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40-8674/GGE/SB/81/12/17

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MEMORANDUM FOR: G. N. Gnugnoli, Project Manager  
New Facilities Section  
Uranium Recovery Licensing Branch

FROM: G. G. Eadie, Project Manager  
Operating Facilities Section II  
Uranium Recovery Licensing Branch

SUBJECT: BLANDING ORE BUYING STATION'S EFFLUENT MONITORING  
REPORT FOR JANUARY 1, 1981 to June 30, 1981

I have reviewed the "Effluent Monitoring Report (10 CFR 40.65) for the Blanding Ore Buying Station" submitted on November 10, 1981 by Plateau Resources Limited for SUA-1326. I have the following comments:

Air Samples

Air samplers were operated continuously or for one 24-hour period each seven days, depending on power availability, at three sampling locations. The highest reported results for the 1st and 2nd quarter of 1981, irrespective of any particular sample, were: 0.0015 pCi/m<sup>3</sup> for uranium, 0.00047 pCi/m<sup>3</sup> for thorium-230, 0.00077 pCi/m<sup>3</sup> for radium-226, 0.021 pCi/m<sup>3</sup> for lead-210, and 0.0058 pCi/m<sup>3</sup> for polonium-210. The highest reported airborne concentration (i.e., 0.021 pCi/m<sup>3</sup> for lead-210) was only 0.5 percent of the 10 CFR Part 20, Appendix B, Table II value for the unrestricted area. All other radionuclides were less than 0.2 percent of their respective MPC unrestricted area limit. All reported values were typical of background levels of airborne radioactivity.

Recommendations

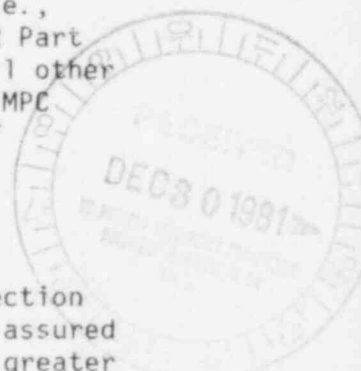
- 1.) The licensee should also provide the lower limit of detection (LLD) for each radionuclide so that the reviewer may be assured that the reported values are statistically real numbers greater than the respective LLD.

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- 2.) The licensee should indicate that the "% MPC" refers to the 10 CFR Part 20, Appendix B, Table II values for unrestricted areas.
- 3.) The licensee should indicate which samples were collected continuously and which samples were collected once each seven days.

Radon-222

The licensee provided radon-222 concentrations for the 1st and 2nd quarter of 1981 for the three sampling locations. The licensee used track etch devices for monitoring the radon levels. The highest reported radon level was 1.04 pCi/l which is typical of the background level. The highest measured radon level was less than 34 percent of the Table II, unrestricted area MPC.

Recommendations

- 1.) The licensee should provide the LLD for radon.
2. The licensee should indicate the percent MPC for unrestricted area for the measured radon levels.

Gamma Radiation (TLD)

The licensee reported gamma radiation exposure rates for 14 locations and for two control monitors. The highest reported exposure rate was 142 mR per quarter measured at an on-site location near the ore storage pad. The highest reported off-site exposure rate was 44.46 mR per quarter, which is typical of background radiation levels. This information is acceptable and therefore does not require further action.

Groundwater

The licensee reported water sample results for the dissolved component for the 1st and 2nd quarters of 1981 for four monitoring locations. The highest reported results, irrespective of any particular sample, were: 13 pCi/l for uranium, 5.2 pCi/l for thorium-230, 1.2 pCi/l for radium-226, 4.1 pCi/l for lead-210, and 0.40 pCi/l for polonium-210. All reported values were typical of

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background levels in groundwater. This information is acceptable and therefore does not require further action.

Surface Water

The licensee did not report the results of surface water sampling of the drainage ditch since it was dry.

Summary

All of the data reported in this environmental monitoring report for the first half of 1981 is typical of background levels and therefore requires no further action. The recommendations above relate only to improving the data reporting format. Also, it should be noted here, that the licensee has been performing more monitoring with respect to the number of sampling locations and radionuclide analyses than is required by the existing EMP for SUA-1326. This "above average" effort should be recognized.

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G. G. Eadie, Project Manager  
Operating Facilities Section II  
Uranium Recovery Licensing Branch

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