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November 1, 1984

United States Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Mr. George W. Knighton, Chief
Licensing Branch 3
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
FSAR Separate Submittal for Environmental Qualification Report
Environmental Qualification of Safety Related Mechanical
Equipment

Gentlemen:

Submitted for your review at this time are six (6) copies of the updated Environmental Qualification Program for Safety Related Mechanical Equipment. This is part of the Equipment Qualification Report transmitted to you this past June (2NRC-4-087, dated June 22, 1984). This program has been performed by Duquesne Light Company (DLC) in response to FSAR Questions 270.2 and 270.3 identified in FSAR Amendment 4 (2NRC-3-096, dated December 2, 1983).

The program as revised contains the following information:

- 1) Qualification methodology utilized
- 2) Detailed master listing of equipment included
- 3) Qualification results

It is understood that several items will be chosen by the Equipment Qualification Branch for detailed review. Extensive back-up documentation and additional information is available in conjunction with the program and will be transmitted to you for those items selected.

The evaluation's results are now complete and DLC has initiated steps to qualify that equipment that has been identified as not having the ability to withstand the postulated environments. Equipment items with the EQ status code of "I" denoted on this master list are included in this category. This generally indicates that a particular type and/or model number is not well suited for a specific area (i.e., containment) as opposed to the item lacking any substantial qualification levels.

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PDR ADDCK 05000412
A PDR

CLH/wjs
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Attachment

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DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION UNIT 2

ENVIRONMENTAL QUALIFICATION OF
MECHANICAL EQUIPMENT

Impell Report No.: 02-1290-1242

Revision 0

October, 1984

Copy # 1

Duquesne Light Company has contracted Impell Corporation to perform this work scope. Personnel from DLC have participated extensively in this program during the initial, on-going and final stages of the program. DLC has reviewed this report and has found it acceptable for submittal to the NRC.

Curtis L Hill

Curtis L. Hill
Sr. Project Eng.
DLC BV-2 Project Team

10-25-84

Date



IMPELL CORPORATION

NEW YORK REGIONAL OFFICE

REPORT APPROVAL COVER SHEET

Client: Duquesne Light Company

Project: Beaver Valley, Unit 2

Job No.: 1290-005-1641

Report Title: Environmental Qualification of Mechanical Equipment

Report Number: 02-1290-1242 Rev. No.: 0

The work described in this Report was performed in accordance with the Impell Corporation Quality Assurance Program. The signatures below verify the accuracy of this Report and its compliance with applicable quality assurance requirements.

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REVISION RECORD

REV. NO.	PREPARED	REVIEWED	APPROVED	CONCURRENCE	APPROVAL DATE	REVISION

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Appendix A: Master List

Appendix B: Mechanical Equipment Qualification Worksheets

SUMMARY

This report provides a description of the methodology, assumptions, and results of a program to evaluate the environmental qualification of active safety-related mechanical equipment at Beaver Valley Power Station Unit 2.

Section 1.0 provides background information regarding the purpose and scope of the Mechanical Equipment Qualification (MEQ) Program.

Section 2.0 describes the criteria and methodology for selecting specific equipment to be included in this program. The resulting "Master List of Active Safety-Related Mechanical Equipment" is provided as Appendix A.

Section 3.0 describes the methodology and acceptance criteria for evaluating the qualification of the equipment and preparing the Mechanical Equipment Qualification (MEQ) Files. The "Mechanical Equipment Environmental Qualification Worksheets" contained in Appendix B summarize the results of this evaluation, and were extracted from the MEQ Files.

Section 4.0 summarizes the results of this program.

Section 5.0 contains a list of references cited in this report.

1.0 INTRODUCTION

The Nuclear Regulatory Commission requested in Requests for Additional Information 270.2, Section f (Reference 1) that Duquesne Light Company review and evaluate the environmental qualification of mechanical equipment to demonstrate compliance with General Design Criteria 4 of Appendix A to 10CFR Part 50. In order to demonstrate compliance, the NRC requested the following:

1. Identification of safety related mechanical equipment located in potentially harsh environments, including required operating times.
2. Identification of the environmental conditions to which the equipment could be exposed.
3. Identification of the nonmetallic subcomponents of this equipment.
4. Identification of nonmetallic material capabilities.
5. Evaluation of environmental effects on this equipment.

The Duquesne Light Company retained the Impell Corporation to perform this review and evaluation. This report presents the methodology, assumptions, and summary of results obtained by Impell in performing the Mechanical Equipment Qualification (MEQ) Program.

The equipment within the scope of this program is active safety-related mechanical equipment located in potentially harsh accident environments which could be required to mitigate either a Loss-Of-Coolant-Accident (LOCA), Main Steam Line Break (MSLB), or High Energy Line Break (HELB) outside containment.

Active mechanical equipment is defined as equipment which must perform a mechanical motion to accomplish its safety function.

The results of this program include a list of active safety-related mechanical equipment located in a harsh environment (Appendix A) and Mechanical Equipment Qualification (MEQ) Files (which include the Mechanical Equipment Environmental Qualification Worksheets provided as Appendix B). The MEQ Files and the Common Reference File, which contain the references cited for materials radiation and thermal capabilities, have been issued under separate cover.

2.0 MASTER LIST DEVELOPMENT

The identification of that equipment encompassed within the scope of the program was performed in 3 steps:

1. Identification of Safety-Related Systems that may contain mechanical equipment requiring environmental qualification.
2. Identification of active mechanical equipment contained in those systems which are located in a potentially harsh environment.
3. Completion of the Master List, including identification of manufacturer and model number.

2.1 Identification of Safety-Related Systems

A list of plant systems that may contain safety-related active mechanical equipment was compiled from the FSAR Table 3.11-1, Amendment 5. Table 3.11-1 was reviewed to identify all safety-related systems containing electrical equipment designated as performing a safety function during the mitigation of design basis accidents, and that will experience the resultant harsh environmental conditions. The resulting list of systems formed the basis for identification of the safety-related active mechanical equipment to be evaluated within the scope of this program. This list is enclosed as Table 2-1.

2.2 Identification of Active Mechanical Equipment

The identification of the equipment to be evaluated for inclusion in the Mechanical Equipment Master List was completed in the following manner.

Using the List of Safety-Related Systems identified in 2.1 above, document BV2-807, "Listing of Seismic and Dynamic Qualification Summary and Status of Safety-Related Equipment" (Reference 2), was reviewed to identify all equipment contained in these systems. The appropriate sections of BV2-807 were then removed and superimposed onto a checklist format to enable further evaluation for the inclusion or exclusion of this equipment on the Master List, as shown in Figure 2-1. Each item of equipment was then evaluated to determine if it was:

- Mechanical
- Active, and
- Located in a potentially harsh environment.

The following categories of mechanical equipment were not considered for inclusion on the Master List because they are considered to be passive or are not expected to perform an active accident mitigating function.

1. Structural seals
2. Piping (not including fittings and seals)
3. Pipe supports
4. Fire stops and seals
5. Terminal boxes, junction boxes, conduit and cable trays
6. Vent, drain and instrument root valves
7. Excess flow check valves (less than 1 inch in size)
8. Flexible hoses and rupture discs
9. Spool pieces & flanges

The following types of equipment were evaluated for inclusion on the Master List and were categorized as either active or passive in accordance with the following table.

<u>ACTIVE</u>	<u>PASSIVE</u>
Remotely Operated Valves	Vessels and Tanks
Remotely Operated Dampers	Strainers and Filters
Check Valves	Heat Exchangers
Pumps	
Centrifugal/Axial Fans	Manually Operated Valves
Safety Valves	Venturi or Orifice type flow elements
	Thermal Relief Valves
Unit Coolers	

Any equipment not included in the above listing was considered on a case-by-case basis.

All items of mechanical equipment determined to be "active" were then evaluated to determine if they are located in a potentially harsh environment. A potentially harsh environment is defined in terms of increased temperature, pressure, humidity, and radiation (resulting in a total integrated dose of greater than 10^3 rads), as well as chemical spray for equipment located inside the Reactor Containment. This evaluation was made by relating the location information in BV2-807 to document 2BVM-119, "Environmental Conditions for Equipment Qualification Requirements", (Reference 3), which is the environmental parameters document used in the Electrical Equipment Qualification Program.

All of the equipment satisfying the above criteria was then included in the Master List.

In addition, a list of safety-related snubbers and check valves was developed using specifications identified by the Duquesne Light Company. This equipment was also included in the Master List. The Master List format is provided as Figure 2-2.

2.3 Completion of Master List

The Master List was completed by determining the appropriate information necessary to identify each item of equipment and categorize the equipment into specific qualification files.

The manufacturer and model number of each item of equipment, as well as the Specification Number for which it was procured, was determined from BV2-807 (Reference 2). This information was then confirmed by examination of the individual specifications and vendor drawings.

The MEQ File numbers were assigned based on plant purchase specifications and the similarity of equipment manufacturers and model numbers.

The completed Master List consists of the following information:

Equipment I.D.

The identification/mark number for each item of equipment.

Equipment Type

The description of the equipment.

Manufacturer

The vendor or manufacturer that supplied the equipment.

Model Number

The manufacturer's identification of the equipment.

Location

The building and elevation where the equipment is installed.

EQ Status

The result of the qualification evaluation of each item of equipment.

MEQ File

The number assigned by Impell to evaluate similar components purchased under common specification.

Temperature Profile

The temperature profile reference figure or table for a component's location.

Pressure Profile

The pressure profile reference figure or table for a component's location.

Rad Zone

The radiation zone or table for a component's location.

Spec. Number

The specification/purchase order number by which the component was procured.

3.0 QUALIFICATION FILE PREPARATION

The qualification evaluation of the mechanical equipment within the scope of the program is documented in the Mechanical Equipment Qualification (MEQ) Files. These files present all data and analyses utilized to demonstrate that the subject equipment is capable of withstanding postulated environmental condition, in a clear, auditable format. These files also stipulate any special limitations, such as scheduled maintenance or refurbishment, required to maintain environmental qualification.

The scope of each MEQ File is a group of equipment which has been determined to be similar because they were procured under the same specification, made by the same manufacturer, and are of the same basic design and construction.

3.1 Selection of Environmental Parameters

Each MEQ File addressed one or more pieces of equipment that may be located in different plant areas. Therefore, in order to address this equipment as a group, all environmental profiles and radiation zones were evaluated and the most severe environment chosen, using Environmental Data from 2BYM-119 (Reference 3). Initially, each set of equipment was evaluated to the worst case environment independent of separate locations. If the equipment was found to not be capable of withstanding these worst case conditions, then each piece of equipment was evaluated separately to its specific environmental conditions. Equipment located in environments enveloped by the qualification values were considered "Qualified."

3.2 Qualification Evaluation

Each piece of equipment entered into the BVPS Unit 2 MEQ Program was evaluated to determine if it was capable of withstanding postulated environmental conditions. In order to perform this evaluation, the design specifications and non-metallic materials of construction for each piece of equipment was determined from vendor drawings, instruction manuals, and through direct communication with the manufacturer. This data was analyzed to determine if the equipment met the specific acceptance criteria discussed below.

a. Operability

All equipment within the scope of this program was conservatively qualified for the postulated post-accident duration of 401.5 days. Equipment was initially evaluated to determine if it could remain operable subsequent to exposure to accident conditions. If an assembly was found which could possibly fail due to accident conditions, the mode of failure was examined to determine if it would be detrimental to plant safety.

B. Temperature

Qualification for accident temperature conditions is obtained by comparison of the peak postulated accident temperature with equipment design specifications and the thermal capabilities of non-metallic components.

In order to evaluate non-metallic materials' capabilities, the maximum operating temperature and/or continuous service temperature of the material is determined, using references from Impell's Equipment Qualification library and Materials Data Base, correspondence with vendors, and published industry data.

C. Pressure

Qualification for accident pressure conditions was obtained by comparison of the peak postulated accident pressure to the equipment design specifications, vendor drawings, or vendor tests.

D. Humidity

Qualification for humidity conditions was evaluated by comparing postulated accident conditions to equipment design specifications. Equipment which carries fluid or air are assumed to be capable of withstanding 100% relative humidity as they are sealed assemblies by design.

E. Radiation

Radiation qualification was obtained by comparing the postulated 40-year-normal-plus accident dose to the radiation resistance of all non-metallic components contained in the device. The accident duration was assumed to be 401.5 days.

The radiation tolerance of materials by property was determined using references compiled in Impell's Equipment Qualification library, and through direct contact with the material manufacturer.

F. Chemical Spray

The effects of the Containment Building Spray solution on all potentially exposed materials were determined by a search of existing literature, the results of which are documented in Impell Calculation No. 1290-005-002.

3.3 Assembly of the MEQ Files

The qualification evaluation for each type of equipment is documented in the MEQ Files in the format described below:

1. Cover Sheet (Figure 3-1)
2. Record of Revisions
3. Table of Contents
4. Equipment List: This is the sort of the Master List applicable to this file.
5. Equipment Evaluation: This provides a qualitative discussion of the data and analysis utilized to determine the qualification status of the equipment. This section also provides the details of any special maintenance required to maintain the environmental qualification of the equipment.
6. Mechanical Equipment Environmental Qualification Worksheet (Figure 3-2): Provides a quantitative presentation of the postulated environment versus the qualified environment for the equipment.
7. Component Materials Evaluation Worksheet (Figure 3-3): This provides the materials list and the thermal and radiation capabilities of the non-metallic subcomponents.
8. Attachments: All pertinent vendor data used to perform this evaluation are provided as attachments to the MEQ File.

4.0 SUMMARY OF RESULTS

The qualification status of the individual Mechanical Equipment Qualification Files are summarized in Table 4-1.

The qualification status of individual items of equipment can be determined by examination of the Master List of Active Safety-Related Mechanical Equipment contained in Appendix A.

5.0 REFERENCES

1. Requests for Additional Information 270.2, Section (f).
2. Report No. BV2-807, the Master Listing of Seismic and Dynamic Qualification Summary and Status of Safety-Related Equipment, report date 12-23-83.
3. 2BVM-119, Environmental Conditions for Equipment Qualification Requirements, Revision 5, April 19, 1984.

