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MEMORANDUM FOR: Jeffrey L. Kotsch, Project Manager
Operating Facilities Section II
Uranium Recovery Licensing Branch

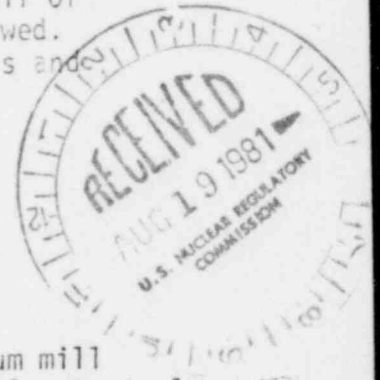
THRU: Harry J. Pettengill, Section Leader
Operating Facilities Section II
Uranium Recovery Licensing Branch

FROM: Claude A. Flory, Project Manager
Operating Facilities Section II
Uranium Recovery Licensing Branch

SUBJECT: REVIEW OF PETROTOMICS 40.65 REPORT FOR THE SECOND HALF
OF 1980

Petrotomics Company semi-annual effluent report for the second half of 1980 for their Shirley Basin, Wyoming uranium mill has been reviewed. Petrotomics reported that there was no release of liquid effluents and reported the following releases of airborne radioactivity:

Uranium as U ₃ O ₈	66,000 uCi
Radium-226	1.82 ± 1.84 uCi
Thorium-230	16.40 ± 8.26 uCi
Radon-222	6,400 ± 1,000 uCi
Lead-210	11.07 ± 4.43 uCi



All the values reported except for Rn-222 are typical of a uranium mill of this size. The Rn-222 value is several orders of magnitude below typical levels expected from a mill facility exclusive of tailings pond emissions. Petrotomics does not specify if tailings pond emission of Rn-222 is included but the low number reported seems to exclude it.

Semi-annual effluent reports for the Petrotomics Shirley Basin Mill were compared for the last three years (1978-1980). The ranges of reported releases during the six periods were 1,000-66,000 uCi for uranium and 920-33,000 uCi for Rn-222. During 1978 and 1979 releases of Ra-226 ranged from 6,000 to 83,000 uCi and for Th-230 from 24,000 to 390,000 uCi. Values for Ra-226 and Th-230 reported in both halves of 1980 were four orders of magnitude less than the values of the two previous years. It is possible that there was a reporting error resulting from improper use of units since in 1978-1979 "Ci" was the reporting unit and in 1980 it was changed to "uCi". Pb-210 was first reported during the second half of 1980.

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Jeffrey L. Kotsch

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On June 20, 1980 Petrotimics was issued a license amendment requiring them to establish an environmental monitoring program and to report the results in accordance with 10 CFR 40.65. Except for the addition of Pb-210 as a monitored radionuclide there was no date or other information in the Petrotomics report which indicated fulfillment of the license conditions contained in the amendment.

Claude A. Flory, Project Manager
Operating Facilities Section II
Uranium Recovery Licensing Branch
Division of Waste Management

Case Closed: 04006659M03E

8/3/81

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