



United States Department of the Interior

BUREAU OF MINES
2401 E STREET, NW.
WASHINGTON, D.C. 20241

WM DOCKET CONTROL
CENTER

April 26, 1984

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Mr. David H. Tiktinsky
Project Manager, M.S. 623-SS
High Level Waste Branch--MMSS
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

WM Record File

B-6934

WM Project

10, 11, 16

Docket No. _____

PDR

LPDR B, M, S

Distribution:

TIKTINSKY

(Return to WM, 623-SS)

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Dear Mr. Tiktinsky:

In accordance with NRC/BOM Interagency Agreement No. NRC-02-08-075,
"Technical Assistance for Assessment of Repository Siting and Design," we
are forwarding a review conducted by the Methane Control group of BOM's
Pittsburgh Research Center for NRC. The document reviewed concerned the
potential methane hazard at BWIP.

Sincerely,

David R. Forshey
Chief, Division of Health
and Safety Technology

Enclosure

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United States Department of the Interior

BUREAU OF MINES

PITTSBURGH RESEARCH CENTER
COCHRANS MILL ROAD
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PITTSBURGH, PENNSYLVANIA 15236

March 26, 1984

Memorandum

To: Chief, Division of Health and Safety Technology, W.O. *DAR*

Through: Research Director, PRC *gmm*

From: Research Supervisor, GMC

Subject: Potential Methane Hazard at BWIP, NRC/BOM Interagency Agreement
No. NRC-02-80-075

In my previous memorandum on this subject (attached) I addressed the technical adequacy of the three reports in assessing the potential methane reservoir in the vicinity of the Reference Repository Location. The question now being asked by NRC--"Is the quantity of methane present at BWIP a sufficient hazard to justify NRC raising it as a potential problem or should the methane occurrence be noted as not of a major concern?"--would best be answered after the research recommended by the reports is conducted.

The information on gas production from borehole RRL-2 is too sparse to make any kind of judgment based on technical facts. The production rates of 11 and 9 ft³ CH₄/hour at a groundwater flow rate of 1.6 gallon/minute are minuscule in a mining context. For example, the methane inflow of 0.2 ft³/minute (11 ft³/hour) is easily diluted by such minimal air quantities as 3000 ft³/minute. However, having said this, the possibility that this inflow is not the maximum that will be seen during the life of the repository is a real concern.

Therefore, more information is needed to be able to answer NRC's question regarding the potential methane hazard at BWIP. As recommended before, a structured research project should be pursued at the BWIP site to characterize the potential methane reservoir.

Roger L. King
Roger L. King

Attachment

W/O ATTACHMENT

cc: E. B. Amey, W.O.
J. N. Murphy
D. M. Hyman
R. L. King

GMC:RLKing:jkr:FTS 723-6550

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