TABLES

TABLE 2-1

LIST OF SAFETY-RELATED SYSTEMS

AUXILIARY STEAM SYSTEM
STEAM GENERATOR BLOWDOWN SYSTEM
PRIMARY COMPONENT COOLING WATER SYSTEM
CHEMICAL AND VOLUME CONTROL
CONTAINMENT VACUUM SYSTEM
AERATED DRAIN SYSTEM
EMERGENCY DIESEL GENERATOR SYSTEM
FUEL POOL COOLING SYSTEM
FIRE PROTECTION
AUXILIARY FEEDWATER SYSTEM
FEEDWATER SYSTEM
PRIMARY PLANT GAS SUPPLY
HYDROGEN CONTROL SYSTEM
HEAT TRACING SYSTEM
HEATING, VENTILATING, AIR CONDITIONING (Control Building)
HEATING, VENTILATING, AIR CONDITIONING (Diesel Generator Building)
HEATING, VENTILATING, AIR CONDITIONING (Auxiliary Building)
HEATING, VENTILATING, AIR CONDITIONING (Reactor Building)
SUPPLEMENTARY LEAK COLLECTION SYSTEM
HEATING, VENTILATION, AIR CONDITIONING (Screen Well and Pump House)
HEATING, VENTILATION, AIR CONDITIONING (Service Building)

TABLE 2-1 (Continued)

CONTAINMENT INSTRUMENT AIR SYSTEM

INFORMATION HANDLING

MAIN STEAM SYSTEM

STEAM VENTS

QUENCH SPRAY SYSTEM

REACTOR COOLANT SYSTEM

RESIDUAL HEAT REMOVAL SYSTEM

RECIRCULATION SPRAY SYSTEM

STEAM DRAINS SYSTEM

SAMPLING SYSTEM

SERVICE WATER SYSTEM

GASEOUS VENTS SYSTEM

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
MEQ FILE STATUS

MEQ FILE	EQUIPMENT DESCRIPTION	EQ STATUS	COMMENTS
001-01	Kerotest Check Valves	Qualified	None
001-02	Westinghouse Swing Check Valves	Qualified	None
001-03	Fisher Controls Plug Valves	Documentation in Review	Qualification Documentation is in review, status not yet determined.
001-04	ITT Grinell Diaphragm Valves	Qualified (Note 1)	Filter in pneumatic Filter/Regulator in Aux Bldg (Zone 21) not capable of withstanding postulated radiation condition.
001-05	Westinghouse Motor Operated Valves	Qualified	None
001-06	Velan Globe Valves	Qualified	None
001-07	Crosby Safety and Relief Valves	Qualified (Note 1)	Valve in containment contains disc O-ring which is not capable of withstanding postulated radiation condition.
001-08	Copes-Vulcan Globe Valves	Qualified (Note 1)	One valves' components not capable of withstanding temperature, radiation, and chemical spray conditions.
001-09	Pacific Charging/Safety Injection Pumps	Incomplete	Oil system three-way valve and pneumatic controller components not capable of withstanding postulated radiation condition.

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
MEQ FILE STATUS

MEQ FILE	EQUIPMENT DESCRIPTION	EQ STATUS	COMMENTS
001-10	Goulds Low Head Safety Injection Pumps	Qualified	None
001-11	Garrett Power Operated Relief Valve	Qualified	None
001-12	Ingersoll-Rand RHR Pumps	Qualified	None
001-13	Posi-Seal Butterfly Valves	Qualified	None
001-14	Goulds Boric Acid Transfer Pumps	Qualified	None
010-01	Ingersoll-Rand Primary Component Cooling Water Pumps	Qualified	None
011-01	Goulds Fuel Pool Cooling Pumps	Qualified	None
015-01	Bingham-Williamette Recirculation Pumps	Qualified	None
020-01	Atwood-Morrill Check Valves	Qualified (Note 1)	Components in several valves not capable of withstanding postulated radiation condition.
022-01	TRW Mission Check Valves	Incomplete	Valve seal not capable of withstanding postulated radiation condition for valves in plant areas where total dose is greater than 1×10^7 rads.

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
MEQ FILE STATUS

MEQ FILE	EQUIPMENT DESCRIPTION	EQ STATUS	COMMENTS
22A-01	Dow Check Valves	Qualified (Note 1)	Valve seat not capable of withstanding postulated radiation condition for valves in plant areas where total dose is greater than 1×10^7 rads.
024-01	Bingham-Williamette Quench Pumps	Incomplete	Pump gasket not capable of withstanding postulated radiation condition.
044-01	Bergen-Paterson Hydraulic Snallas	Incomplete	Seals not capable of withstanding postulated radiation condition.
064-01	Pressure Check Valves	Qualified	None
64A-01	Vogt Check Valves	Qualified	None
067-01	Contromatics Ball Valves	Qualified	None
073-01	Walworth Check Valves	Qualified	None
73A-01	Velan Check Valves	Qualified	None
075-01	Velan Check Valves	Qualified	None
076-01	Henry Pratt Motor Operated Butterfly Valves	Qualified (Note 1)	Components in top and bottom bearings and seat in several valves not capable of withstanding postulated radiation condition.

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
MEQ FILE STATUS

MEQ FILE	EQUIPMENT DESCRIPTION	EQ STATUS	COMMENTS
76A-01	Posi-Seal Butterfly Valves	Qualified	None
077-01	Walworth Gate Valves	Qualified	None
82A-01	Anchor Darling Gate Valves	Qualified	None
091-01	Xomox Plug Valves	Qualified (Note 1)	Several valves contain components not capable of withstanding postulated temperatures and/or radiation conditions.
092-01	Borg-Warner Gate Valves	Qualified	None
135-01	Crane-Deming Quench Spray Chemical Injection Pumps	Qualified	None
150-01	Joy Fans	Electrical EQ Program	Entire assembly addressed within the scope of the Electrical E.Q. Program (File No. 2710.100.150.021A).
157-01	AWCO Motor Operated Dampers	Qualified	None
162-01	Buffalo Forge Fans	Electrical EQ Program	Entire assembly addressed within the scope of the Electrical E.Q. Program (File No. 2610.130.162.037).
185-01	AWCO Air & Motor Operated Dampers	Qualified	None

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
MEQ FILE STATUS

MEQ FILE	EQUIPMENT DESCRIPTION	EQ STATUS	COMMENTS
208-01	Bingham-Williamette Auxiliary Feed-water Pumps	Qualified	None
208-02	Terry Auxiliary Feedwater Pump Turbine	Documentation in Review	Materials of construction for governor not yet received from vendor.
209A-01	Copes-Vulcan Globe Valves	Qualified	None
211-01	EPG/Gulf & Western Ball Valves (MSIV)	Qualified	None
225-01	Crosby Main Steam Safety Valves	Qualified	None
651-01	Masoneilan Globe Valves	Documentation in Review	Materials of construction not yet received from vendor.
653-01	Yarway Control Valves	Qualified	None
657-01	Dresser Safety and Relief Valves	Qualified	None
666A-01	Hammel Dahl/Conoflow Globe Valves	Qualified	None

NOTE 1: These files contain some equipment for which qualification is currently incomplete.

FIGURES

REPORT NO. BV2-807

PROJECT EQUIPMENT SYSTEM
 SEISMIC AND DYNAMIC QUALIFICATION AND STATUS REPORT
 MASTER LIST OF SAFETY RELATED EQUIPMENT
 BY SYSTEM, SUPPLIER, SPEC, EOC, EQUIPMENT ID

REPORT DATE 12/23/83

JOB NAME BVPS-UNIT 2
 UTILITY DUQUESNE LIGHT CO.

ENGINEER: STONE & WEBSTER
 ISSS SUPPLIER: WESTINGHOUSE

DOCKET NO. 50-412

SYSTEM ASS - AUXILIARY STEAM - NUCLEAR - SYSTEM

EQUIPMENT ID	EQUIPMENT		LOCATION BLDG ELEV IITE	Mechanical Component (Y/N)	Active (Y/N)	Harsh Environment (Y/N)	QUAL. (Y/N)
	DESCRIPTION MANUFACTURER MODEL	QUAL REPORT SPEC QTY					
SHEC EQUIPMENT							
AOV - AIR OPERATED VALVE							
2ASS+AOV130A	HI ENERGY LINE BREAK ISOL VLV IRI/HAIKO LHS 38-41911/EA-750	651 1	AB 00720. RRS REF- CODES-				
2ASS+AOV130B	HI ENERGY LINE BREAK ISOL VLV IRI/HAIKO LHS 38-41911/EA-750	651 1	AB 00720. RRS REF- CODES-				
SOV - SOLENOID VALVE							
2ASS+SOV130A	HI ENERGY LINE BREAK ISOL VLV ASCO/SOV IP8320	651 1	AB 00720. RRS REF- CODES-				
2ASS+SOV130B	HI ENERGY LINE BREAK ISOL VLV ASCO/SOV IP8320	651 1	AB 00720. RRS REF- CODES-				

Performed by: _____
 Checked by: _____

Job No. 1290-005-1671
 Calculation No. _____
 Revision _____

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT
IMPELL JOB NO. 1250-005-1671

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

RUN DATE: 9/13/84
PAGE 3

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY MEQ FILE

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION UNIT NO. 2

ENVIRONMENTAL QUALIFICATION OF MECHANICAL EQUIPMENT

Mechanical Equipment Qualification File No.
Draft Revision
Specification No. 2BVS-

Prepared by Date Checked by Date

Impell Approval Date

DLCO Approval Date

Impell Job No. 1290-005-1671

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: _____ Date: _____

Checked by: _____ Date: _____

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. _____

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-_____	Maximum Temperature (degrees F)					
EQUIPMENT TYPE:	Maximum Pressure (psig)					
MANUFACTURER:	Maximum Relative Humidity (%)					
MODEL NO.:	Containment Spray					
<u>LIMITING ENVIRONMENT</u>	40-Year Normal Radiation Dose (Rads)					
LOCATION:	401.5 Day Accident Radiation Dose (Rads)					
RAD ZONE:						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File _____, Rev. 0.

Impell Report No. 02-1290-1242
 Revision 0

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: _____ Date: _____

Checked by: _____ Date: _____

COMPONENT MATERIALS EVALUATION WORKSHEET

MEQ File No. _____

COMPONENT	MATERIAL	TEMPERATURE (°F)	REFERENCE	RADIATION (RADS)	REFERENCE

APPENDIX A

MASTER LIST OF ACTIVE SAFETY-RELATED MECHANICAL EQUIPMENT

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2ASS*ADV130A	GLOBE VALVE	MASONEILAN 78-41911	AB 720	DR MEQ 651-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	PIPE TUNNEL	2BVS-651
2ASS*ADV130B	GLOBE VALVE	MASONEILAN 78-41911	AB 720	DR MEQ 651-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	PIPE TUNNEL	2BVS-651
2BDC*ADV100A1	GLOBE VALVE	MASONEILAN 78-41431	RB 721	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2BDC*ADV100B1	GLOBE VALVE	MASONEILAN 48-41431	CV 725	DR MEQ 651-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-651
2BDC*ADV100C1	GLOBE VALVE	MASONEILAN 48-41431	RB 721	DR MEQ 651-01	FIGURE Y GEN. AREA FIGURE X	GENERAL AREA	2BVS-651
2BDC*ADV101A1	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2BDC*ADV101A2	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2BDC*ADV101B1	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2BDC*Adv101B2	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2BDC*ADV101C1	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2BDC*ADV101C2	GLOBE VALVE	MASONEILAN 48-41431	RC 723	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2BDC*ADV102A1	GLOBE VALVE	MASONEILAN 38-40211	RC 742	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2BDC*ADV102A2	GLOBE VALVE	MASONEILAN 38-40211	RC 742	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2BDC*ADV102B1	GLOBE VALVE	MASONEILAN 38-40211	RC 743	DR MEQ 651-01	FIGURE 1A FIGURE 1B	CONTAINMENT	2BVS-651

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*****	*****	*****	*****	*****	*****	*****	*****
2BDC*ADV102B?	GLOBE VALVE	MASONETLAN 38-40211	RC 743	DR MEQ 651-01	FIGURE IA FIGURE IB	CONTAINMENT	2BVS-651
2BDC*ADV102C1	GLOBE VALVE	MASONETLAN 38-40211	RC 742	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2BDC*ADV102C2	GLOBE VALVE	MASONETLAN 38-40211	RC 742	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2BDC*ADV103A	GLOBE VALVE	MASONETLAN 48-21134	SB 742	DR MEQ 651-01	TABLE III TABLE III	TABLE IV	2BVS-651
2BDC*ADV103B	GLOBE VALVE	MASONETLAN 48-21134	SB 742	DR MEQ 651-01	TABLE III TABLE III	TABLE IV	2BVS-651
2CCP*ADV105	GLOBE VALVE	MASONETLAN 37-20771	RC 707	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV107A	GLOBE VALVE	MASONETLAN 48-41431	RC 721	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV107B	GLOBE VALVE	MASONETLAN 48-41431	RC 721	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV107C	GLOBE VALVE	MASONETLAN 38-40211	RC 721	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV111A	GLOBE VALVE	MASONETLAN 37-20771	RC 719	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-651
2CCP*ADV111B	GLOBE VALVE	MASONETLAN 37-20771	RC 719	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-651
2CCP*ADV111C	GLOBE VALVE	MASONETLAN 37-20771	RC 719	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-651
2CCP*ADV130	GLOBE VALVE	MASONETLAN 37-40411	AB 720	DR MEQ 651-01	FIGURE VIII FIGURE VIII	ZONE 7A	2BVS-651
2CCP*ADV132	GLOBE VALVE	MASONETLAN 47-20211	AB 721	DR MEQ 651-01	FIGURE VIII FIGURE VIII	ZONE 7A	2BVS-651

