

# Duquesne Light Company

Beaver Valley Power Station  
P.O. Box 4  
Shippingport, PA 15077-0004

JOHN D. SIEBER  
Vice President - Nuclear Group

(412) 393-5255

February 14, 1990

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1 and No. 2  
BV-1 Docket No. 50-334, License No. DPR-66  
BV-2 Docket No. 50-412, License No. NPF-73  
NRC Generic Letter 88-14

Gentlemen:

On August 8, 1988, Generic Letter 88-14, "Instrument Air System Problems Affecting Safety-Related Equipment" was issued to all holders of Operating Licenses or Construction Permits for Nuclear Power Reactors. The purpose of the generic letter was to request each licensee/applicant review NUREG-1275, Volume 2, and perform a design and operational verification of the instrument air system. In addition, each licensee/applicant was to provide a discussion of their program for maintaining proper instrument air quality. Each licensee/applicant was to provide a response to the NRC staff within 180 days. The response was to consist of a submittal signed under oath or affirmation which indicated the requested actions had been completed or that the licensee's plan/schedule had been provided. By letter dated February 17, 1989, Duquesne Light Company provided a response indicating the actions that had been completed and a schedule for the completion of the remaining actions. By letter dated May 3, 1989, Duquesne Light Company provided additional information concerning the schedule for the completion of a design change to the instrument air system at Beaver Valley Unit 2 and pertaining to the maintenance repair of instrument air system equipment.

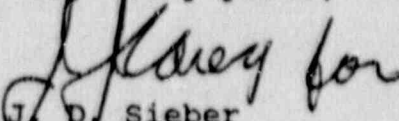
Attached is an update of the status of actions to be taken at Beaver Valley Unit 1 and Unit 2 to meet the requirements of Generic Letter 88-14. All of the required actions have not been completed at this time. A subsequent submittal will be made when all actions are completed.

A048  
11

Beaver Valley Power Station, Unit Nos. 1 & 2  
Docket No. 50-334, License No. DPR-66  
Docket No. 50-412, License No. NPF-73  
NRC Generic Letter 88-14  
Page 2

If you have any questions concerning this response, please  
contact my office.

Very truly yours,

  
J. D. Sieber  
Vice President  
Nuclear Group

cc: Mr. J. Beall, Sr. Resident Inspector  
Mr. W. T. Russell, NRC Region I Administrator  
Mr. P. Tam, Sr. Project Manager

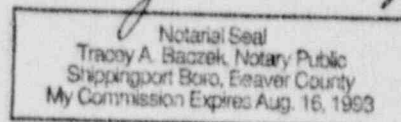
COMMONWEALTH OF PENNSYLVANIA)

) SS:

COUNTY OF BEAVER )

On this 14<sup>th</sup> day of February, 1990,  
before me, Tracy A. Baczek, a Notary Public in and for said  
Commonwealth and County, personally appeared J. J. Carey, who being  
duly sworn, deposed, and said that (1) he is Executive Vice President  
of Duquesne Light, (2) he is duly authorized to execute and file the  
foregoing Submittal on behalf of said Company, and (3) the statements  
set forth in the Submittal are true and correct to the best of his  
knowledge, information and belief.

Tracy A. Baczek



Member, Pennsylvania Association of Notaries



ATTACHMENT

Page 1 of 4

Generic Letter 88-14  
"Instrument Air Supply System Problems  
Affecting Safety-Related Equipment"

Unit 1

The instrument air system at BVPS Unit 1 has been tested periodically for dewpoint, oil, particulates and flammable gases. No oil or flammable gases were detected. The dewpoint and particulates occasionally fail to meet the test acceptance criteria.

The interior of the station instrument air receiver was cleaned and coated with an epoxy material during the Unit 1 Seventh Refueling Outage. The air receiver is made of carbon steel material, is located downstream of the air dryer and filters and is believed to be a contributor to the particulate problem. The effect of the coating in helping to correct the particulate problem is under evaluation.

A design change package (DCP 1392) has been initiated to install an improved air filter in the by-pass line around the air dryer and to change the particulate filtering size of the air dryer after filter. The by-pass line and filter are used whenever the air dryer must be by-passed for maintenance. The filters currently installed in the by-pass line are obsolete and not readily available. The replacement filter will be of the coalescent type and will meet or exceed particulate size filtering requirements. The current air dryer after filter particulate size filtering capability does not meet the 3 micron particulate filtering requirement. The air dryer after filter particulate size filtering capability will be improved to 1 micron with completion of the design change package. The design change package is scheduled for implementation by the end of 1990. Periodic testing of the system subsequent to the above changes will be used to determine if the particulate problem is solved.

The instrument air system dryer has performed adequately, when operating properly, for the air dewpoint to meet the acceptance criteria. With adequate attention to proper operation and maintenance of the dryer, the systems air dewpoint should be satisfactory. No specific changes to the system are currently contemplated to improve the instrument air system dewpoint.

