

JUL 27 1982

40-8585/GNG/82/05/17/0

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Docket No. 40-8585

MEMORANDUM FOR: Docket File 40-8585
FROM: Giorgio N. Gnugnoli, Project Manager
New Facilities Section
Uranium Recovery Licensing Branch
Division of Waste Management
SUBJECT: REVIEW OF THE SEMI-ANNUAL EFFLUENT MONITORING REPORT
(10 CFR PART 40.65) SUBMITTED BY WYOMING MINERALS
CORPORATION (WMC) ON THE BINGHAM CANYON EXTRACTION
PLANT (SUA-1315) FOR JULY 1, 1981 THROUGH
DECEMBER 31, 1981

As required by 10 CFR Part 40.65 and by License Condition No. 27 of Source Material License SUA-1315, WMC has submitted information pertaining to stack emissions for the second half of 1981.

Analysis of the maximum concentrations of natural uranium from the general fumes collection scrubber stack and from the calciner scrubber stack were respectively 8% and 7% of the maximum permissible concentrations (MPCs) in 10 CFR Part 20 for restricted areas. Based on a measured flow rate of 817 ft³/min, a maximum concentration of 6.50 X 10⁻¹² µCi/cc and a 24-hour operational day, the maximum daily natural uranium release would not be expected to exceed 0.22 µCi/day. Based on a maximum production rate of 600 lbs. U₃O₈ per day, this release would correspond to a 1.41 X 10⁻⁶ fraction of the total amount of radioactivity in the daily product.

In like fashion, based on a measured flow rate of 834 ft³/min and maximum concentration of 7.62 X 10⁻¹² µCi/cc, the maximum daily release of natural uranium from the general fumes stack (0.26 µCi/day) corresponds to a 1.69 X 10⁻⁶ fraction of the total amount of radioactivity in the daily product. These release rates are significantly below those previously estimated, as described in Section 5 of the "Environmental/Safety Impact Appraisal", dated September 15, 1977. In this document, the applicant-supplied estimated daily release of 10 grams U₃O₈ corresponds to approximately 5.7 µCi/day of natural uranium.

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JUL 27 1982

Based on radiochemical isotopic analysis of the yellowcake product, releases of Th-230 and Ra-226 were also at levels far below MPCs.

As part of this review, I telephoned Mr. Bart Conroy of WMC on May 14, 1982 to clarify two items for future reports. I suggested that the operating times for the two stack sources, as well as the Lower Limits of Detection (LLDs) of the monitoring equipment, be provided in future 40.65 reports. He agreed to include this information. He pointed out that the policy for reporting low values was either to report the measured stack concentration, or else to report that the measurement was below the LLD of the equipment, as well as specifying that LLD.

Original Signed by:
G. Gnugnoli

Giorgio N. Gnugnoli, Project Manager
New Facilities Section
Uranium Recovery Licensing Branch
Division of Waste Management

Approved By: Original Signed by:
D. E. Martin
Dan E. Martin, Section Leader
New Facilities Section
Uranium Recovery Licensing Branch
Division of Waste Management

- cc: R. Berg, WMC
- B. Conroy, WMC
- R. Platzke, WMC
- C. Rutledge, WMC

Case Closed: 04008585010E

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