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*****	*****	*****	*****	*****	*****	*****	*****
2CCP*ADV170	GLOBE VALVE	MASONTELAN 4A-41431	RC 694	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV171	GLOBE VALVE	MASONTELAN 4A-21134	RC 709	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV172	GLOBE VALVE	MASONTELAN 4A-21134	RC 709	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV173	GLOBE VALVE	MASONTELAN 4A-21134	RC 709	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*ADV174	GLOBE VALVE	MASONTELAN 4A-21134	RC 709	DR MEQ 651-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-651
2CCP*DCV100-1	GLOBE VALVE	COPEX-VULCAN D-100 8" CLASS 150	AB 737	Q MEQ 209A-1	FIGURE VIIIE FIGURE VIIIL	ZONE 77	2BVS-209A
2CCP*DCV100-2	GLOBE VALVE	COPEX-VULCAN D-100 8" CLASS 150	AB 737	Q MEQ 209A-1	FIGURE VIIIE FIGURE VIIIL	ZONE 77	2BVS-209A
2CCP*DCV101A	BUTTERFLY VALVE	MASONTELAN 33-37310	AB 714	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BVS-651
2CCP*DCV101B	BUTTERFLY VALVE	MASONTELAN 33-37310	AB 714	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BVS-651
2CCP*DCV101C	BUTTERFLY VALVE	MASONTELAN 33-37310	AB 714	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BVS-651
2CCP*LCV100A	GLOBE VALVE	MASONTELAN 4A-20721	AB 776	DR MEQ 651-01	FIGURE VIIIX FIGURE VIIIM	ZONE 81	2BVS-651
2CCP*LCV100B	GLOBE VALVE	MASONTELAN 4A-20721	AB 776	DR MEQ 651-01	FIGURE VIIIX FIGURE VIIIM	ZONE 81	2BVS-651
2CCP*MDV103A	BUTTERFLY VALVE	POST SEAL INT 2144	RC 719	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-076A
2CCP*MDV103B	BUTTERFLY VALVE	POST SEAL INT 2144	RC 719	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-076A

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*****	*****	*****	*****	*****	*****	*****	*****
2CCP#MOV103C	BUTTERFLY VALVE	POSI SEAL INT 2144	RC 719	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076A
2CCP#MOV112A	BUTTERFLY VALVE	POSI SEAL INT 2144	RC 720	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076A
2CCP#MOV112B	BUTTERFLY VALVE	POSI SEAL INT 2144	RC 720	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076A
2CCP#MOV114	BUTTERFLY VALVE	POSI-SEAL INT 2484	RC 710	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076A
2CCP#MOV118	BALL VALVE	CONTRONATICS 298-20-121	RB 774	Q MEQ 067-01	TABLE III TABLE III	TABLE IV	28VS-067
2CCP#MOV119	BALL VALVE	CONTRONATICS 298-20-121	RB 774	Q MEQ 067-01	TABLE III TABLE III	TABLE IV	28VS-067
2CCP#MOV120	BALL VALVE	CONTRONATICS 298-20-121	RB 774	Q MEQ 067-01	TABLE III TABLE III	TABLE IV	28VS-067
2CCP#MOV128A	BUTTERFLY VALVE	HENRY PRATT CO 1100-6"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	28VS-076
2CCP#MOV128B	BUTTERFLY VALVE	HENRY PRATT CO 1100-6"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	28VS-076
2CCP#MOV150-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-18"	RB 730	T MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2CCP#MOV150-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-18"	RC 724	T MEQ 076-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076
2CCP#MOV151-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-18"	RB 725	T MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2CCP#MOV151-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-18"	RC 725	T MEQ 076-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-076
2CCP#MOV156-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-18"	RB 725	T MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076

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*****	*****	*****	*****	*****	*****	*****	*****
2CCP*MOV156-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-18"	RC 725	T MEQ 076-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BUS-076
2CCP*MOV157-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-18"	RB 725	T MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BUS-076
2CCP*MOV157-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-18"	RC 728	T MEQ 076-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BUS-076
2CCP*MOV173	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV175-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV175-2	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV176-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV176-2	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV177-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV177-2	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV178-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*MOV178-2	BUTTERFLY VALVE	HENRY PRATT CO 1100-10"	AB 722	T MEQ 076-01	FIGURE VIIIA FIGURE VIIIL	ZONE 76	2BUS-076
2CCP*P21A	COOLING WATER PUMP	INGERSOLL RAND 10X18AA	AB 736	Q MEQ 010-01	FIGURE VIIF FIGURE VIIL	ZONE 77	2BUS-010
2CCP*P21B	COOLING WATER PUMP	INGERSOLL RAND 10X18AA	AB 736	Q MEQ 010-01	FIGURE VIIF FIGURE VIIL	ZONE 77	2BUS-010

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*****	*****	*****	*****	*****	*****	*****	*****
2CCP*P21C	COOLING WATER PUMP	INGERSOLL RAND 10X18AA	AB 736	Q MEQ 010-01	FIGURE VIIIE FIGURE VIIEE	ZONE 77	2BUS-010
2CCP*TCV100A	BUTTERFLY VALVE	MASONEILAN INTER INC 33-37410	AB 713	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIE	ZONE 76	2BUS-651
2CCP*TCV100B	BUTTERFLY VALVE	MASONEILAN INTER INC 33-37410	AB 713	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIE	ZONE 76	2BUS-651
2CCP*TCV100C	BUTTERFLY VALVE	MASONEILAN INTER INC 33-37410	AB 713	DR MEQ 651-01	FIGURE VIIIA FIGURE VIIIE	ZONE 76	2BUS-651
2CCP*TCV144	GLOBE VALVE	MASONEILAN 37-20721	AB 720	DR MEQ 651-01	NONE(220F MAX) FIGURE VIIIE	ZONE 19	2BUS-651
2CHS*ADV102	GLOBE VALVE	HAMMEL DAHL/CONOFLOW 77/3254/001	AB 759	Q MEQ 666A-1	FIGURE VIIEG FIGURE VIIIE	ZONE 53	2BUS-666A
2CHS*ADV200A	CONTROL VALVE	FISHER CONTROLS 2-1A78RC	RC 729	T MEQ 001-03	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-001
2CHS*ADV200B	CONTROL VALVE	FISHER CONTROLS 2-1A78RC	RC 729	T MEQ 001-03	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-001
2CHS*ADV200C	CONTROL VALVE	FISHER CONTROLS 2-1A78RC	RC 729	T MEQ 001-03	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-001
2CHS*ADV201	GLOBE VALVE	MASONEILAN 38-26571	AB 736	DR MEQ 651-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BUS-651
2CHS*ADV203	GLOBE VALVE	HAMMEL DAHL/CONOFLOW 77/3254/003	AB 759	Q MEQ 666A-1	FIGURE VIIEG FIGURE VIIIE	ZONE 53	2BUS-666A
2CHS*ADV204	CONTROL VALVE	FISHER CONTROLS 2-1A76RE	RD 724	T MEQ 001-03	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BUS-001
2CHS*ADV205	GLOBE VALVE	MASONEILAN 48-21134	AB 736	DR MEQ 651-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BUS-651
2CHS*ADV8101	DIAPHRAGM VALVE	ITT GRINNELL 3/4-BW92R	AB 759	Q MEQ 001-04	FIGURE VIIEG FIGURE VIIIE	ZONE 53	2BUS-001

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*****	*****	*****	*****	*****	*****	*****	*****
2CHS*FCV113R	DIAPHRAGM VALVE	ITT GRIMWELL 2-BA92R	AB 719	T MEQ 001-04	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*FCV114B	DIAPHRAGM VALVE	ITT GRIMWELL 2-BA92R	AB 719	T MEQ 001-04	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*FCV160	GLOBE VALVE	MASONWELAN 4B-21114	RB 724	DR MEQ 651-01	FIGURE X GEN. AREA FIGURE X	TABERANU GEN. AREA	28VS-651
2CHS*LCV115B	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*LCV115C	GATE VALVE	WESTINGHOUSE 4-GM72FB	AB 712	Q MEQ 001-05	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*LCV115D	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*LCV115E	GATE VALVE	WESTINGHOUSE 4-GM72FB	AB 712	Q MEQ 001-05	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-001
2CHS*LCV460A	CONTROL VALVE	FISHER CONTROLS 2-TA88RG	RC 712	T MEQ 001-03	FIGURE IA FIGURE IB	INSIDE CRANE WALL	28VS-001
2CHS*LCV460B	CONTROL VALVE	FISHER CONTROLS 2-TA88RG	RC 712	T MEQ 001-03	FIGURE IA FIGURE IB	INSIDE CRANE WALL	28VS-001
2CHS*MOV100A	PLUG VALVE	XOMOX 1366 BW	AB 718	T MEQ 091-01	NONE(220F MAXIMUM) FIGURE VIIIIL	ZONE 19	28VS-091
2CHS*MOV100B	PLUG VALVE	XOMOX 1366 BW	AB 710	T MEQ 091-01	FIGURE VIIID FIGURE VIIIIL	ZONE 72	28VS-071
2CHS*MOV111	GATE VALVE	ANCHOR BARTING 2 1/2" -150	AB 713	Q MEQ 82A-01	FIGURE VIIIIC FIGURE VIIIIL	ZONE 21	28VS-82A
2CHS*MOV201	GLOBE VALVE	VELAN 2-TM887WH	RC 708	Q MEQ 001-04	FIGURE IA FIGURE IB	INSIDE CRANE WALL	28VS-001
2CHS*MOV275A	GLOBE VALVE	VELAN 2-TM7AFH	AB 737	Q MEQ 001-06	FIGURE VIIIJ FIGURE VIIIIL	ZONE 40	28VS-001

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*****	*****	*****	*****	*****	*****	*****	*****
2CHS#MOV275B	GLOBE VALVE	VEIAN 2-TM7AFN	AB 737	Q MEQ 001-06	FIGURE VIIIJ FIGURE VIIIJ	ZONE 41	2BVS-001
2CHS#MOV275C	GLOBE VALVE	VEIAN 2-TM7AFN	AB 737	Q MEQ 001-06	FIGURE VIIIJ FIGURE VIIIJ	ZONE 40	2BVS-001
2CHS#MOV249	GATE VALVE	WESTINGHOUSE 3-GM78FM	RB 721	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	SHIELDED CHUBICLE	2BVS-001
2CHS#MOV308A	GLOBE VALVE	VEIAN 2-TM78FM	RB 720	Q MEQ 001-06	FIGURE X SHIELD FIGURE X	SHIELDED CHUBICLE	2BVS-001
2CHS#MOV308B	GLOBE VALVE	VEIAN 2-TM7AFN	RB 720	Q MEQ 001-06	FIGURE X SHIELDED FIGURE X	SHIELDED CHUBICLE	2BVS-001
2CHS#MOV308C	GLOBE VALVE	VEIAN 2-TM7AFN	RB 720	Q MEQ 001-06	FIGURE X SHIELDED FIGURE X	SHIELDED CHUBICLE	2BVS-001
2CHS#MOV310	GATE VALVE	WESTINGHOUSE 3-GM8AFMH	RC 720	Q MEQ 001-05	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2CHS#MOV311	GLOBE VALVE	VEIAN 2-TM8AFNH	RC 695	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2CHS#MOV350	GLOBE VALVE	VEIAN 2-TM7AFN	AB 713	Q MEQ 001-06	FIGURE VIIIIC FIGURE VIIIJ	ZONE 21	2BVS-001
2CHS#MOV373	GATE VALVE	WESTINGHOUSE 3-GM78FM	AB 711	Q MEQ 001-05	FIGURE VIIIIC FIGURE VIIIJ	ZONE 21	2BVS-001
2CHS#MOV378	GATE VALVE	WESTINGHOUSE 3-GM72FBH	RC 733	Q MEQ 001-05	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-001
2CHS#MOV380A	GLOBE VALVE	VEIAN 2-TM7AFN	AB 736	Q MEQ 001-06	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-001
2CHS#MOV380B	GLOBE VALVE	VEIAN 2-TM78FM	AB 736	Q MEQ 001-06	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-001
2CHS#MOV381	GATE VALVE	WESTINGHOUSE 3-GM72FB	RB 720	Q MEQ 001-05	FIGURE Y SHIELDED FIGURE X	SHIELDED CHUBICLE	2BVS-001

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*****	*****	*****	*****	*****	*****	*****	*****
2CHS#MOV383A	GLOBE VALVE	VELAN 2-TM78FM	AB 736	Q MEQ 001-06	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-001
2CHS#MOV383B	GLOBE VALVE	VELAN 2-TM78FM	AB 736	Q MEQ 001-06	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-001
2CHS#MOV8130A	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8130B	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8131A	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8131B	GATE VALVE	WESTINGHOUSE 8-CM72FB	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8132A	GATE VALVE	WESTINGHOUSE 4-CM78FM	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8132B	GATE VALVE	WESTINGHOUSE 4-CM78FM	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8133A	GATE VALVE	WESTINGHOUSE 4-CM78FM	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#MOV8133B	GATE VALVE	WESTINGHOUSE 4-CM78FM	AB 721	Q MEQ 001-05	FIGURE VIII C FIGURE VIII L	ZONE 21	28VS-001
2CHS#P21A	CHARGING/SI PUMP	PACIFIC PUMP 2 1/2" RL TJ	AB 736	T MEQ 001-09	FIGURE VIII J FIGURE VIII L	ZONE 39	28VS-001
2CHS#P21B	CHARGING/SI PUMP	PACIFIC PUMP 2 1/2" RL TJ	AB 736	T MEQ 001-09	FIGURE VIII J FIGURE VIII L	ZONE 41	28VS-001
2CHS#P21C	CHARGING/SI PUMP	PACIFIC PUMP 2 1/2" RL TJ	AB 736	T MEQ 001-09	FIGURE VIII J FIGURE VIII L	ZONE 40	28VS-001
2CHS#P22A	PUMP	COULOC 3196HT	AB 756	Q MEQ 001-14	FIGURE VIII C FIGURE VIII L	ZONE 47	28VS-001

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
2CHS*P22B	PUMP	CONLDS 3196MT	AB 756	Q MEQ 001-14	FIGURE VIITC FIGURE VIITL	ZONE 4B	2BVS-001
2CHS*PCV116A	GLOBE VALVE	HAMMEL DAHL/CONOFLW 77/3254/004	AB 759	Q MEQ 666A-1	FIGURE VIITC FIGURE VIITL	ZONE 7A	2BVS-666A
2CHS*PCV116B	GLOBE VALVE	HAMMEL DAHL/CONOFLW 77/3254/005	AB 759	Q MEQ 666A-1	FIGURE VIITC FIGURE VIITL	ZONE 53	2BVS-666A
2CHS*PCV117	CONTROL VALVE	FISHER CONTROLS 3/4-RA52RDB	AB 757	Q MEQ 001-03	FIGURE VIITC FIGURE VIITL	ZONE 53	2BVS-001
2CHS*RV203	RELIEF VALVE	CROSBY VALVE & GAGE 2RV76JWB	RC 729	Q MEQ 001-07	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2CHS*RV209	RELIEF VALVE	CROSBY VALVE & GAGE 2RV72JWB	AB 724	Q MEQ 001-07	NONE (220F MAXIMUM) FIGURE VIITL	ZONE 19	2BVS-001
2CHS*RV257	RELIEF VALVE	CROSBY VALVE & GAGE 3RV72JWS	AB 765	Q MEQ 001-07	FIGURE VIITC FIGURE VIITL	ZONE 7A	2BVS-001
2CHS*RV382A	RELIEF VALVE	CROSBY VALVE & GAGE 2RV72JWB	RC 720	Q MEQ 001-07	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-001
2CHS*RV382B	RELIEF VALVE	CROSBY VALVE & GAGE 2RV72JWB	AB 724	Q MEQ 001-07	NONE (142 F MAXIMUM) FIGURE VIITL	ZONE 20	2BVS-001
2CVS*ADV101A	GLOBE VALVE	MASONETLAN 38-20571	RB 721	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CURTICLE	2BVS-651
2CVS*ADV101B	GLOBE VALVE	MASONETLAN 38-20571	RB 721	DR MEQ 651-01	FIGURE X FIGURE X	SHIELDED CURTICLE	2BVS-651
2DAS*ADV100A	GLOBE VALVE	MASONETLAN 38-20761	RC 724	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-651
2DAS*ADV100B	GLOBE VALVE	MASONETLAN 38-20761	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CURTICLE	2BVS-651
2DGS*ADV108A	GLOBE VALVE	MASONETLAN 38-20761	RC 725	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BVS-651

