

June 13, 2023

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Director, Office of Nuclear Material Safety and Safeguards  
Washington, DC 20555-0001

SUBJECT: Reply to Notice of Violation in NRC Inspection Report NO. 05000182/2023201

1.) Reason for the Violation

In inspection report NO. 05000182/2023201, it was found that PUR-1, docket number 50-182, had committed a level IV violation by operating the reactor with a replacement RAM detector, without SCRAM capabilities, outside of the one-week period allowed by T.S. 3.2 table II footnote (e). This violation was due to mitigating actions taken following the failure of the PUR-1 pool top RAM detector on August 26<sup>th</sup>, 2022. In response to the failure of the RAM PUR-1 staff replaced the failed detector with an Eberline 9DP\* gamma sensitive detector, with alarm setpoints set to 30 and 50 mR/hr in accordance with footnote (e) of table II. PUR-1 staff misinterpreted the section of footnote (e) stating: ‘For periods of one week or for the duration of a reactor run...’ to mean that multiple runs for lengths of time not to exceed one week were allowed. PUR-1 was operated in this state from September 8<sup>th</sup>, 2022, until the original RAM was repaired, recalibrated, and reinstalled on February 2<sup>nd</sup>, 2023.

2.) Corrective Steps Taken and Results Achieved

PUR-1 staff have been in compliance with TS 3.2 since the reinstallation of the pool top RAM on February 2<sup>nd</sup>, 2023. In addition, PUR-1 staff, and operators have been notified of the intended meaning of TS 3.2 table II footnote (e). All reactor runs have been since then performed with all requirements of TS 3.2. fulfilled.

3.) Corrective Steps to be Taken

As PUR-1 has returned to normal operating conditions following the reinstallation of the permanent pool top RAM and all staff and operators have been informed of the intended meaning of TS 3.2 table II footnote (e), no further steps are needed to correct this violation.

4.) Date When Full Compliance Will be Reached

Full compliance has been achieved as of February 2<sup>nd</sup>, 2023.

Please feel free to contact me or any of us with questions or if you need further clarification.

Sincerely,



True Miller  
Reactor Supervisor  
N.E. Radiation Laboratory Assistant Director  
School of Nuclear Engineering

cc:

Dr. Arvind Raman  
Dean of Engineering  
Armstrong Hall of Engineering, Suite 3000  
701 West Stadium Avenue  
West Lafayette, IN 47907-2045

Mayor  
City of West Lafayette  
1200 N. Salisbury Street  
West Lafayette, IN 47906  
John H. Ruyack, Manager  
Epidemiology Res Center/Indoor & Radiological Health  
Indiana Department of Health  
2525 N. Shadeland Avenue, Suite E3  
Indianapolis, IN 46219

Howard W. Cundiff, P.E., Director  
Consumer Protection  
Indiana State Department of Health  
2 North Meridian Street, 5D  
Indianapolis, IN 46204

Test, Research and Training  
Reactor Newsletter  
Attention: Amber Johnson  
Dept of Materials Science and Engineering  
University of Maryland  
4418 Stadium Drive College Park, MD 20742-2115