:	Dr. H. Miller Low-Level Waste Branch Division of Fuel Cycle and Material Safety

This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

NRC Research and Technical Assistance Report

Prepared for
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555
Under Interagency Agreement DOE #40-549-75
NRC FIN No. B0281

*Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830
operated by
Union Carbide Corporation
for the
U. S. Department of Energy

7912110 465

1532 054

MONTHLY PROGRESS REPORT
FOR SEPTEMBER 1979

ASSESSMENT OF THE RADIATION DOSES RESULTING FROM RELEASES OF RADON-222 AND RADIUM-226 FROM URANIUM MINING AND MILLING ACTIVITIES (189 No. B0281)

Health and Safety Research Division
Oak Ridge National Laboratory

PRINCIPAL SCIENTISTS: C. C. Travis, L. M. McDowell-Boyer, A. P. Watson

OBJECTIVE:

The principal objective of this assessment is to provide estimates of integrated population exposure and resultant dose to American, Canadian, and Mexican populations which would result from releases of radon-222 from uranium mining and milling activities in the western United States. A continental transport, diffusion, and deposition model developed by the National Oceanic and Atmospheric Agency (NOAA) will be utilized in conjunction with available population and food production data to develop best-estimate population exposures and doses. Estimates will be made on the basis of a unit release rate of radon-222 from Grants, New Mexico; Falls City, Texas; Caspar, Wyoming; and Wellpinit, Washington.

TECHNICAL PROGRESS:

Revisions of a publication for *Nuclear Safety* entitled "A Review of Parameters Describing Terrestrial Food-Chain Transport of ^{210}Pb and ^{226}Ra," have been made.

Preparation for participation in public meetings on the GEIS on uranium milling is ongoing.

NRC Research and Technical Assistance Report

BUDGET AND TECHNICAL MANPOWER EXPENDITURES (FY 1979)

Reporting Period	Project Costs, $	Technical Support, Man-months
Credit*	9,554	
September 1979	1,931	0.25
Total to Date	148,669	30.5
Estimated Cost to Completion	28,313	6.0

*Credit of $9,554 for June, July and August

1532 056

INTERNAL DISTRIBUTION

1. R. O. Chester, Building 7509
2. L. M. McDowell-Boyer, Building 7509
3. F. R. Mynatt, Building 9201-3, Y-12, Mail Stop 2
4. P. S. Rohwer, Building 7509
5. C. C. Travis, Building 7509
6. A. R. Calhoun, Building 7509
7. A. P. Watson, Building 7509
8. J. P. Witherspoon, Building 7509
9. ORNL Laboratory Records Department-RC

EXTERNAL DISTRIBUTION

10-11. Technical Information Center, DOE-OR

12-13. H. Miller, Low-Level Waste Branch, Division of Fuel Cycle and Material Safety, Mail Stop 42655, Nuclear Regulatory Commission, Washington, DC 20555

14. Mr. Dircks, Office of Nuclear Material Safety and Safeguards, Attn: Program Support, Nuclear Regulatory Commission, Washington, DC 20555

15-16. Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, 7920 Norfolk Avenue, Bethesda, MD 20014

1532 057