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2DGS*ANV108B	GLOBE VALVE	MASONHEILAN 38-20761	RD 724	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CHUBICLE	28VS-651
2FNC*P21A	FUEL POOL CLG. PUMP	GOULDS 3196-MT	FB 730	Q MEQ 011-01	TABLE III TABLE III	TABLE IV	28VS-011
2FNC*P21B	FUEL POOL CLG PUMP	GOULDS 3196-MT	FB 730	Q MEQ 011-01	TABLE III TABLE III	TABLE IV	28VS-011
2FWE*FCV122	CONTROL VALVE	YARWAY 5302	SG 733	Q MEQ 653-01	TABLE III TABLE III	ZONE F	28VS-653
2FWE*FCV123A	CONTROL VALVE	YARWAY 5302	SG 733	Q MEQ 653-01	TABLE III TABLE III	ZONE E	28VS-653
2FWE*FCV123B	CONTROL VALVE	YARWAY 5302	SG 733	Q MEQ 653-01	TABLE III TABLE III	ZONE F	28VS-653
2FWE*P22	HORIZ. PUMP	BINCHAM-WILLAMETTE MSD & STC TRB DRIVEN	SG 718	Q MEQ 208-01	TABLE III TABLE III	ZONE F	28VS-208
2FWE*P23A	DBI. VOL. PUMP	BINCHAM-WILLAMETTE MSD & STC MTR DRIVEN	SG 718	Q MEQ 208-01	TABLE III TABLE III	ZONE F	28VS-208
2FWE*P23B	DBI. VOL. PUMP	BINCHAM-WILLAMETTE MSD & STC MTR DRIVEN	SG 718	Q MEQ 208-01	TABLE III TABLE III	ZONE F	28VS-208
2FWE*RV101	RELIEF VALVE	DRESSER 3-1914J-2	SG 724	Q MEQ 657-01	TABLE III TABLE III	ZONE F	28VS-657
2FWE*T22	TURBINE	TERRY Z54	SG 718	DR MEQ 208-02	TABLE III TABLE III	ZONE F	28VS-208
2FWS*FCV478	GLOBE VALVE	COPE'S-VULCAN 16FA3RG	MV 780	Q MEQ 001-08	FIGURE II FIGURE II	TABLE IV	28VS-001
2FWS*FCV479	GLOBE VALVE	MASONHEILAN 38-40037	SB 782	DR MEQ 651-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-651
2FWS*FCV488	GLOBE VALVE	COPE'S-VULCAN 16FA3RG	MV 780	Q MEQ 001-08	FIGURE II FIGURE II	TABLE IV	28VS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
 SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2FWS*FCV489	GLOBE VALVE	MASONIELAN 38-40037	MV 780	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	2BUS-651
2FWS*FCV489	GLOBE VALVE	MASONIELAN 38-40037	MV780	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	2BUS-651
2FWS*FCV498	GLOBE VALVE	COPEL-VULCAN 16FA3RC	MV 780	Q MEQ 001-08	FIGURE II FIGURE II	TABLE IV	2BUS-001
2FWS*HYV157A	GATE VALVE	BORG-WARNER	MV 776	Q MEQ 092-01	FIGURE II FIGURE II	TABLE IV	2BUS-092
2FWS*HYV157B	GATE VALVE	BORG-WARNER	MV 776	Q MEQ 092-01	FIGURE II FIGURE II	TABLE IV	2BUS-092
2FWS*HYV157C	GATE VALVE	BORG-WARNER	MV 776	Q MEQ 092-01	FIGURE II FIGURE II	TABLE IV	2BUS-092
2GNS*ADV101-1	CONTROL VALVE	FISHER CONTROLS 1-1A7ARD	RB 719	I MEQ 001-03	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BUS-001
2GNS*ADV101-2	CONTROL VALVE	FISHER CONTROLS 1-1A7ARD	RC 729	I MEQ 001-03	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BUS-001
2GNS*PCV101A	GLOBE VALVE	HAMMEL DAHL/CONOFLOW 77/3254/008	AB 762	Q MEQ 666A-1	FIGURE VIII FIGURE VIII	ZONE 7A	2BUS-666A
2GNS*PCV101B	GLOBE VALVE	HAMMEL DAHL/CONOFLOW 77/3254/009	AB 762	Q MEQ 666A-1	FIGURE VIII FIGURE VIII	ZONE 7A	2BUS-666A
2HCS*ADV102	GLOBE VALVE	MASONIELAN 4A-21134	AB 738	DR MEQ 651-01	FIGURE FIGURE	ZONE	2BUS-651
2HCS*MOV110A	PLUG VALVE	XOMOX 166 SW	SG 741	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091
2HCS*MOV110B	PLUG VALVE	XOMOX 166 SW	SG 741	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091
2HCS*MOV112A	PLUG VALVE	XOMOX 166 SW	SG 741	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
 SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HCS*MOV112B	PLUG VALVE	XOMOX 166 SW	SG 741	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091
2HCS*MOV113A	BALL VALVE	CONTRONATICS 298-20-121	SG 741	Q MEQ 067-01	TABLE III TABLE III	ZONE B	2BUS-067
2HCS*MOV113B	BALL VALVE	CONTRONATICS 298-20-121	SG 741	Q MEQ 067-01	TABLE III TABLE III	ZONE B	2BUS-067
2HCS*MOV116	BALL VALVE	CONTRONATICS 298-20-121	SG 718	Q MEQ 067-01	TABLE III TABLE III	APPENDIX B	2BUS-067
2HCS*MOV117	BALL VALVE	CONTRONATICS 298-20-121	SG 718	Q MEQ 067-01	TABLE III TABLE III	APPENDIX B	2BUS-067
2HCS*MOV120A	PLUG VALVE	XOMOX 166 SW	SG 738	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091
2HCS*MOV120B	PLUG VALVE	XOMOX 166 SW	SG 738	Q MEQ 091-01	TABLE III TABLE III	ZONE B	2BUS-091
2HVC*ADD201A	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*ADD201B	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*ADD202A	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*ADD202B	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*ADD204A	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*ADD204B	AIR OPER. DAMPER	AWVCO DAAP-7402	AB 773	Q MEQ 185-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-185
2HVC*FN265A	CENTRIFUGAL FAN	BUFFALO FORCE 660 BL	AB 774	E MEQ 162-01	FIGURE VIIIIX FIGURE VIIIM	ZONE 79	2BUS-162

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC. NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HVC*FN265B	CENTRIFUGAL FAN	BUFFALO FORCE 660 BL.	AB 774	E MEQ 162-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BVS-162
2HVC*FN266A	CENTRIFUGAL FAN	BUFFALO FORCE 660 BL.	AB 774	F MEQ 162-01	TABLE VIIIV TABLE VIIM	ZONE 79	2BVS-162
2HVC*FN266B	CENTRIFUGAL FAN	BUFFALO FORCE 660 BL.	AB 774	E MEQ 162-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BVS-162
2HVP*FN264A	VANE-AXIAL FAN	JOY 23-17-3500	AB 767	E MEQ 150-01	FIGURE VIIC FIGURE VIIL	ZONE 78	2BVS-150
2HVP*FN264B	VANE-AXIAL FAN	JOY 23-17-3500	AB 767	E MEQ 150-01	FIGURE VIIC FIGURE VIIL	ZONE 78	2BVS-150
2HVP*FN265A	VANE-AXIAL FAN	JOY 18-14-1770	AB 756	E MEQ 150-01	FIGURE VIIIK FIGURE VIIM	MCC AREA	2BVS-150
2HVP*FN265B	VANE-AXIAL FAN	JOY 18-14-1770	AB 756	E MEQ 150-01	FIGURE VIIIK FIGURE VIIM	MCC AREA	2BVS-150
2HVP*MOD21A	M.O. DAMPER	AWJCO DAAP-7402	AB 748	Q MEQ 185-01	FIGURE VIIF FIGURE VIIM	ZONE 77	2BVS-185
2HVP*MOD21B	M.O. DAMPER	AWJCO DAAP-7402	AB 748	Q MEQ 185-01	FIGURE VIIF FIGURE VIIL	ZONE 77	2BVS-185
2HVP*MOD22A	M.O. DAMPER	AWJCO DAAP-7402	AB 793	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 80	2BVS-185
2HVP*MOD22B	M.O. DAMPER	AWJCO DAAP-7402	AB 793	Q MEQ 185-01	FIGURE VIIF FIGURE VIIM	ZONE 80	2BVS-185
2HVP*MOD24A	M.O. DAMPER	AWJCO DAAP-7402	AB 793	Q MEQ 185-01	FIGURE VIIF FIGURE VIIM	ZONE 80	2BVS-185
2HVP*MOD24B	M.O. DAMPER	AWJCO DAAP-7402	AB 793	Q MEQ 185-01	FIGURE VIIF FIGURE VIIM	ZONE 80	2BVS-185
2HVP*MOD30A	M.O. DAMPER	AWJCO DAAP-7402	AB 789	Q MEQ 185-01	FIGURE VIIF FIGURE VIIM	ZONE 80	2BVS-185

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
 SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HVR*MOD30B	M.O. DAMPER	AWJCO DAAP-7402	AB 791	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 80	2BUS-185
2HVR*FN201A	VANE-AXIAL FAN	JOY 66-30-1770/870	RC 693	E MEQ 150-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-150
2HVR*FN201B	VANE-AXIAL FAN	JOY 66-30-1770/870	RC 693	E MEQ 150-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-150
2HVR*FN201C	VANE-AXIAL FAN	JOY 66-30-1770/870	RC 693	E MEQ 150-01	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BUS-150
2HVR*FN206A	VANE-AXIAL FAN	JOY 36-26-1770	MV 774	E MEQ 150-01	FIGURE II FIGURE II	TABLE IV	2BUS-150
2HVR*FN206B	VANE-AXIAL FAN	JOY 36-26-1770	MV 774	E MEQ 150-01	FIGURE II FIGURE II	TABLE IV	2BUS-150
2HVR*MOD201A	M.O. DAMPER	AWJCO DAAP-7402	MV 774	T MEQ 185-01	FIGURE II FIGURE II	TABLE IV	2BUS-185
2HVR*MOD201B	M.O. DAMPER	AWJCO DAAP-7402	MV 774	T MEQ 185-01	FIGURE II FIGURE II	TABLE IV	2BUS-185
2HVR*MOD202A	M.O. DAMPER	AWJCO DAAP-7402	MV 774	T MEQ 185-01	FIGURE II FIGURE II	TABLE IV	2BUS-185
2HVR*MOD202B	M.O. DAMPER	AWJCO DAAP-7402	MV 774	T MEQ 185-01	FIGURE II FIGURE II	TABLE IV	2BUS-185
2HVR*MOD21	M.O. DAMPER	AWJCO DAAP-7402	AB 792	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BUS-185
2HVR*MOD22	M.O. DAMPER	AWJCO DAAP-7402	AB 794	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 80	2BUS-185
2HVR*MOD23A	BUTTERFLY VALVE	POSI SEAL INT 2144	RB 774	Q MEQ 76A-01	TABLE III TABLE III	TABLE IV	2BUS-076A
2HVR*MOD23B	BUTTERFLY VALVE	POSI SEAL INT 2144	RC 776	Q MEQ 76A-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	2BUS-076A

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HVR*MOD25A	BUTTERFLY VALVE	POSI SEAL 2144	RB 776	Q MEQ-76A-01	TABLE III TABLE III	TABLE IV	2BVS-076A
2HVR*MOD25B	BUTTERFLY VALVE	POSI-SEAL INT 2144	RC 776	Q MEQ 76A-01	FIGURE 1A FIGURE 1B	INTSIDE CRANE WAL.	2BVS-076A
2HVR*MOD26A	M.O. DAMPER	AWUCO DAAP-7402	RB 728	Q MEQ 185-01	FIGURE X GEN. AREA FIGURE X	2 POSSIBLE ZONES	2BVS-185
2HVR*MOD26B	M.O. DAMPER	AWUCO DAAP-7402	RB 725	Q MEQ 185-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-185
2HVR*MOD27A	M.O. DAMPER	AWUCO DAAP-7402	RB 728	Q MEQ 185-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-185
2HVR*MOD27B	M.O. DAMPER	AWUCO DAAP-7402	RB 728	Q MEQ 185-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-185
2HVS*FN204A	CENTRIFUGAL FAN	BUFFALO FORCE 805-L39	AB 774	E MEQ 162-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-162
2HVS*FN204B	CENTRIFUGAL FAN	BUFFALO FORCE 805-L39	AB 777	E MEQ 162-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BVS-162
2HVS*MOD201A	M.O. DAMPER	AWUCO DAAP-7402	AB 782	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BVS-185
2HVS*MOD201B	M.O. DAMPER	AWUCO DAAP-7402	AB 782	Q MEQ 185-01	FIGURE VIIIK FIGURE VIIM	ZONE 79	2BVS-185
2HVS*MOD202A	M.O. DAMPER	AWUCO DAAP-7402	AB 787	Q MEQ 185-01	FIGURE VIIX FIGURE VIIM	ZONE 79	2BVS-185
2HVS*MOD202B	M.O. DAMPER	AWUCO DAAP-7402	AB 787	Q MEQ 185-01	FIGURE VIIX FIGURE VIIM	ZONE 79	2BVS-185
2HVS*MOD203A	M.O. DAMPER	AWUCO DAA-P-3274	AB 781	Q MEQ 157-01	FIGURE VIIX FIGURE VIIM	ZONE 80	2BVS-157
2HVS*MOD203B	M.O. DAMPER	AWUCO DAA-P-3274	AB 778	Q MEQ 157-01	FIGURE VIIX FIGURE VIIM	ZONE 80	2BVS-157

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT TO.

