



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 4, 1980
NRC/THI-80-020

Docket No. 50-320

Mr. R. C. Arnold
Senior Vice President
Metropolitan Edison Company
100 Interpace Parkway
Parsippany, New Jersey 07054

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Dear Mr. Arnold:

Subject: Reactor Building Purge

Reference: GPU letter, GQL 1416, R. C. Arnold to R. H. Vollmer,
dated November 12, 1979

The NRC staff review of the hardware intended for use during the proposed purge of the Reactor Building (R.B.) has identified the following concerns:

1. The purge discharge fan and filter housing do not appear to be compatible. The fan, AH-E34, is capable of producing a negative pressure in excess of 40 inches W.G. at the fan inlet during zero flow conditions. The filter housing, which is connected to the fan inlet, is rated to a minimum pressure of -11 inches W.G. This disparity in pressure ratings provides a potential for filter housing failure and a resultant radioactive release to the Auxiliary Building (A.B.). Several situations can be identified which would result in underpressurization of the filter housing as a result of the pressure rating disparity. These include:
 - a. Automatic closure of valve AH-V3A on high R.B. pressure.
 - b. Inadvertent closure of any one of the valves upstream of the filter housing.
 - c. High pressure drop across the filters and/or high R.B. negative pressure. Please note that a R.B. pressure of -.4 PSIG is in itself sufficient to exceed the filter housing negative pressure rating.
2. To ensure against inadvertent release of R.B. gases through the air inlet valve, AH-V7, controls should be established to maintain the R.B. at a negative pressure with respect to the A.B. throughout the purge. The automatic closure set point of AH-V3B should be reset from +.5 PSIG to some negative value. The feasibility of adding a check valve type device to the air inlet line should be investigated.

8008120 704

Mr. R. C. Arnold

2

February 4, 1980

3. The filters are situated in a low point with respect to the other purge system components. Any condensation would, therefore, collect in the filter housing. Filter housing drains directed to a liquid waste collecting system should be added to the design.
4. Please provide additional information on the type of sensors and indicators which will be used to measure purge flow rates. What is the accuracy of these devices at the projected purge rates?

The concerns addressed in this letter are hardware oriented and as such do not affect the progress of the R.B. Purge Environmental Assessment, which is currently being prepared by the NRC staff. The release of the Environmental Assessment, however, will be contingent upon satisfactory resolution of all hardware and technical concerns.

John T. Collins

John T. Collins
Deputy Director
NRC/TMI Technical Support Staff

cc: See Distribution List

Mr. R. C. Arnold
Metropolitan Edison Company

3

Walter W. Cohen, Consumer Advocate
Department of Justice
Strawberry Square, 14th Floor
Harrisburg, PA 17127

Robert L. Knupp, Esquire
Assistant Solicitor
Knupp and Andrews
P. O. Box P
407 N. Front Street
Harrisburg, PA 17108

John E. Minnich, Chairperson
Dauphin Co. Board of Commissioners
Dauphin County Courthouse
Front and Market Streets
Harrisburg, PA 17101

Robert Q. Pollard
Chesapeake Energy Alliance
609 Montpelier Street
Baltimore, MD 21218

Chauncey Kepford
Judith H. Johnsrud
Environmental Coalition on Nuclear Power
433 Orlando Avenue
State College, PA 16801

Ms. Frieda Berryhill, Chairperson
Coalition for Nuclear Power Plant
Postponement
2610 Grendon Drive
Wilmington, DE 19808

Holly S. Keck
Anti-Nuclear Group Representing York
245 W. Philadelphia Street
York, PA 17404

John Levin, Esquire
Pennsylvania Public Utilities Commission
P. O. Box 3265
Harrisburg, PA 17120

Jordon D. Cunningham, Esquire
Fox, Farr and Cunningham
2320 N. Second Street
Harrisburg, PA 17110

Ms. Kathy McCaughin
Three Mile Island Alert, Inc.
23 South 21st Street
Harrisburg, PA 17104

Ms. Marjorie M. Aamodt
R. D. #5
Coatesville, PA 19320

Ms. Karen Sheldon
Sheldon, Harmon, Roisman & Weiss
1725 I Street, N.W., Suite 506
Washington, DC 20006

