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40-8064
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EXXON MINERALS COMPANY

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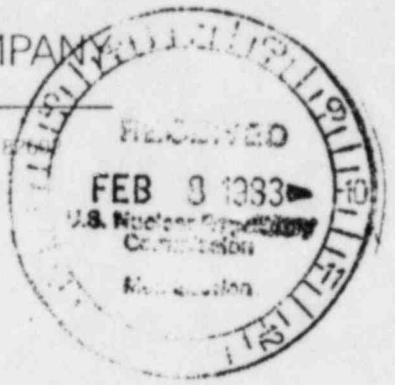
Highland Uranium Operations



January 28, 1983

U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTN: Mr. J. J. Linehan, Section Leader
Operating Facilities, Section I
Uranium Recovery Licensing Branch
Division of Waste Management

Docket No. 40-8064
NRC 1982 Fourth Quarter Report
Uranium Solution Mining
Pilot Program
Converse County, Wyoming

Gentlemen:

This report is submitted in accordance with License Condition No. 16 of Source Material License No. SUA-1064 issued June 30, 1982.

Expanded R&D Pilot

Restoration of the Expanded R&D Pilot (second) well field at Highland continued through the fourth quarter of 1982. Fluids were produced from the original production wells and passed through ion exchange columns for incidental uranium recovery. The fluids were then treated by reverse osmosis (RO) to reduce elemental concentrations and injected into the produced aquifer via the original injection wells. Since restoration began in October 1981, approximately 7.2 pore volumes of fluid have been produced.

Bi-weekly sampling of the observation and monitor wells continued through the report period as per Condition No. 30. The layout of the Expanded R&D Pilot well field and analytical results are presented in Attachment I. Except for sulfate which has been excluded as a single excursion parameter, all parameters have remained below their respective upper control limits.

The uranium content of the composite produced fluid remained at 5 mg/l through the fourth quarter.

The total volume of liquid wastes discharged from the pilot solution mine to the Highland mill tailings basin was 1,115 k gallons.

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DESIGNATED ORIGINAL

Certified By B Fraher

A DIVISION OF EXXON CORPORATION

Info Only

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Original Pilot

Exxon has claimed restoration of the Original Pilot in documentation submitted in September 1982. Until regulatory concurrence of restoration is received, the Original Pilot observation wells are sampled on a monthly basis as per Condition No. 25. The Original Pilot well field layout and analytical results are presented in Attachment II.

Health Physics surveys are taken monthly at the Solution Mine. These surveys consist of air samples for airborne uranium and radon progeny, and beta-gamma readings. Samples are taken at the recovery building, R.O. building and well field header house. Results of those surveys for the third and fourth quarters of 1982 are presented in Attachment III.

Should there be any questions about the R&D Pilot Solution Mine program, please call Mr. Dave Clark at (307) 265-7600.

Very truly yours,

J. B. Shannon
Mine Manager

DEC:clr
Attachments

c: U.S. Nuclear Regulatory Commission, Region IV
Office of Inspection and Enforcement
611 Ryan Plaza, Suite 1000
Arlington, Texas 76011
Attention: Mr. G. D. Brown

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

Wyoming Department of Environmental Quality
Land Quality Division
Equality State Bank Building
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Cheyenne, Wyoming 82002
Attention: Ms. Cathleen McCarty