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATYON	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HVS#MOD210A	M.O. DAMPER	AWVCO DAAP-7402	AB 7A7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD210B	M.O. DAMPER	AWVCO DAAP-7402	AB 7A7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD211A	M.O. DAMPER	AWVCO DAAP-7402	AB 7B7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD211B	M.O. DAMPER	AWVCO DAAP-7402	AB 7A7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD212A	M.O. DAMPER	AWVCO DAAP-7402	AB 7B7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD212B	M.O. DAMPER	AWVCO DAAP-7402	AB 7B7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD213A	M.O. DAMPER	AWVCO DAAP-7402	AB 7A7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD213B	M.O. DAMPER	AWVCO DAAP-7402	AB 7B7	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD218A	M.O. DAMPER	AWVCO DAAP-7402	AB 790	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVS#MOD218B	M.O. DAMPER	AWVCO DAAP-7402	AB 790	Q MEQ 185-01	FIGURE VIII? FIGURE VIIIM	ZONE 80	28VS-185
2HVZ#FN216A	CENTRIFUGAL FAN	BUFFALO FORCE 445 RL	RB 774	E MEQ 162-01	TABLE III TABLE III	TABLE IV	28VS-162
2HVZ#FN216B	CENTRIFUGAL FAN	BUFFALO FORCE 445 RL	RB 774	E MEQ 162-01	TABLE III TABLE III	TABLE IV	28VS-162
2HVZ#FN261A	VANE-AXIAL FAN	JNY 54-36-1170	RB 787	E MEQ 150-01	TABLE III TABLE III	TABLE IV	28VS-150
2HVZ#FN261B	VANE-AXIAL FAN	JNY 54-26-1170	RB 787	E MEQ 150-01	TABLE III TABLE III	TABLE IV	28VS-150

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	KAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2HVZ*FN262A	VANE-AXIAL FAN	JOY 54-26-1170	RB 787	E MEQ 150-01	TABLE III TABLE III	TABLE IV	2BUS-150
2HVZ*FN262B	VANE-AXIAL FAN	JOY 54-26-1170	RB 787	E MEQ 150-01	TABLE III TABLE III	TABLE IV	2BUS-150
2HVZ*MOD21A	M.O. DAMPER	AWJCO DAAP-7402	RB 781	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2HVZ*MOD21B	M.O. DAMPER	AWJCO DAAP-7402	RB 781	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2HVZ*MOD22A	M.O. DAMPER	AWJCO DAAP-7402	RB 784	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2HVZ*MOD22B	M.O. DAMPER	AWJCO DAAP-7402	RB 784	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2HVZ*MOD23A	M.O. DAMPER	AWJCO DAAP-7402	RB 784	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2HVZ*MOD23B	M.O. DAMPER	AWJCO DAAP-7402	RB 784	Q MEQ 185-01	TABLE III TABLE III	TABLE IV	2BUS-185
2IAC*MOV130	PLUG VALVE	XOMOX 166 BW	RB 732	Q MEQ 091-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BUS-091
2IAC*MOV133	PLUG VALVE	XOMOX 166 BW	RC 693	I MEQ 091-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BUS-091
2IAC*MOV134	PLUG VALVE	XOMOX 166 BW	RB 732	Q MEQ 091-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BUS-091
2MSS*ADV102A	GLOBE VALVE	MASONEILAN 48-207X1	MV 789	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	2BUS-651
2MSS*ADV102B	GLOBE VALVE	MASONEILAN 48-207X1	MV 789	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	2BUS-651
2MSS*ADV102C	GLOBE VALVE	MASONEILAN 48-207X1	MV 789	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	2BUS-651

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	R&D ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2MSS*HYV101A	BALL VALVE	EPC/GULF & WESTERN 24" BALL VALVE	MV 789	Q MEQ 211-01	FIGURE II FIGURE II	TABLE IV	28VS-211
2MSS*HYV101B	BALL VALVE	EPC/GULF & WESTERN 24" BALL VALVE	MV 789	Q MEQ 211-01	FIGURE II FIGURE II	TABLE IV	28VS-211
2MSS*HYV101C	BALL VALVE	EPC/GULF & WESTERN 24" BALL VALVE	MV 789	Q MEQ 211-01	FIGURE II FIGURE II	TABLE IV	28VS-211
2MSS*SV101A	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV101B	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV101C	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV102A	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV102B	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV102C	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV103A	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV103B	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV103C	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV104A	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV104B	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2MSS*SV104C	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 725-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV105A	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 225-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV105B	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 725-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2MSS*SV105C	SAFETY VALVE	CROSBY VALVE & GAGE HA65FM	MV 799	Q MEQ 725-01	FIGURE II FIGURE II	TABLE IV	28VS-225
2QSS*MOV100A	GATE VALVE	ANCHOR DARLING 12" -150	SG 718	Q MEQ 82A-01	TABLE III TABLE III	ZONE F	28VS-82A
2QSS*MOV100B	GATE VALVE	ANCHOR DARLING 12" -150	SG 718	Q MEQ 82A-01	TABLE III TABLE III	ZONE F	28VS-82A
2QSS*MOV101A	GATE VALVE	ANCHOR DARLING 10" -150	SG 735	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	28VS-82A
2QSS*MOV101B	GATE VALVE	ANCHOR DARLING 10" -150	SG 735	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	28VS-82A
2QSS*MOV102A	GATE VALVE	ANCHOR DARLING 6" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE F	28VS-82A
2QSS*MOV102B	GATE VALVE	ANCHOR DARLING 6" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE F	28VS-82A
2QSS*P21A	QUENCH PUMP	BINGHAM-WILLAMETTE 8X10X12 HS	SG 728	Q MEQ 024-01	TABLE III TABLE III	ZONE F	28VS-024
2QSS*P21B	QUENCH PUMP	BINGHAM-WILLAMETTE 8X10X12 HS	SG 728	Q MEQ 024-01	TABLE III TABLE III	ZONE F	28VS-024
2QSS*P24A	ROTARY PUMP	CRANE-DEMING FIG. 1549, SIZE 3HF	SG 728	Q MEQ 135-01	TABLE III TABLE III	ZONE F	28VS-135
2QSS*P24B	ROTARY PUMP	CRANE-DEMING FIG. 1549, SIZE 3HF	SG 728	Q MEQ 135-01	TABLE III TABLE III	ZONE F	28VS-135

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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*****	*****	*****	*****	*****	*****	*****	*****
2QSS#RV102A	RELIEF VALVE	DRESSER 1 1/2 -1970-2	SG 730	Q MEQ 657-01	TABLE IV TABLE IV	ZONE F	2BUS-657
2QSS#RV102B	RELIEF VALVE	DRESSER 1 1/2-1970-2	SG 730	Q MEQ 657-01	TABLE IV TABLE IV	ZONE F	2BUS-657
2RCS#ADV101	DIAPHRAGM VALVE	ITT GRIMMELL 3/4-DA92R	RB 720	Q MEQ 001-04	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BUS-001
2RCS#ADV519	DIAPHRAGM VALVE	ITT GRIMMELL 3-DA92R	RB 720	Q MEQ 001-04	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BUS-001
2RCS#ADV544	GLOBE VALVE	COPEL-VULCAN 3/8-TA7ADL	RC 70A	T MEQ 001-0A	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV535	GATE VALVE	WESTINGHOUSE 3-CM88FHH	RC 7A4	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV536	GATE VALVE	WESTINGHOUSE 3-CM88FHH	RC 7A4	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV537	GATE VALVE	WESTINGHOUSE 3-CM88FHH	RC 7A4	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV556A	GLOBE VALVE	VEIAN 2-TM88FHH	RC 724	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV556B	GLOBE VALVE	VEIAN 2-TM88FHH	RC 724	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV556C	GLOBE VALVE	VEIAN 2-TM88FHH	RC 724	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV557A	GLOBE VALVE	VEIAN 2-TM88FHH	RC 717	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV557B	GLOBE VALVE	VEIAN 2-TM88FHH	RC 717	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV557C	GLOBE VALVE	VEIAN 2-TM88FHH	RC 717	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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*****	*****	*****	*****	*****	*****	*****	*****
2RCS#MOV585	GLOBE VALVE	COPIES-VULCAN 8-AM88SBH	RC 739	Q MEQ 001-08	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV586	GLOBE VALVE	COPIES-VULCAN A-AM88SBH	RC 739	Q MEQ 001-0A	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV587	GLOBE VALVE	COPIES-VULCAN B-AM88SBH	RC 739	Q MEQ 001-0B	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV590	GATE VALVE	WESTINGHOUSE 1165E23	RC734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV591	GATE VALVE	WESTINGHOUSE 1165E25	RC 734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV592	GATE VALVE	WESTINGHOUSE 1165E23	RC 734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV593	GATE VALVE	WESTINGHOUSE 1165E25	RC 734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV594	GATE VALVE	WESTINGHOUSE 1165E23	RC 734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#MOV595	GATE VALVE	WESTINGHOUSE 1165E25	RC 734	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#PCV455C	POWER OPERATED RV	GARRETT 3-1S8ARSA	RC 784	Q MEQ 001-11	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#PCV455D	POWER OPERATED RV	GARRETT 3-1S8ARSA	RC 784	Q MEQ 001-11	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#PCV456	POWER OPERATED RV	GARRETT 3-1S8ARSA	RC 784	Q MEQ 001-11	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#RV551A	SAFETY RELIEF VALVE	CROSBY VALVE & GAGE 6RV88LSB	RC 784	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2RCS#RV551B	SAFETY RELIEF VALVE	CROSBY VALVE & GAGE 6RV88LSB	RC 784	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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*****	*****	*****	*****	*****	*****	*****	*****
2RCS-RV551C	SAFETY RELIEF VALVE	CROSBY VALVE & GAGE AR488LSB	RC 7A4	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-001
2RCS-SM21A1	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A10	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A11	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A12	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A2	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A3	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A4	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A5	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A6	HYDRAULIC SHOCKER	BERGEN-PATERSON R6403C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A7	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A8	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21A9	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044
2RCS-SM21B1	HYDRAULIC SHOCKER	BERGEN-PATERSON R6503C	RC	T MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL.	2BUS-044

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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*****	*****	*****	*****	*****	*****	*****	*****
2RCS-SM21B10	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B11	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B12	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B2	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B3	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B4	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B5	HYDRAULIC SHUBBER	BERGEN-PATERSON B6403G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B6	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B7	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B8	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21B9	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21C1	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21C10	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044
2RCS-SM21C11	HYDRAULIC SHUBBER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-044

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
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*****	*****	*****	*****	*****	*****	*****	*****
2RCS-SW21C12	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C2	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C3	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C4	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C5	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C6	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C7	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C8	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RCS-SW21C9	HYDRAULIC SHOCKER	BERGEN-PATERSON B6503G	RC	I MEQ 044-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-044
2RHS*FCV605A	BUTTERFLY VALVE	POSTI-SEAL 88A76R7A	RC 70A	Q MEQ 001-13	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS*FCV605B	BUTTERFLY VALVE	POSTI-SEAL 88A76R7A	RC 70B	Q MEQ 001-13	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS*MOV701A	GATE VALVE	WESTINGHOUSE 12-GM885EH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS*MOV701B	GATE VALVE	WESTINGHOUSE 12-GM885EH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS*MOV702A	GATE VALVE	WESTINGHOUSE 12-GM885EH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2RHS#MOV702B	GATE VALVE	WESTINGHOUSE 12-CMAASEH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#MOV720A	GATE VALVE	WESTINGHOUSE 10-GM885EH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#MOV720B	GATE VALVE	WESTINGHOUSE 10-GM885EH	RC 721	Q MEQ 001-05	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#MOV750A	GLOBE VALVE	VELAM 2-7M78FPH	RC 721	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#MOV750B	GLOBE VALVE	VELAM 2-7M78FPH	RC 721	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#P21A	PUMP	INGERSOL 8 X 22 WDF	RC 70A	Q MEQ 001-12	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#P21B	PUMP	INGERSOL 8 X 22 WDF	RC 70B	Q MEQ 001-12	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#RV721A	RELIEF VALVE	CROSBY VALVE & GAGE 3RV761WB	RC 712	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RHS#RV721B	RELIEF VALVE	CROSBY VALVE & GAGE 3RV761WB	RC 712	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
2RSS#MOV154C	GATE VALVE	ANCHOR DARLING 6" -150	SG 749	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	28VS-82A
2RSS#MOV154D	GATE VALVE	ANCHOR DARLING 4" -150	SG 749	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	28VS-82A
2RSS#MOV155A	BUTTERFLY VALVE	HENRY PRATT CO N-MK II	SG 691	Q MEQ 076-01	TABLE III TABLE III	ZONE D	28VS-076
2RSS#MOV155B	BUTTERFLY VALVE	HENRY PRATT CO N-MK II	SG 691	Q MEQ 076-01	TABLE III TABLE III	ZONE D	28VS-076
2RSS#MOV155C	BUTTERFLY VALVE	HENRY PRATT CO N-MK II	SG 691	Q MEQ 076-01	TABLE III TABLE III	ZONE D	28VS-076

