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THE UNIVERSITY OF KANSAS · LAWRENCE, KANSAS · 66045

DEPARTMENT OF CHEMICAL AND PETROLEUM ENGINEERING

July 16, 1979

Director
Division of Reactor Licensing
Nuclear Regulatory Commission
Washington, DC 20545

Dear Sir:

In accordance with Facility License R-78, I submit the following annual routine report enumerating specific points as specified.

1. Routine operation of the reactor accumulated .93 megawatt hours, mostly at 250 kw.
2. Unscheduled shutdowns occurred on July 26, 1978, two on Dec. 27, 1978, April 17, 1979, and May 18, 1979, and were diagnosed as due to electronic transients of unknown origin.
3. Routine maintenance has been successful in avoiding any necessity for performing special preventive and corrective maintenance having safety significance.
4. There have been no changes in facility or procedures nor have any tests or experiments been carried out without prior approval by the NRC pursuant to 10CFR 50.59.
5. Beta and gamma activity released to the sanitary sewer system from the demineralizer regeneration effluent hold-up tank was 1.23×10^{-2} μ ci and 7.9×10^{-2} μ ci.
6. Air samples taken in the vicinity of the reactor building were as follows:

Total number of samples between 7-1-78 & 6-30-78:		51
Beta activity	Number of samples < MDA:	46
	Average MDA	2.79×10^{-2} μ ci/ml
	Maximum	8.91×10^{-12}
	Minimum	1.40×10^{-13}
	Number of samples > MDA:	5
	Average of 5 samples	2.42×10^{-12} μ ci/ml
	Maximum	5.83×10^{-12}
	Minimum	2.60×10^{-13}
Gamma activity	Number of samples < MDA:	46
	Average MDA	3.18×10^{-11} μ ci/ml
	Maximum	6.86×10^{-11}
	Minimum	5.77×10^{-12}
	Number of samples > MDA:	5
	Average of 5 samples	3.97×10^{-11} μ ci/ml
	Maximum	5.87×10^{-11}
	Minimum	1.25×10^{-12}

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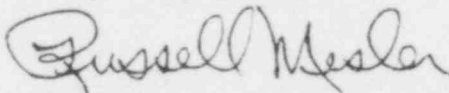
7. Air samples taken outside reactor building were as follows:

Total number of samples taken from 7-1-78 to 6-30-79:		51
Beta activity	Number of samples < MDA:	45
	Average MDA	4.74×10^{-12} uci/ml
	Maximum	9.06×10^{-12}
	Minimum	7.68×10^{-13}
Number of samples > MDA:		6
	Average of 6 samples	7.45×10^{-12} uci/ml
	Maximum	1.54×10^{-11}
	Minimum	9.59×10^{-13}
Gamma activity	Number of samples < MDA	49
	Average MDA	3.33×10^{-11} uci/ml
	Maximum	7.06×10^{-11}
	Minimum	5.33×10^{-12}
Number of samples > MDA		2
	Average of 2 samples	3.63×10^{-11} uci/ml
	Maximum	5.25×10^{-11}
	Minimum	2.01×10^{-11}

8. No facility personnel or visitors received any significant radiation exposure.
9. The University Committee on Radiation sources for the 1979-1980 year has not been appointed. You will be advised of the membership upon appointment.

The Nuclear Reactor Committee for 1979-1980 remains the same.

Very truly yours,



Russell B. Mesler
Professor

RBM:jw
cc: Reactor Committee