

OCT 17 1977

Docket No. 40-3453

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MEMORANDUM FOR: Distribution

FROM: Paul J. Magno  
Fuel Reprocessing and Recycle Branch

SUBJECT: TRIP REPORT: MEETING ON RADIOLOGICAL ASSESSMENT  
FOR ATLAS URANIUM MILL

DATE: September 27 and 28, 1977

PLACE: Argonne National Laboratory

PARTICIPANTS: Paul Magno, NRC                      Ping Chee, ANL  
Michael Momeni, ANL                      Walter Kisielewski, ANL

Purpose of the Meeting:

The purpose of this meeting was to review the radiological assessment for the Atlas mill and where appropriate to revise this assessment in order to bring it into conformity with NRC's proposed standardized format for radiological assessments for uranium mills.

Summary of the Meeting:

The main changes made in the radiological assessment for the Atlas mill are summarized below:

1. The radioactive effluent release rates (source terms) were reviewed. The basis for these release rates were discussed and some of the values revised based on "best judgement" estimates for the Atlas mill. The basis for these estimates were properly documented.
2. The estimates of individual doses presented were changed from 50-year integrated doses to annual 50-year dose commitments (i.e., 50-year dose commitment from one year's release). Estimated doses were presented for individuals at locations closest to the mill site where the doses were expected to be the highest.
3. Inhalation doses for particulates were calculated using the ICRP Committee II Task Group Lung Model. Exposures to radon were calculated using an "area source".
4. The doses to an individual from ingestion of beef raised near the mill site were recalculated using a deposition velocity of 1 cm/sec rather than 24 cm/sec and a dose conversion factor based on a power function rather than an exponential function.

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5. Population doses to the residents of the town of Moab and vicinity were calculated and those doses were compared to doses received from natural background.
6. The radiological impacts section was rewritten incorporating the above changes.

NOTE: Later, a table was prepared showing a comparison of doses to individuals from the operation of the Atlas mill with present and future radiation exposure standards.

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