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*****	*****	*****	*****	*****	*****	*****	*****
2RSS#MOV155D	BUTTERFLY VALVE	HENRY PRATT CO N-MK 11	SG 691	Q MEQ 076-01	TABLE III TABLE III	ZONE D	2BVS-076
2RSS#MOV156A	GATE VALVE	ANCHOR DARLING 12" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	2BVS-82A
2RSS#MOV156B	GATE VALVE	ANCHOR DARLING 12" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	2BVS-82A
2RSS#MOV156C	GATE VALVE	ANCHOR DARLING 12" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	2BVS-82A
2RSS#MOV156D	GATE VALVE	ANCHOR DARLING 12" -150	SG 738	Q MEQ 82A-01	TABLE III TABLE III	ZONE D	2BVS-82A
2RSS#P21A	RECIRCULATION PUMP	BINGHAM-WILLAMETTE 10X12X18B TYPE VCR	SG 735	Q MEQ 015-01	TABLE III TABLE III	ZONE D (APPENDIX B)	2BVS-015
2RSS#P21B	RECIRCULATION PUMP	BINGHAM-WILLAMETTE 10X12X18B TYPE VCR	SG 735	Q MEQ 015-01	TABLE III TABLE III	ZONE D (APPENDIX B)	2BVS-015
2RSS#P21C	RECIRCULATION PUMP	BINGHAM-WILLAMETTE 10X12X18B TYPE VCR	SG 735	Q MEQ 015-01	TABLE III TABLE III	ZONE D (APPENDIX B)	2BVS-015
2RSS#P21D	RECIRCULATION PUMP	BINGHAM-WILLAMETTE 10X12X18B TYPE VCR	SG 735	Q MEQ 015-01	TABLE III TABLE III	ZONE D (APPENDIX B)	2BVS-015
2SIS#MOV889	CONTROL VALVE	FISHER CONTROLS 3/4-1A7ARD	SG 743	I MEQ 001-03	TABLE III TABLE III	ZONE D	2BVS-001
2SIS#MOV836	GATE VALVE	WESTINGHOUSE 3-GM78FN	RB 720	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BVS-001
2SIS#MOV841	GATE VALVE	WESTINGHOUSE 3-GM78FN	AD 712	Q MEQ 001-05	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-001
2SIS#MOV842	GLOBE VALVE	VEIAN 2-TM78FHH	RC 738	Q MEQ 001-06	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-001
2SIS#MOV851A	GLOBE VALVE	VEIAN 2-TM78FHH	RC 694	Q MEQ 001-06	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPFC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SIS#MOV851B	GLOBE VALVE	VELAN 2-TM78FHH	RC 695	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV851C	GLOBE VALVE	VELAN 2-TM78FHH	RC 694	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV852A	GLOBE VALVE	VELAN 2-TM78FHH	RC 694	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV852B	GLOBE VALVE	VELAN 2-TM78FHH	RC 694	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV852C	GLOBE VALVE	VELAN 2-TM78FHH	RC 694	Q MEQ 001-06	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV863A	GATE VALVE	WESTINGHOUSE 8-CM72FB	SG 732	Q MEQ 001-05	TABLE III TABLE III	ZONE E	2BVS-001
2SIS#MOV863B	GATE VALVE	WESTINGHOUSE 8-CM72FB	SG 728	Q MEQ 001-05	TABLE III TABLE III	ZONE E	2BVS-001
2SIS#MOV864A	GLOBE VALVE	VELAN 2-TM78FHH	SG 731	Q MEQ 001-06	TABLE III TABLE III	ZONE E	2BVS-001
2SIS#MOV864B	GLOBE VALVE	VELAN 2-TM78FHH	SG 731	Q MEQ 001-06	TABLE III TABLE III	ZONE E	2BVS-001
2SIS#MOV865A	GATE VALVE	WESTINGHOUSE 12-CM88FHH	RC 694	Q MEQ 001-05	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV865B	GATE VALVE	WESTINGHOUSE 12-CM88FHH	RC 694	Q MEQ 001-05	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV865C	GATE VALVE	WESTINGHOUSE 12-CM88FHH	RC 694	Q MEQ 001-05	FIGURE IA FIGURE IB	INSIDE CRANE WALL	2BVS-001
2SIS#MOV867A	GATE VALVE	WESTINGHOUSE 3-CM78FN	AB 712	Q MEQ 001-05	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-001
2SIS#MOV867B	GATE VALVE	WESTINGHOUSE 3-CM78FN	AB 713	Q MEQ 001-05	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SIS#MOV867C	GATE VALVE	WESTINGHOUSE 3-CM78FN	RB 719	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	TABLE IV	28VS-001
2SIS#MOV867D	GATE VALVE	WESTINGHOUSE 3-CM78FN	MV 722	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	TABLE IV	28VS-001
2SIS#MOV869A	GATE VALVE	WESTINGHOUSE 3-CM78FN	RB 720	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	28VS-001
2SIS#MOV869B	GATE VALVE	WESTINGHOUSE 3-CM78FN	RB 720	Q MEQ 001-05	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	28VS-001
2SIS#MOV8809A	GATE VALVE	WESTINGHOUSE 14-CM72FB	SG 721	Q MEQ 001-05	TABLE III TABLE III	ZONE F	28VS-001
2SIS#MOV8809B	GATE VALVE	WESTINGHOUSE 14-CM72FB	SG 721	Q MEQ 001-05	TABLE III TABLE III	ZONE F	28VS-001
2SIS#MOV8811A	GATE VALVE	WESTINGHOUSE 10-CM72FB	SG 728	Q MEQ 001-05	TABLE III TABLE III	ZONE E	28VS-001
2SIS#MOV8811B	GATE VALVE	WESTINGHOUSE 10-CM72FB	SG 728	Q MEQ 001-05	TABLE III TABLE III	ZONE E	28VS-001
2SIS#MOV8888A	GATE VALVE	WESTINGHOUSE 10-CM78FN	SG 737	Q MEQ 001-05	TABLE III TABLE III	ZONE D	28VS-001
2SIS#MOV8888B	GATE VALVE	WESTINGHOUSE 10-CM78FN	SG 737	Q MEQ 001-05	TABLE III TABLE III	ZONE D	28VS-001
2SIS#MOV8889	GATE VALVE	WESTINGHOUSE 10-CM78FN	SG 737	Q MEQ 001-05	TABLE III TABLE III	ZONE D	28VS-001
2SIS#MOV8890A	GATE VALVE	WESTINGHOUSE 4-CM72FB	SG 721	Q MEQ 001-05	TABLE III TABLE III	ZONE F	28VS-001
2SIS#MOV8890B	GATE VALVE	WESTINGHOUSE 4-CM72FB	SG 721	Q MEQ 001-05	TABLE III TABLE III	ZONE F	28VS-001
2SIS#P21A	LHSI PUMP	COULDS PUMPS 34052	SG 720	Q MEQ 001-10	TABLE III TABLE III	ZONE F	28VS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SIS*P21B	LHSI PUMP	GOULDS PUMPS 34052	SC 720	Q MEQ 001-10	TABLE III TABLE III	ZONE F	2BUS-001
2SIS*RV858A	RELIEF VALVE	CROSBY VALVE & GAGE 1RV76D6S	RC 706	T MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2SIS*RV858B	RELIEF VALVE	CROSBY VALVE & GAGE 1RV76D6S	RC 706	T MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2SIS*RV858C	RELIEF VALVE	CROSBY VALVE & GAGE 1RV76D6S	RC 706	T MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-001
2SSR*AOV100A1	GLOBE VALVE	MASONETILAM 3A-20571	RC 718	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BUS-651
2SSR*AOV100A2	GLOBE VALVE	MASONETILAM 3A-20571	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CURTICLE	2BUS-651
2SSR*AOV101A	GLOBE VALVE	MASONETILAM 3A-20571	RC 720	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-651
2SSR*AOV101B	GLOBE VALVE	MASONETILAM 3A-20571	RC 720	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-651
2SSR*AOV101C	GLOBE VALVE	MASONETILAM 3A-20571	RC 720	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-651
2SSR*AOV102A1	GLOBE VALVE	MASONETILAM 3A-20571	RC 719	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BUS-651
2SSR*AOV102A2	GLOBE VALVE	MASONETILAM 3A-20571	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CURTICLE	2BUS-651
2SSR*AOV108	GLOBE VALVE	MASONETILAM 3A-20571	RC 720	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BUS-651
2SSR*AOV109A1	GLOBE VALVE	MASONETILAM 3A-20571	RC 719	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BUS-651
2SSR*AOV109A2	GLOBE VALVE	MASONETILAM 3A-20571	RB 722	DR MEQ 651-01	FIGURE 11 FIGURE 11	TABLE IV	2BUS-651

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SSR*ADV110	GLOBE VALVE	MASONETLAN 38-20571	RC 783	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV112A1	GLOBE VALVE	MASONETLAN 38-20571	RC 719	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
2SSR*ADV112A2	GLOBE VALVE	MASONETLAN 38-20571	MV 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BVS-651
2SSR*ADV113		MASONETLAN 38-20571	RC 709	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV113B	GLOBE VALVE	MASONETLAN 38-20571	RC 712	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV115A	GLOBE VALVE	MASONETLAN 38-20571	RC 794	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV115B	GLOBE VALVE	MASONETLAN 38-20571	RC 694	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV115C	GLOBE VALVE	MASONETLAN 38-20571	RC 694	DR MEQ 651-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-651
2SSR*ADV116A	GLOBE VALVE	MASONETLAN 38-20571	AB 737	DR MEQ 651-01	FIGURE VIIIJ FIGURE VIIIJ	ZONE 40	2BVS-651
2SSR*ADV116B	GLOBE VALVE	MASONETLAN 38-20571	AB 737	DR MEQ 651-01	FIGURE VIIIJ FIGURE VIIIJ	ZONE 40	2BVS-651
2SSR*ADV116C	GLOBE VALVE	MASONETLAN 38-20571	AB 737	DR MEQ 651-01	FIGURE VIIIJ FIGURE VIIIJ	ZONE 41	2BVS-651
2SSR*ADV117A	GLOBE VALVE	MASONETLAN 38-20571	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BVS-651
2SSR*ADV117B	GLOBE VALVE	MASONETLAN 38-20571	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BVS-651
2SSR*ADV117C	GLOBE VALVE	MASONETLAN 38-20571	RB 722	DR MEQ 651-01	FIGURE X SHIELDED FIGURE X	SHIELDED CUBICLE	2BVS-651

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	KAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SSR*ADV118A	GLOBE VALVE	MASONEILAN 38-20571	AB 720	DR MEQ 651-01	NONE(220F MAX) FIGURE VIIIIL	ZONE 19	28VS-651
2SSR*ADV118B	GLOBE VALVE	MASONEILAN 38-20571	AB 757	DR MEQ 651-01	FIGURE VIIIIC FIGURE VIIIIL	ZONE 53	28VS-651
2SSR*ADV118C	GLOBE VALVE	MASONEILAN 38-20571	AB 756	DR MEQ 651-01	FIGURE VIIIIC FIGURE VIIIIL	ZONE 53	28VS-651
2SSR*ADV118D	GLOBE VALVE	MASONEILAN 38-20571	AB 712	DR MEQ 651-01	NONE(220F MAX) FIGURE VIIIIL	ZONE 14	28VS-651
2SVS*PCV101A	GLOBE VALVE	COPEX-VULCAN D-100 10" CLASS 600	MV 773	Q MEQ 209A-1	FIGURE II FIGURE II	TABLE IV	28VS-209A
2SVS*PCV101B	GLOBE VALVE	COPEX-VULCAN D-100 10" CLASS 600	MV 773	Q MEQ 209A-1	FIGURE II FIGURE II	TABLE IV	28VS-209A
2SVS*PCV101C	GLOBE VALVE	COPEX-VULCAN D-100 10" CLASS 600	MV 773	Q MEQ 209A-1	FIGURE II FIGURE II	TABLE IV	28VS-209A
2SWS*ADV110A	BUTTERFLY VALVE	MASONEILAN 33-37310	RC 717	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-651
2SWS*ADV110B	BUTTERFLY VALVE	MASONEILAN 33-37310	RC 717	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-651
2SWS*ADV110C	BUTTERFLY VALVE	MASONEILAN 33-37310	RC 717	DR MEQ 651-01	FIGURE IA FIGURE IB	OUTSIDE CRANE WALL	28VS-651
2SWS*ADV114	BUTTERFLY VALVE	MASONEILAN 33-37410	RB 720	DR MEQ 651-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-651
2SWS*FCV120A	GLOBE VALVE	MASONEILAN 47-21124	RB 774	DR MEQ 651-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-651
2SWS*FCV120B	GLOBE VALVE	MASONEILAN 47-21124	MV 774	DR MEQ 651-01	FIGURE II FIGURE II	TABLE IV	28VS-651
2SWS*MOV104A	GATE VALVE	WALWORTH CO 16"-W5202 WE	SG 723	Q MEQ 077-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-077

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EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
2SWS#MOV104B	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 723	Q MEQ 077-01	TABLE III TABLE III	ZONE E	2BVS-077
2SWS#MOV104C	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 723	Q MEQ 077-01	TABLE III TABLE III	ZONE E	2BVS-077
2SWS#MOV104D	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 723	Q MEQ 077-01	TABLE III TABLE III	ZONE E	2BVS-077
2SWS#MOV105A	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 753	Q MEQ 077-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-077
2SWS#MOV105B	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 753	Q MEQ 077-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-077
2SWS#MOV105C	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 753	Q MEQ 077-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-077
2SWS#MOV105D	GATE VALVE	WALWORTH CO 16"-W5202 WF	SG 753	Q MEQ 077-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-077
2SWS#MOV107A	BUTTERFLY VALVE	POSTI-SEAL INT 2144	AB 730	Q MEQ 76A-01	FIGURE VIIIA FIGURE VIIIC	ZONE 7A	2BVS-076A
2SWS#MOV107B	BUTTERFLY VALVE	POSTI-SEAL INT 2144	AB 730	Q MEQ 76A-01	FIGURE VIIIA FIGURE VIIIC	ZONE 7A	2BVS-076A
2SWS#MOV107C	BUTTERFLY VALVE	POSTI-SEAL INT 2144	AB 730	Q MEQ 76A-01	FIGURE VIIIA FIGURE VIIIC	ZONE 7A	2BVS-076A
2SWS#MOV107D	BUTTERFLY VALVE	POSTI-SEAL INT 2144	AB 730	Q MEQ 76A-01	FIGURE VIIIA FIGURE VIIIC	ZONE 7A	2BVS-076A
2SWS#MOV148A	BUTTERFLY VALVE	POSTI-SEAL INT 2484	RB 720	Q MEQ 76A-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-076A
2SWS#MOV148B	BUTTERFLY VALVE	POSTI-SEAL INT 2484	RB 720	Q MEQ 76A-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-076A
2SWS#MOV152-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-B"	RB 721	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-076

