Mobil Oil Corporation

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URANIUM/MINERALS DIVISION

December 8, 1981

Mr. David G. Boyer
Ground Water Hydrologist
Ground Water Section
Water Pollution Control Bureau
Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87503

CROWNPOINT SECTION 9
POND NO. 3 UNDERDRAIN
FLUID ANALYSIS REPORT

Dear Mr. Boyer:

Per your written request, the following information is submitted to further substantiate Mobil Oil Corporation's contention that fluids present in Pond No. 3 underdrain monitoring pipe riser (9P-11) are not due to a leak in the pond liner.

HISTORY:

A heavy rainfall occurred over the Crownpoint Section 9 Project area on October 2, 1981. As a result, standing surface water had collected in a low area on the up hill, east side of the third evaporation pond just outside of the security fence. The center of this water accumulation was approximately 20 feet east of the underdrain monitoring pipe riser 9P-11. It measured 15 feet wide, 175 feet long and was over one foot deep in certain areas. It was on October 7, 1981, that fluids were detected in 9P-11. The fluids were analyzed in accordance with Mobil's Discharge Plan (DP-26) and results were submitted in the Monthly Data Report of November 12, 1981. This information shows no presence of pond fluids in 9P-11.

Comparative fluid samples were taken from 9P-11 and Pond No. 3 on October 10, 1981. Results are presented in Table 1 (Attachment 1). Along with parameters required by the Discharge Plan, fluids were also analyzed for pH and chloride. These results confirm that fluids found in 9P-11 were not from the pond.

On October 20, 1981, water was still standing east of the pond. Mobil drained the surface water away from the pond. The level of fluids in 9P-11 increased until October 23, 1981, when the water depth from the bottom of the riser pipe was approximately 2 feet. The depth of fluids in 9P-11 has decreased to a level of one foot (as of December 7, 1981). The fluid level in 9P-11 is expected to continue to decrease.

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Table 2 (Attachment 1) is a comparison of pond fluids and fluids from 9P-11 taken on December 3, 1981. This was performed in response to your written request of November 19, 1981, for a detailed analytical comparison of the chemical composition. Included are results from 4 additional parameters along with those required by the Discharge Plan (DP-26). These results provide additional assurance that riser pipe fluids are not those from the evaporation pond.

At your request, the latest available radionuclide analysis results (Table 3/ Attachment 1) for Pond 3 (sample taken on October 4, 1981) is included for your review. This type of information is included in the Quarterly Data Report submitted by Mobil sixty days after the end of each quarter.

If we can be of further assistance, do not hesitate to contact me at (303) 572-2585. We would appreciate your confirmation of our findings.

Very truly yours,

G. A. Cresswell
Manager
Hydrological & Environmental Affairs

MLSkwirz:dp
Attachments
cc: W. L. Luthy, Nufuels
R. D. Peirce, Crownpoint, U/M
G. W. Stewart, NMEID-RPB

ATTACHMENT 1

TABLE 1
(Oct. 10, 1981)

	POND 3	9P-11
Uranium (mg/1)	3.5	0.1
Bicarbonate (mg/1)	229	-0-
Sodium (mg/1)	3,650	182
Conductivity (µmhos)	18,200	13,900
Chloride (mg/1)	4,375	158
pH	11.0	3.4

TABLE 2
(Dec. 3, 1981)

pH	8.9	3.3
Chloride (mg/1)	6,575	164
Calcium (mg/1)	446	249
Iron (mg/1)	0.35	15
Carbonate (mg/1)	46	-0-
Molybdenum (mg/1)	169	0.8
Uranium (mg/1)	0.8	0.1
Bicarbonate (mg/1)	405	-0-
Sodium (mg/1)	4,150	194
Conductivity (µmhos)	18,200	16,400

TABLE 3

Uranium (mg/1)	6.1	N/A
Thorium-230 (pCi/1)	2.5 ± 1.5	"
Radium-228 (pCi/1)	1.1 ± 1.8	"
Radium-226 (pCi/1)	83 ± 4	"
Lead-210 (pCi/1)	81 ± 3	"