Earl B. Hoffman
Dauphin County Commissioner
Dauphin County Courthouse
Front and Market Street
Harrisburg, PA 17101

Government Publications Section
State of Library of Pennsylvania
Box 1601 Education Building
Harrisburg, PA 17127

Dr. Edward O. Swartz
Board of Supervisors
Londonderry Township
RFD #1 Geyers Church Road
Middeltown, PA 17057

U. S. Environmental Protection Agency
Region III Office
ATTN: EIS COORDINATOR
Curtis Building (Sixth Floor)
6th and Walnut Streets
Philadelphia, PA 19106

Dauphin County Office Emergency
Preparedness
Court House, Room 7
Front and Market Streets
Harrisburg, PA 17101

Department of Environmental Resources
ATTN: Director, Office of
Radiological Health
P. O. Box 2063
Harrisburg, PA 17105

R. C. Arnold
Metropolitan Edison Company

4

Mr. R. F. Wilson
Director, TMI-2
Metropolitan Edison Company
P. O. Box 480
Middletown, PA 17057

Mr. J. J. Barton
Manager, Site Operations, TMI-2
Metropolitan Edison Company
P. O. Box 480
Middletown, PA 17057

Mr. R. W. Heward
Radiological Control Manager, TMI-2
Metropolitan Edison Company
P. O. Box 480
Middletown, PA 17057

Mr. B. Elam
Manager, Plant Engineering
Metropolitan Edison Company
P. O. Box 480
Middletown, PA 17057

Mr. L. W. Harding
Supervisor of Licensing
Metropolitan Edison Company
P. O. Box 480
Middletown, PA 17057

Mr. E. G. Wallace
Licensing Manager
GPU Service Corporation
100 Interpace Parkway
Parsippany, NJ 07054

Mr. I. R. Finrock, Jr.
Jersey Central Power & Light Company
Madison Avenue at Punch Bowl Road
Morristown, NJ 07950

Mr. R. W. Conrad
Pennsylvania Electric Company
1007 Broad Street
Johnstown, PA 15907

J. B. Lieberman, Esquire
Berlock, Israel, Lieberman
26 Broadway
New York, NY 10004

George F. Trowbridge, Esquire
Shaw, Pittman, Potts & Trowbridge
1800 M Street, N.W.
Washington, DC 20036

Ms. Mary V. Southard, Chairperson
Citizens for a Safe Environment
P. O. Box 405
Harrisburg, PA 17108

Dr. Walter H. Jordan
881 W. Outer Drive
Oak Ridge, TN 37830

Dr. Linda W. Little
5000 Hermitage Drive
Raleigh, NC 27612

Karin W. Carter, Esquire
505 Executive House
P. O. Box 2357
Harrisburg, PA 17120

Honorable Mark Cohen
512 E-3 Main Capital Building
Harrisburg, PA 17120

Ellyn Weiss, Esquire
Sheldon, Harmon, Roisman & Weiss
1725 I Street, N.W., Suite 506
Washington, DC 20006

Mr. Steven C. Sholly
304 S. Market Street
Mechanicsburg, PA 17055

Mr. Thomas Gerusky
Bureau of Radiation Protection
P. O. Box 2063
Harrisburg, PA 17120

Mr. Marvin I. Lewis
6504 Bradford Terrace
Philadelphia, PA 19149

Ms. Jane Lee
R. D. 3, Box 3521
Etters, PA 17319

Mr. R. C. Arnold
Metropolitan Edison Company

5

Governor's Office of State
Planning and Development
ATTN: Coordinator, Pennsylvania
Clearinghouse,
P. O. Box 1323
Harrisburg, PA 17120

Mrs. Rhoda D. Carr
1402 Marene Drive
Harrisburg, PA 17109

Mr. Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 420, 7735 Old Georgetown Road
Bethesda, MD 20014

Ivan W. Smith, Esquire
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Atomic Safety and Licensing Board Panel
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Atomic Safety and Licensing Appeal Panel
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Docketing and Service Section
U. S. Nuclear Regulatory Commission
Washington, DC 20555