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*****	*****	*****	*****	*****	*****	*****	*****
2SWS#MOV152-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-8"	RC 725	I MEQ 076-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	28VS-076
2SWS#MOV153-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 725	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV153-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-8"	RC 725	I MEQ 076-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	28VS-076
2SWS#MOV154-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 721	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV154-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-8"	RC 725	I MEQ 076-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	28VS-076
2SWS#MOV155-1	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 724	I MEQ 076-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-076
2SWS#MOV155-2	BUTTERFLY VALVE	HENRY PRATT CO 1400-8"	RC 725	I MEQ 076-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	28VS-076
2SWS#MOV160	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 723	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV161	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 725	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV162	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 724	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV163	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 725	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV164	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 724	I MEQ 076-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	28VS-076
2SWS#MOV165	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 724	I MEQ 076-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-076
2SWS#MOV166	BUTTERFLY VALVE	HENRY PRATT CO 1100-8"	RB 722	I MEQ 076-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	28VS-076

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*****	*****	*****	*****	*****	*****	*****	*****
2SWS#MOV167	BUTTERFLY VALVE	HENRY PRATT CO 1100-A"	RB 723	I MEQ 076-01	FSAR TABLE 3.11-1 FSAR TABLE 3.11-1	FSAR TABLE 3.11-1	2BVS-076
2URS#AOV109A1	GLOBE VALVE	MASONEILAN 4A-207X1	RB 721	DR MEQ 651-01	FIGURE X GEN. AREA FIGURE X	GENERAL AREA	2BVS-651
2URS#AOV109A2	GLOBE VALVE	MASONEILAN 4A-207X1	RC 727	DR MEQ 651-01	FIGURE 1A FIGURE 1B	OUTSIDE CRANE WALL	2BVS-651
NOTE 1	CHECK VALVE	CLOW VCT015-X-2	RC(NOTE 2)	I MEQ 27A-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-022A
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-Y-2 2 1/2"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-B-2 4"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW150-X-2 10"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-AS-3 4"	RC(NOTE 2)	Q MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW090-A-2 4"	RC(NOTE 2)	Q MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW150-C-3 3"	RC(NOTE 2)	Q MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-Y-2 3"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	VACUUM BREAKER	ATWOOD-MORRILL VCW015-Y-2 10"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	VACUUM BREAKER	ATWOOD-MORRILL VCW015-Y-2 12"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW150-X-2 2 1/2"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	2BVS-020

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*****	*****	*****	*****	*****	*****	*****	*****
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW150-X-2 3"	RC(NOTE 2)	I MEQ 070-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW060-Y-2 2 1/2"	RC(NOTE 2)	I MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-B-2 2 1/2"	RC(NOTE 2)	I MEQ 070-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW060-A-2 16"	RC(NOTE 2)	Q MEQ 020-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW015-B-2 6"	RC(NOTE 2)	I MEQ 070-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	ATWOOD-MORRILL VCW040-AA-2 6"	RC(NOTE 2)	Q MEQ 070-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-020
NOTE 1	CHECK VALVE	KEROTEST 3/4-C58	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 3/4-C78	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 3/4-C88	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 3/4-C88A	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 1-C78	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 2-C58	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	KEROTEST 2-C78	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 3-C52	RC(NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPFC NO.
*****	*****	*****	*****	*****	*****	*****	*****
NOTE 1	CHECK VALVE	WESTINGHOUSE 3-C78	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 3-C88	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 4-C72	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 6-C88	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 8-C72	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 10-C72	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 10-C74	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 10-C78	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 12-C88	RC (NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	TRW MISSION UC1015-A-3 3"	RC(NOTE 2)	T MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION UC1015-A-3 4"	RC(NOTE 2)	T MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION UC1015-A-3 6"	RC(NOTE 2)	T MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION UC1015-A-3 8"	RC(NOTE 2)	T MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION UC1015-A-3 10"	RC(NOTE 2)	T MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT
 SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
NOTE 1	CHECK VALVE	TRW MISSION VCI015-C-3 70"	RC(NOTE 2)	I MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION VCI015-C-3 24"	RC(NOTE 2)	I MEQ 022-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	TRW MISSION VCI015-C-3 30"	RC(NOTE 2)	I MEQ 077-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-022
NOTE 1	CHECK VALVE	VOGT VCS060-AZ-3 2"	RC(NOTE 2)	Q MEQ 064A-1	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064A
NOTE 1	CHECK VALVE	DRESSER VCS060-A-2 2"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS060-A-3 2"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS060-B-3 3/4"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	WALWORTH VCW015-A-3 3"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW015-A-3 4"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW015-A-3 6"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW060-A-2 3"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW060-A-3 6"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW060-A-2 4"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073
NOTE 1	CHECK VALVE	WALWORTH VCW060-A-3 3"	RC(NOTE 2)	Q MEQ 073-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-073

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	EQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
NOTE 1	CHECK VALVE	VELAN UCW015-AZ-3 6"	RC(NOTE 2)	Q MEQ 73A-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-73A
NOTE 1	CHECK VALVE	VELAN UCW015-AZ-3 3"	RC(NOTE 2)	Q MEQ 73A-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-73A
NOTE 1	CHECK VALVE	VELAN UCW060-AZ-3 3"	RC(NOTE 2)	Q MEQ 73A-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-73A
NOTE 1	CHECK VALVE	VELAN VCS015-X-2 1"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	VELAN VCS015-X-2 2"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	VELAN VCS015-X-3 1/2"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	VELAN VCS015-X-3 1"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	VELAN VCS015-X-3 2"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	VELAN VCS015-X-3 1/2"	RC(NOTE 2)	Q MEQ 075-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-075
NOTE 1	CHECK VALVE	RENOTES: 2-CAB	RC(NOTE 2)	Q MEQ 001-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	DRESSER VCS060-A-3 3/4"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS060-A-3 1"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS060-B-3 1"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS060-A-3 1 1/2"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

SORTED BY EQUIPMENT ID

EQUIPMENT ID	EQUIPMENT TYPE	MANUFACTURER MODEL NO.	LOCATION	FQ STATUS MEQ FILE	TEMPERATURE PROFILE PRESSURE PROFILE	RAD ZONE	SPEC NO.
*****	*****	*****	*****	*****	*****	*****	*****
NOTE 1	CHECK VALVE	DRESSER VCS040-B-3 2"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	DRESSER VCS150-C-3 2"	RC(NOTE 2)	Q MEQ 064-01	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-064
NOTE 1	CHECK VALVE	WESTINGHOUSE 3-C72	RC NOTE 2)	Q MEQ 001-07	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001
NOTE 1	CHECK VALVE	WESTINGHOUSE 3-C88A	RC(NOTE 2)	Q MEQ 001-02	FIGURE 1A FIGURE 1B	INSIDE CRANE WALL	28VS-001

DUQUESNE LIGHT COMPANY
BEAVER VALLEY POWER STATION, UNIT NO. 2

MASTER LIST OF SAFETY-RELATED ACTIVE MECHANICAL EQUIPMENT

NOTES

1. The Mark (Equipment Identification) Number for this equipment is not used based on generic worst case environmental qualification.
2. Plant location was not specifically identified for this equipment. Therefore, the Reactor Containment is conservatively chosen to apply the worst case postulated environmental conditions for mechanical equipment qualification.
3. Environmental Qualification (EQ) Status Codes are defined as follows:
 - Q - Environmental Qualification has been satisfactorily addressed.
 - I - Environmental Qualification is incomplete.
 - DR - Qualification documentation is in review; qualification status has not yet been determined.
 - E - Qualification of entire equipment assembly addressed within the Electrical Equipment Qualification Program.

APPENDIX B

MECHANICAL EQUIPMENT QUALIFICATION WORKSHEETS

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: J. D. Pala Date: 7/6/84
 Checked by: J. Gray Date: 7/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Y-Type Check Valve	Maximum Pressure (psig)	45	1	1905	2 (Section 2.3)	None
MANUFACTURER: Kerotest	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: Various	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1			
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1	Not Sensitive	2 (Section 2.2)	None
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-02

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	1490	2 (Section 2.1)	None
EQUIPMENT TYPE: Swing Check Valve	Maximum Pressure (psig)	45	1	200	2 (Section 2.3)	None
MANUFACTURER: Westinghouse	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: Various	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Containment						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-02, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-03

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	130	1	175	² (Section 2.1)	None
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	1.45	1	50	² (Section 2.3)	None
MANUFACTURER: Fisher	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: 3/4-RA52RDB	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	5×10^6	² (Section 2.2)	None
LOCATION: Aux. Bldg. E1. 757	401.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: 53						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-03, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Sonia Yarris Date: 10-16-84
 Checked by: Bub Date: 10-16-84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-03

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	120	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	Slightly Negative	1	400	2 (Section 2.3)	None
MANUFACTURER: Fisher	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: 3/4-IA78RD	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
<u>LIMITING ENVIRONMENT</u>	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Safeguards Area E1. 743	401.5 Day Accident Radiation Dose (Rads)	2×10^7	1			
RAD ZONE: Zone D						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-03, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Socia. Masia Date: 10-16-84
 Checked by: B. B. Date: 10/16/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-03

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	203	2 (Section 2.1)	Yes 2 (Section 2.1)
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	45	1	400	2 (Section 2.3)	None
MANUFACTURER: Fisher	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2-IA78RG, 2-IA88RG, 1-IA78RD	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	5×10^6	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall	Radiation Dose (Rads)					

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-03, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-03

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	220	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	1.47	1	400	2 (Section 2.3)	None
MANUFACTURER: Fisher	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2-IA76RE	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1 x 10 ⁶	1	5 x 10 ⁶	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Rod Control Area E1. 724	401.5 Day Accident Radiation Dose (Rads)	1 x 10 ⁸	1			
RAD ZONE: Shielded Cubicle						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-03, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-04

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	204	1	225	2 (Section 2.1)	None
EQUIPMENT TYPE: Air Oper., High Press.	Maximum Pressure (psig)	1.45	1	50	2 (Section 2.3)	None
MANUFACTURER: ITT Grinnell	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2DA92R with Filter/Regulator	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1 x 10 ⁶	1	5 x 10 ⁶	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Auxiliary Building	401.5 Day Accident Radiation Dose (Rads)	9 x 10 ⁶	1			
RAD ZONE: Zone 21						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-04, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-04

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	180	1	225	² (Section 2.1)	None
EQUIPMENT TYPE: Air Oper., High Press.	Maximum Pressure (psig)	1.47	1	50	² (Section 2.3)	None
MANUFACTURER: ITT Grinnell	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: 3DA92R with Filter/Regulator	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	² (Section 2.2)	None
LOCATION: Rod Control Area	401.5 Day Accident Radiation Dose (Rads)	5×10^6	1			
RAD ZONE: General Area	Radiation Dose (Rads)					

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-04, Rev. 1.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-04

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	180	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Air Oper., High Press.	Maximum Pressure (psig)	1.47	1	50	2 (Section 2.3)	None
MANUFACTURER: ITT Grinnell	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3/4DA92R (Equip. ID 2RCS*AOV101) with Filter/Regulator	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	2 (Section 2.2)	None
LOCATION: Rod Control Area	401.5 Day Accident Radiation Dose (Rads)	5×10^6	1			
RAD ZONE: General						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-04, Rev. 1.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Sonia Upton Date: 9/18/84
 Checked by: [Signature] Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-04

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	130	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Air Oper., High Press.	Maximum Pressure (psig)	1.45	1	50	2 (Section 2.3)	None
MANUFACTURER: ITT Grinnell	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3/4DA92R (Equip.ID 2CHS*A0V8101) with Filter/Regulator	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
<u>LIMITING ENVIRONMENT</u>	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	5 x 10 ⁶	2 (Section 2.2)	None
LOCATION: Auxiliary Building	401.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: Zone 53						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-04, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-05

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	1200	2 (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Gate Valve	Maximum Pressure (psig)	45	1	200	2 (Section 2.3)	None
MANUFACTURER: Westinghouse	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: Various	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2 x 10 ⁷	1			
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8 x 10 ⁸	1	1 x 10 ¹⁰	2 (Section 2.2)	None
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-05, Rev. 1.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: *B. Zuber* Date: 10-11-84
 Checked by: *Teria Harris* Date: 10-11-84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-06

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	1200	² (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Globe Valves	Maximum Pressure (psig)	45	1	2500	² (Section 2.3)	None
MANUFACTURER: Velan	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: 2TM88FNH, 2TM78FNH, 2TM78FN	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	² (Section 2.2)	None
LOCATION: Containment RAD ZONE: Inside Crane Wall	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 3 1984.
 2. MEQ File 001-06, Rev. 1.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Kenneth D. Moody Date: 7/12/84
 Checked by: [Signature] Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-07

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	130	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Relief Valve	Maximum Pressure (psig)	1.45	1	75	2 (Section 2.3)	None
MANUFACTURER: Crosby	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3RV72LNS	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1.0×10^3	1	1.0×10^7	2 (Section 2.2)	None
LOCATION: AB765	401.5 Day Accident Radiation Dose (Rads)	1.0×10^6	1			
RAD ZONE: 78						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-07, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-07

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Relief Valve	Maximum Pressure (psig)	45	1	75	2 (Section 2.3)	None
MANUFACTURER: Crosby	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2RV76JMB, 3RV76LWB, 2RV72JWB	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2.0×10^7	1	Not Sensitive	2 (Section 2.2)	None
LOCATION: Reactor Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-07, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Kenneth D. Mady Date: 9/15/84
 Checked by: [Signature] Date: 9/15/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-07

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	1490	2 (Section 2.1)	None
EQUIPMENT TYPE: Relief Valve	Maximum Pressure (psig)	45	1	75	2 (Section 2.3)	None
MANUFACTURER: Crosby	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 6RV88LSB	Containment Spray	2000 ppm Boron: NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2.0×10^7	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: Reactor Containment	40T.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall	Radiation Dose (Rads)					

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-07, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-07

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	369	2 (Section 2.1)	None
EQUIPMENT TYPE: Relief Valve	Maximum Pressure (psig)	45	1	75	2 (Section 2.3)	None
MANUFACTURER: Crosby	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 1RV76DGS	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	10-Year Normal Radiation Dose (Rads)	2.0×10^7	1	1.0×10^7	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: RC706	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-07, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-08

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	327	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Globe Valve and Air Actuator	Maximum Pressure (psig)	2.07	1	100	2 (Section 2.3)	None
MANUFACTURER: Copes-Vulcan, Inc.	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 16FA3RG (Valve) D100160 (Actuator)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1 x 10 ³	1	1 x 10 ⁷	2 (Section 2.2)	None
LOCATION: Main Steam Valve House	401.5 Day Accident Radiation Dose (Rads)	1 x 10 ⁶	1			
RAD ZONE: Main Steam Valve House						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-08, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-08

