

January 8, 1991

CERTIFIED MAIL, RETURN RECEIPT REQUESTED

U. S. Nuclear Regulatory Commission
Uranium Recovery Field Office
P. O. Box 25325
Denver, CO 80225

RE: Effluent Monitoring Report - SUA-1371, Locket No. 40-8698

Gentlemen:

Enclosed please find the original and four copies of the Effluent Monitoring Report for the Shoshone Canyon Uranium Processing Facility for the period from June 30, 1990 through December 31, 1990. This report is submitted in accordance with the requirements of 10 CFR 40.65.

Sincerely,

Vance W. Morrill

Vance W. Morrill
Environmental Radiological Health Technician

Enclosures

cc: RTBerg
NSavignac
USNRC, Director of Inspection and Enforcement (2)

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EFFLUENT MONITORING REPORT

(10 CFR 40.65)

Report Period: July 1, 1990 through December 31, 1990

Shoothering Canyon Uranium Processing Facility
Garfield County, Utah
NRC License No. SUA-1371
Docket No. 40-8698

Prepared by:

Plateau Resources Limited
Box 2111-Ticaboo
Lake Powell, UT 84533

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1.0 INTRODUCTION

The following Effluent Monitoring Report is presented to comply with requirements in accordance with 10 CFR 40, section 40.65, for the Shootaring Canyon Uranium Processing Facility, Source Material License No. SUA-1371, Docket No. 40-8698, operated by Plateau Resources Limited, Box 2111-Ticaboo, Lake Powell, UT 84533.

The sampling data represents the time period from July 1, 1990 through December 31, 1990.

2.0 SUPPLEMENTAL NOTES

1. The "% MPC" column refers to the 10 CFR, Part 20, Appendix B, Table II values for unrestricted areas:

| | MPC Air (uCi/ml) |
|-----------|---------------------|
| U-Natural | 5.0 E-12 |
| Ra-226 | 2.0 E-12 |
| Rn-222 | 3.0 E-09 |

2. Values are presented using the "E" format, i.e.:

$$1.2 \text{ E-16} = 1.2 \times 10^{-16}$$

3. All airborne particulate samples were collected using continuous high volume sampling techniques.
4. Lower limits of detection (LLD) and all analyses for the period of July 1, 1990 through December 31, 1990, were calculated and performed by outside laboratories; Barringer Laboratories, Inc, of Golden Co.
5. Gross concentrations are the sum of naturally occurring background concentrations and mill generated effluents. Similarly, gross exposure rates are the sum of naturally occurring background exposure rates and mill generated exposure rates.

3.0 AIR SAMPLES - 2nd Half, 1990

3.1 PARTICULATES, High Volume Air Samples

Date: 07/01/90 to 12/31/90

Location: AP-3 - Downwind; Sampled 20 hours per quarter.

| <u>Radionuclide</u> | <u>Gross Concentration and Error Estimate (uCi/ml)</u> | <u>LLD (uCi/ml)</u> | <u>% MPC</u> |
|---------------------|--|-------------------------|--------------|
| U-Nat | 8.10 E-19 | 1 E-18 | 1.6 E-5 |
| Ra-226 | 0.80 E-16 + 1.90 E-16 | 1 E-18 | 0.004 |

4.0 WATER SAMPLES

4.1 Groundwater Monitoring Wells

Date: 09-24-90

Location: RM-1

Type: Radiological Monitoring Well (hydrologically upgradient from tailings impoundment).

| <u>Radionuclide</u> | <u>Gross Concentration and Error Estimate (uCi/ml)</u> | <u>LLD (uCi/ml)</u> |
|---------------------|--|-------------------------|
| U-Nat | 2.50 E-9 | 2 E-10 |
| Ra-226 | 0.20 E-9 ± 0.2 E-9 | 2 E-10 |

Date: 09-24-90

Location: RM-1

| <u>CHEMICAL PARAMETER</u> | <u>CONCENTRATION (mg/l)</u> | <u>LLD (mg/l)</u> |
|---------------------------|-----------------------------|-------------------|
| As | <0.002 | 0.001 |
| Se | <0.002 | 0.001 |
| pH | 8.18 pH units | 0.1 pH units |
| chloride | 5.00 | 1. |

4.1 Groundwater Monitoring Wells

Date: 09-27-90

Location: RM-4

Type: Radiological Monitoring Well (hydrologically downgradient from tailings impoundment).

| Radionuclide | Gross Concentration and Error Estimate (uCi/ml) | LLD (uCi/ml) |
|--------------|---|-----------------|
| U-Nat | 1.60 E-9 | 2 E-10 |
| Ra-226 | 0.20 E-9 ± 0.02 E-9 | 2 E-10 |

Date: 09-27-90

Location: RM-4

| <u>CHEMICAL PARAMETER</u> | <u>CONCENTRATION (mg/l)</u> | <u>LLD (mg/l)</u> |
|---------------------------|-----------------------------|-------------------|
| As | <0.001 | 0.001 |
| Se | <0.002 | 0.001 |
| pH | 8.20 pH units | 0.1 pH units |
| Chloride | 6.00 | 1. |

4.1 Groundwater Monitoring Wells

Date: 09-26-90

Location: RM-5

Type: Radiological Monitoring Well (hydrologically downgradient from tailings impoundment).

| <u>Radionuclide</u> | <u>Gross Concentration and Error Estimate (uCi/ml)</u> | <u>LLD (uCi/ml)</u> |
|---------------------|--|---------------------|
| U-Nat | 2.60 E-9 | 2 E-10 |
| Ra-226 | 0.10 E-9 + 0.2 E-10 | 2 E-10 |

Date: 09-26-90

Location: RM-5

| <u>CHEMICAL PARAMETER</u> | <u>CONCENTRATION (mg/l)</u> | <u>LLD (mg/l)</u> |
|---------------------------|-----------------------------|-------------------|
| As | <0.001 | 0.001 |
| Se | <0.002 | 0.001 |
| pH | 8.20 | 0.1 pH units |
| Chloride | 7.0 | 1.0 |

4.1 Groundwater Monitoring Wells

Date: 09-25-90
 Location: RM-6

Type: Radiological Monitoring Well (hydrologically downgradient from tailings impoundment).

| <u>Radionuclide</u> | <u>Gross Concentration and Error Estimate (uCi/ml)</u> | <u>LLD (uCi/ml)</u> |
|---------------------|--|---------------------|
| U-Nat | 1.80 E-9 ± | 2 E-10 |
| Ra-226 | 0.30 E-9 ± 0.20 E-9 | 2 E-10 |

Date: 09-26-90
 Location: RM-6

| <u>CHEMICAL PARAMETER</u> | <u>CONCENTRATION (mg/l)</u> | <u>LLD (mg/l)</u> |
|---------------------------|-----------------------------|-------------------|
| As | 0.001 | 0.001 |
| Se | 0.002 | 0.001 |
| pH | 8.30 pH units | 0.1 pH units |
| Chloride | 7 | 1.0 |