



50-263

PDR

AUG 18 1969

Mr. Steve J. Gadler  
2120 Carter Avenue  
St. Paul, Minnesota 55108

Dear Mr. Gadler:

I am pleased to respond to your letter of June 30 addressed to Mr. Howard Shapar, Assistant General Counsel of the Atomic Energy Commission.

You expressed a concern that the conditions of 10 CFR 20 related to gaseous effluent release at the Monticello Nuclear Power Plant probably would not be able to be met if high activity during the holdup period, or unfavorable weather conditions prevailed. In this regard, the following discussion may help to clarify what appears to be a misunderstanding of the provisions of 10 CFR 20.

Under the provisions of 10 CFR 20 the effluent from a reactor facility is to be controlled and limited to such values that the cumulative whole body radiation dose to an individual at the theoretical point of highest exposure will not exceed the limit recommended by FRC and adopted by the AEC. Irrespective of weather conditions or gaseous effluent holdup time, an operator of a nuclear power plant is not permitted to exceed release rates conservatively calculated and specified as mandatory conditions of his license included to implement this principle.

To translate these requirements into plant operating conditions for each reactor plant, specific limits on rates of radioactive material (curies per second) which may be released from the stack are derived. An annual average release rate limit is established such that the concentration of radioactive gas released under monitored and controlled conditions, when averaged over the calendar year, will not result in exposure at any offsite location above the specified limit. To account for variations in plant operating characteristics and weather conditions, releases at rates above the average rate are permitted over short periods of time. Limits are also placed, however, on the levels to which these short term release rates may go. If release rates above the average are temporarily experienced, there must be corresponding periods during which release rates are below the average, so that the average release rate permitted for the year is not exceeded.

OFFICE ▶						
SURNAME ▶						
DATE ▶						

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Mr. Steve J. Gadler

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In developing the permissible annual average and maximum short-term release rate limits in any given case, the meteorological characteristics of the site (including inversions and other adverse conditions), the topography of the site and the gaseous holdup time available in the plant off-gas system are considered. The limits so derived become the specified operating conditions within which the plant must operate.

Continuous radiation monitoring of the off-gas system provides the means to demonstrate compliance with the stack release rate limits. Radiation monitors are located before and after the holdup system. If radiation levels in excess of the allowable instantaneous release rate were detected an alarm would be actuated followed by isolation of the off-gas system and would not be released to the stack. Thus, the high activity radionuclides of the off-gas system could not be released to the stack. If corrective measures released rate limits would not be made within the time delay to reduce the activity level could not be made within the time delay period of the holdup system, then under the conditions of the license the plant would need to be shut down.

Sincerely,

Peter A. Morris, Director  
Division of Reactor Licensing

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ed at request of P.  
ached draft.

In developing the permissible annual average and maximum short-term release rate limits in any given case, the meteorological characteristics of the site (including inversions and other adverse conditions), the topography of the site environs, and the gaseous holdup time available in the plant off-gas system are considered. The limits so derived become the specified operating conditions within which the plant must operate.

Continuous radiation monitoring of the off-gas system provides the means to demonstrate compliance with the stack release rate limits. Radiation monitors are located before and after the holdup system. If radiation levels in excess of the allowable instantaneous release rate were detected an alarm would be actuated followed by isolation of the off-gas system from the stack. Thus, the high activity radioactive gas would be confined in the holdup system and would not be released to the stack until it could be ensured that the stack release rate limits would not be exceeded. If corrective measures to reduce the activity level could not be made within the time delay period of the holdup system, then under the conditions of the license the plant would need to be shut down.

Sincerely,

Peter A. Morris, Director  
Division of Reactor Licensing

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DR Reading

RL Reading

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RPB-1 Reading

H. L. Price

C. K. Beck

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C. L. Henderson

P. A. Morris

F. Western

F. Shapar

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D. R. Muller

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(Retyped at request of P. A. Morris)  
See attached draft.

OFFICE ▶	LRL	RL	OGC	RPB-1	DDR	DR	DR
	Vassallo	Muller	Shapar	L. Rogers	C. Beck	H. Price	P. Morris
SURNAME ▶	Schmidt						
DATE ▶	8/4/69	8/5/69	8/7/69	8/11/69	8/1/69	8/15/69	8/13/69