

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe. 05000397  
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 SORESEN, G.C. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
 SCHWENCER, A. Licensing Branch 2

SUBJECT: Requests temporary exemption from 30-minute rated supply requirement of 10CFR50, App R. App R requires rated operating air supply of at least 30 minutes for self-contained breathing apparatus for use by fire brigade.

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1. The first part of the report is a general description of the project. It includes the title, the objectives, the scope, and the organization of the project. The title is "The Effect of Temperature on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide". The objectives are to determine the effect of temperature on the rate of reaction and to determine the activation energy of the reaction. The scope is limited to the reaction of hydrogen peroxide with potassium iodide in aqueous solution. The organization of the project is as follows: a general description of the project, a description of the experimental procedure, a description of the results, and a conclusion.

2. The second part of the report is a description of the experimental procedure. It includes the materials, the apparatus, and the procedure. The materials are hydrogen peroxide, potassium iodide, and distilled water. The apparatus is a 250 ml Erlenmeyer flask, a 10 ml graduated cylinder, a thermometer, and a stopwatch. The procedure is as follows: a 10 ml sample of 3% hydrogen peroxide is placed in a 250 ml Erlenmeyer flask. A 10 ml sample of 0.1 M potassium iodide is added to the flask. The flask is stoppered and the mixture is allowed to stand for 5 minutes. The flask is then placed in a water bath at a known temperature. The time required for the reaction to complete is determined by the appearance of a blue color. The reaction is complete when the blue color is no longer visible.

3. The third part of the report is a description of the results. It includes the data, the calculations, and the graphs. The data are as follows: a table showing the rate of reaction at different temperatures. The calculations are as follows: a table showing the activation energy of the reaction. The graphs are as follows: a plot of the rate of reaction versus temperature.

4. The fourth part of the report is a conclusion. It includes a summary of the results and a discussion of the significance of the results. The summary of the results is as follows: the rate of reaction increases with increasing temperature. The activation energy of the reaction is 50 kJ/mol. The significance of the results is as follows: the results show that the rate of reaction is affected by temperature. This is important because it allows us to predict the rate of reaction at different temperatures.

5. The fifth part of the report is a bibliography. It includes a list of the references used in the report. The references are as follows: a list of books, articles, and other sources used in the report.

## Washington Public Power Supply System

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

June 6, 1984  
G02-84-376

Docket No. 50-397

Director of Nuclear Reactor Regulation  
Attention: Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Schwencer:

Subject: NUCLEAR PLANT NO. 2  
OPERATING LICENSE NPF-21, REQUEST FOR  
TEMPORARY EXEMPTION FROM SECTION III.H  
OF 10 CFR 50, APPENDIX R

Reference: IE Information Notice No. 84-34: Respirator  
User Warning: Defective Self-Contained  
Breathing Apparatus Air Cylinders

In the reference Information Notice, the Supply System was alerted to a serious defect in certain self-contained breathing apparatus (SCBA) rated at 4,500 psi. In addition, the National Institute of Occupational Safety and Health (NIOSH) has issued a mandate limiting the filling/operating pressure of the affected cylinders to 4,000 psi until further notice. The effect of this is to reduce their rated certification to 25-minutes. Section III.H of 10 CFR 50, Appendix R requires a rated operating air supply of at least 30-minutes for all SCBA provided for use by Fire Brigade, Damage Control Parties, and Control Room Personnel. Compliance with the NIOSH mandate places the Supply System in non-compliance with Appendix R.

Therefore, the Supply System hereby requests the NRC provide us a temporary exemption from the 30-minute-rated supply requirement of 10 CFR 50, Appendix R, Section III.H. In the case of the affected cylinders that are fulfilling Appendix R requirements, the Supply System has accomplished the required pressure reductions and provided appropriate compensatory air supplies.

Should you have any questions regarding this matter, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,



G. C. Sorensen, Manager  
Regulatory Programs

cc: R Auluck - NRC  
WS Chin - BPA  
AD Toth - NRC Site

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