A procedure was prepared and the Unit 1 containment instrument air system was tested for dewpoint, particulates, oil and flammable gases during the refueling outage that started in September 1989. No flammable gases were detected. The dewpoint, particulates and oil did not meet the acceptance criteria. An

Engineering Memorandum (EM 22649) has been issued to evaluate corrective actions necessary to meet the performance specifications. As stated in our February 17, 1989, response to Generic Letter 88-14, the containment instrument air system is located inside containment; it is not tested during power operation. Modifications to the system will be scheduled for completion during those outages when the containment is not subatmospheric. A tentative schedule for installation of a filter and dryer in the system is to make the modifications by the end of the ninth refueling outage.

A test procedure was prepared and the Intake Structure instrument air system was tested for dewpoint, particulates, oil and flammable gases commencing in February 1989. No flammable gases were detected. The system did not meet the acceptance criteria for dewpoint, particulates and oil. A design change package (DCP 1393) has been initiated to install a filter and dryer in the system to correct the problem. The design change is currently scheduled for implementation by the end of the next Unit 1 refueling outage.

A test procedure was prepared, a temporary sample location was installed and testing for dewpoint, particulates, oil and flammable gases was performed on the Control Room Ventilation System instrument air system in December 1989 prior to the startup of Unit 1 from the last refueling outage. Periodic testing has continued. No oil or flammable gases have been detected in the system. The results of the particulate testing were not acceptable at one location. A design change package (DCP 1400) has been initiated to modify the system so that all of the components served by the system will receive filtered air. The temporary sample location will be made permanent as part of the piping change. The design change package is scheduled for completion by the end of the next Unit 1 refueling outage.

The dewpoint determined for this system met minimum requirements during the initial test in December 1989, and at some of the subsequent periodic test performances. The dewpoint tests meet the acceptance criteria when performed while the air compressors are not pumping up system pressure and fail when performed while the air compressors are pumping to increase system pressure. The performance of the system will continue to be monitored and evaluated to determine if changes are warranted to further reduce the system air dewpoint.

Unit 2

The station instrument air system at BVPS Unit 2 has been periodically tested for dewpoint, particulates, oil and flammable gases. No oil or flammable gases were detected. The dewpoint was not within the acceptance criteria at most times prior to installation of a temporary, larger capacity air dryer in the system to operate in place of the original system dryer. Since installation of the large dryer, the dewpoint of the system has improved dramatically and meets or exceeds the acceptance criteria. Minor system revisions are underway or planned to make the installation permanent. This should be completed during the next refueling outage.

The particulates in the system have not consistently met the test acceptance criteria. A coalescing filter was installed upstream of the air dryer in July 1989 in an attempt to correct the particulate and dewpoint problem. The carbon steel instrument air receiver as well as some carbon steel piping which are located downstream of the air dryer and filters are believed to be the sources of the particulates exceeding 3 micron in size. As part of the design change package to make the temporary air dryer a permanent installation, an additional 3 micron size or smaller particulate filter will be added to the system downstream of the air receiver. This design change package is scheduled to be implemented during the 2R outage.

The Unit 2 containment instrument air has been tested periodically for dewpoint, particulates, oil and flammable gases since July 1989. These parameters have met the test acceptance criteria and no system modifications are planned to improve performance in these areas.

As stated in our response to the second verification item of Generic Letter 88-14, we indicated we were in the process of changing some Abnormal Operating Procedures (AOP 1.34.1 and AOP 2.34.1) associated with the loss of instrument air at Unit 1 or Unit 2 into Alarm Response Procedures. Those changes have been completed for each unit. We also stated we would review and revise certain initial training and retraining programs/lesson plans to insure they address concerns regarding the importance of, and potential problems related to, the instrument air system. The status of those changes is indicated below:

- License retaining classroom Module 4 88/89 cycle (completed)
- License Retraining Simulator Module 3/4 88/89 cycle (completed)
- Non-License Retraining Module 3 88/89 cycle (completed)
- Technical Personnel Training
  - LP-TPT-20 (initial training) (completed)
  - LP-TPT-100B (retraining) (completed)



- Initial Operator Training  
(Prior to next presentation, no trainees in training)
  - Simulator
  - LP-SQS-34.1
  - 2LP-SQS-34.1
- Initial STA training  
(Prior to next presentation, no trainees in training)
  - LP-STA-54A

NOTE: STA retraining is covered in license retraining.

No other items remain open regarding the second verification item of Generic Letter 88-14.

In our February 1989 response letter to Generic Letter 89-14 concerning the verification of the design of the instrument air system (Verification Number 3), we indicated some Unit 1 air-operated valves may require testing to satisfy Generic Letter 88-14 requirements. During the last Unit 1 refueling outage which began September 1989, we tested twenty-seven (27) Q.A. Category I air-operated valves (1BVT 2.34.3) to confirm the proper failure positions for those valves. Two additional valves were included and tested in that test procedure. All of the valves were confirmed to fail to the position needed to meet design requirements.

No further testing is planned and all the actions required to satisfy the third verification item of Generic Letter 88-14 are completed. No design problems were identified which would have prevented components from accomplishing their intended safety function.