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	1200	2 (Section 2.1)	None
EQUIPMENT TYPE: Globe Valve	Maximum Pressure (psig)	45	1	2200	2 (Section 2.3)	None
MANUFACTURER: Copes-Vulcan, Inc.	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 8AM88SBH	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: RC	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-08, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-08

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	195	2 (Section 2.1)	Yes See Ref. 2 (Section 2.1)
EQUIPMENT TYPE: Globe Valve	Maximum Pressure (psig)	45	1	50	2 (Section 2.3)	None
MANUFACTURER: Copes-Vulcan, Inc.	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3/8-TA73DL	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	Unacceptable	2 (Section 2.5)	Yes See Ref. 2 (Section 2.5)
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1.2×10^5	2 (Section 2.2)	Yes See Ref. 2 (Section 2.2)
LOCATION: RC	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-08, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Charging SI Pump and Bearing	Maximum Pressure (psig)	1.45	1	2800 (Pump) 15 (Bearing)	2 (Section 2.3)	None
MANUFACTURER: Pacific (Pump), Kingsbury (Bearing)	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2-1/2 RG-1J (Pump), JHJ-7 (Bearing)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	1 x 10 ⁷	2 (Section 2.2)	None
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: J. N. Asala Date: 09-28-84
 Checked by: John PortKDMoody Date: 09-28-84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Charging SI Pump Shaft Seal	Maximum Pressure (psig)	1.45	1	20	2 (Section 2.3)	None
MANUFACTURER: Crane	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: IB-RS	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	1×10^7	2 (Section 2.2)	None
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	248	2 (Section 2.1)	None
EQUIPMENT TYPE: Gear Unit	Maximum Pressure (psig)	1.45	1	15	2 (Section 2.3)	None
MANUFACTURER: Westinghouse Gear Unit	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: SU-1023 8x5	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	1.9×10^7	2 (Section 2.2)	None
LOCATION: AB736	401.5 day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Oil Pump	Maximum Pressure (psig)	1.45	1	15	2 (Section 2.3)	None
MANUFACTURER: Brown & Sharpe Oil Pump	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 537	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	1.5 x 10 ⁷	2 (Section 2.2)	None
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	250	² (Section 2.1)	None
EQUIPMENT TYPE: Coupling	Maximum Pressure (psig)	1.45	1	1.45	² (Section 2.3)	None
MANUFACTURER: Zurn	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NOs.: F-102-1/2 S.B. FE-102-1/2 S.B.	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	1.5×10^7	² (Section 2.2)	None
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	550	² (Section 2.1)	None
EQUIPMENT TYPE: 3 Way Valve	Maximum Pressure (psig)	1.45	1	15	² (Section 2.3)	None
MANUFACTURER: ITT Hammel Dahl	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: 831HGC32JAAC	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	3.4×10^4	² (Section 2.2)	Yes ² (Section 2.2)
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	180	² (Section 2.1)	None
EQUIPMENT TYPE: 3 Way Valve Diaphragm Actuator	Maximum Pressure (psig)	1.45	1	3	² (Section 2.3)	None
MANUFACTURER: Conoflow	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: A41ADB5AB6	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3×10^6	1	1.5×10^7	² (Section 2.2)	None
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET (CONTINUED)

MEQ File No. 001-09

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-001	Maximum Temperature (degrees F)	150	1	180	² (Section 2.1)	None
EQUIPMENT TYPE: Pneumatic Controller	Maximum Pressure (psig)	1.45	1	3	² (Section 2.3)	None
MANUFACTURER: Ametek	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: 40	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	4 x 10 ⁶	² (Section 2.2)	Yes ² (Section 2.2)
LOCATION: AB736	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1			
RAD ZONE: Pump Cubicles 39, 40, 41						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-09, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-10

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-011	Maximum Temperature (degrees F)	120	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Centrifugal Pump	Maximum Pressure (psig)	Slightly Negative	1	240	2 (Section 2.3)	None
MANUFACTURER: Goulds	Maximum Relative Humidity (%)	90	1	100	2 (Section 2.4)	None
MODEL NO.: 3405L	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1.0×10^3	1	4.0×10^6	2 (Section 2.2)	None
LOCATION: SG718'-6"	401.5 Day Accident Radiation Dose (Rads)	1.0×10^6	1			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-10, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: 73/mbm

Date: 09-06-84

Checked by: A. Ruff

Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-11

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Power Operated Relief Valve	Maximum Pressure (psig)	45	1	2485	2 (Section 2.3)	None
MANUFACTURER: Garrett	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3-IS88RSA	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1			
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1	1.5×10^9	2 (Section 2.2)	None
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 75-1, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-12

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	369	2 (Section 2.1)	None
EQUIPMENT TYPE: Pump	Maximum Pressure (psig)	45	1	500	2 (Section 2.3)	None
MANUFACTURER: Ingersoll-Rand	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: C-8X20WOF500X15E	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10/5	2 (Section 2.5)	None
LIMITING ENVIRONMENT: LOCATION: Containment	40-Year Normal Radiation Dose (Rads)	2.0 x 10 ⁷	1	5 x 10 ⁷	2 (Section 2.2)	None
RAD ZONE: Inside Crane Wall	401.5 Day Accident Radiation Dose (Rads)	3 x 10 ⁷	1 (See Note 1)			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-12, Rev. 0.

NOTE: 1. Postulated accident dose does not include beta contribution of 1.5 x 10⁸ rads.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-13

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	369	1	375	2 (Section 2.1)	None
EQUIPMENT TYPE: Butterfly Valve and Actuators	Maximum Pressure (psig)	45	1	80	2 (Section 2.3)	None
MANUFACTURER: Posi-Seal and Bettis	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 8-BA 76RZA (Valve) NCB-725-SR-80 (Actuat.)	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	2×10^8	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall	Radiation Dose (Rads)					

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-13, Draft Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: B. J. Baker Date: 9/26/84
 Checked by: [Signature] Date: 9/26/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 001-14

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC. P.O. NO.: 2BVS-001	Maximum Temperature (degrees F)	130	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Centrifugal Pump	Maximum Pressure (psig)	1.45	1	150	2 (Section 2.3)	None
MANUFACTURER: Goulds	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3196MT	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
<u>LIMITING ENVIRONMENT</u>	40-Year Normal Radiation Dose (Rads)	3.0 x 10 ⁶	1	3 x 10 ⁴	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: AB 756	401.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: 47, 48						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 001-14, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 010-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-010	Maximum Temperature (degrees F)	130	1	160	2 (Section 2.1)	None
EQUIPMENT TYPE: Centrifugal Pump	Maximum Pressure (psig)	1.45	1	170	3 (Section 2.3.)	None
MANUFACTURER: Ingersoll-Rand	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 10X18AA	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	4.4×10^6	2 (Section 2.2)	None
LOCATION: AB, E1. 736'	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: 77						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 010-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: F. Z... Date: 9-18-84
 Checked by: [Signature] Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 011-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-011	Maximum Temperature (degrees F)	150	1	203	2 (Section 2.1)	None
EQUIPMENT TYPE: Centrifugal Pump	Maximum Pressure (psig)	Slightly Negative	1	74	2 (Section 2.3)	None
MANUFACTURER: Goulds	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3196MT	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2.0 x 10 ⁶	1	5.0 x 10 ⁶	2 (Section 2.2)	None
LOCATION: FB 730	40i.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: C						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 011-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 015-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-015	Maximum Temperature (degrees F)	120	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Recirculation Pump Assembly	Maximum Pressure (psig)	Slightly Negative	1	60	2 (Section 2.3)	None
MANUFACTURER: Bingham-Willamette	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: 10x12x18B Type VCR	Containment Spray	N/A	1	N/A	N/A	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	At Least 5.2×10^7	2 (Section 2.2)	None
LOCATION: SG 735'	401.5 Day Accident Radiation Dose (Rads)	5.2×10^7	1 (See Note 1)			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 015-01, Rev. 0.

- NOTES: 1. The postulated accident radiation dose includes an accident dose of 2.2×10^6 rads (Reference 1, Appendix B) and the recirculating fluid dose of 5×10^7 rads.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 020-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-020	Maximum Temperature (degrees F)	369	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	1900	2 (Section 2.3)	None
MANUFACTURER: Atwood & Morrill	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
TAG NO.: VCW090-A-2 VCW150-C-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	Not Sensitive	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 020-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 129C-005-1671

Prepared by: J. D. Paska Date: 9/26/84
 Checked by: [Signature] Date: 9/26/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 020-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-020	Maximum Temperature (degrees F)	369	1	1490	2 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	245	2 (Section 2.3)	None
MANUFACTURER: Atwood & Morrill	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
TAG NO.: VCW060-A-2 VCW060-AA-2 VCW015-AS-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 020-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 020-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-020	Maximum Temperature (degrees F)	369	1	369	3 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve.	Maximum Pressure (psig)	45	1	155	2 (Section 2.3)	None
MANUFACTURER: Atwood & Morrill	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
TAG NO.: Note 1	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	1 x 10 ⁷	2 (Section 2.2)	None
LOCATION: Containment (Except Radiation parameters)	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1			
RAD ZONE: Reference 3						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 020-01, Rev. 0.
 3. Values for Auxiliary Building Cubicles 13, 14, 34, 36, 39, 40, 41, which is maximum radiation parameter to qualify (See Ref. 2 Section 2.0)

NOTE: 1. VCW015-Y-2 (2-1/2", 10", 12"); VCW015-B-2 (4", 6"); VCW150-X-2

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 020-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-020	Maximum Temperature (degrees F)	369	1	400	3 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	155	2 (Section 2.3)	None
MANUFACTURER: Atwood & Morrill	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
TAG NO.: Note 1	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	1 x 10 ⁷	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1			
RAD ZONE: Reference 3						

- References:
1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 020-01, Rev. 0.
 3. Values for Auxiliary Building Cubicles 13, 14, 34, 36, 39, 40, 41, which is maximum radiation parameters to qualify (See Ref. 2 Section 2.0)

NOTE: 1. VCW015-B-2 (2-1/2"); VCW015-Y-2 (3"); VCW060-Y-2

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 022-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-022	Maximum Temperature (degrees F)	369	1	369	3 (Section 2.1)	None
EQUIPMENT TYPE: Insert-Type Check Valve	Maximum Pressure (psig)	45	1	245	2 (Section 2.3)	None
MANUFACTURER: TRW-Mission	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCI-015-A-3 VCI-015-C-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT LOCATION: Containment (Except Radiation parameters)	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1,2,3	1 x 10 ⁷	2 (Section 2.2)	None
	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1,2,3			
RAD ZONE: Reference 3						

- References:
1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 022-01, Rev. 0.
 3. Values for Auxiliary Building Cubicles 13, 14, 32, 34, 36, 39, 40, 41, which is maximum radiation parameters to qualify (See Ref. 2 Section 2.0)

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 22A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-22A	Maximum Temperature (degrees F)	369	1	369	3 (Section 2.1)	None
EQUIPMENT TYPE: Insert-Type Check Valve	Maximum Pressure (psig)	45	1	175	2 (Section 2.3)	None
MANUFACTURER: Clow	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCI-015-X-2	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT LOCATION: Containment (Except Radiation parameters)	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1,2,3	1 x 10 ⁷	2 (Section 2.2)	None
RAD ZONE: Reference 3	401.5 Day Accident Radiation Dose (Rads)	7 x 10 ⁶	1,2,3			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 22A-01, Rev. A.
 3. Values for Auxiliary Building Cubicles 13, 14, 32, 34, 36, 39, 40, 41, which is maximum radiation parameters to qualify (See Ref. 2 Section 2.0)

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 024-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-024	Maximum Temperature (degrees F)	120	1	221	2 (Section 2.1)	None
EQUIPMENT TYPE: Pump Mechanical Seal	Maximum Pressure (psig)	Slightly Negative	1	143	2 (Section 2.3)	None
MANUFACTURER: Bing- ham-Willamette (Pump) Durametallc (Seal)	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: 8 x 10 x 12 HS (Pump) PTO (Seal)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: SG728	401.5 Day Accident Radiation Dose (Rads)	5.1×10^7	1 (See Note 1)			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 024-01, Rev. 0.

- NOTES: 1. Postulated accident radiation dose includes an accident dose of 1×10^6 rads (Reference 1) and the recirculating fluid dose of 5×10^7 rads.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 024-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-024	Maximum Temperature (degrees F)	120	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Coupling	Maximum Pressure (psig)	Slightly Negative	1	0	2 (Section 2.3)	None
MANUFACTURER: Waldron	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: #2-1/2 HSW	Containment Spray	N/A	1	N/A	N/A	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1 x 10 ³	1	5 x 10 ⁶	2 (Section 2.2)	None
LOCATION: SG728	401.5 Day Accident Radiation Dose (Rads)	1 x 10 ⁶	1			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 024-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 044-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-044	Maximum Temperature (degrees F)	369	1	At Least 369	2 (Section 2.1)	Yes (Section 2.1)
EQUIPMENT TYPE: Hydraulic Snubbing Cylinders	Maximum Pressure (psig)	45	1	100	2 (Section 2.3)	None
MANUFACTURER: Bergen Paterson	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: B6503G	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	3×10^7	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 044-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: F. Zuber Date: 9/18/84
 Checked by: Kenneth D. Moody Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 064-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-64	Maximum Temperature (degrees F)	369	1	1490	2 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	1265	2 (Section 2.3)	None
MANUFACTURER: Dresser	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCS-060-A-2, VCS-060-A-3, VCS-060-B-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 064-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Zyden Date: 9-18-84
 Checked by: Kenneth D. Moody Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 064-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-64	Maximum Temperature (degrees F)	369	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	3170	2 (Section 2.3)	None
MANUFACTURER: Dresser	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCS-150-C-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	Not Sensitive	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 064-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Y. Z... Date: 9/6/84
 Checked by: Kenneth D. Mendy Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 64A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-64A	Maximum Temperature (degrees F)	369	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Check Valve	Maximum Pressure (psig)	45	1	1265	2 (Section 2.3)	None
MANUFACTURER: Vogt	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCS060-AZ-3	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1.5×10^9	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 64A-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 067-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-067	Maximum Temperature (degrees F)	120	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Ball Valve	Maximum Pressure (psig)	Atmospheric	1	250	2 (Section 2.3)	None
MANUFACTURER: Contromatics	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 298-20-121	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^7	2 (Section 2.2.)	None
LOCATION: SG 718' RB 774'	401.5 Day Accident Radiation Dose (Rads)	2.2×10^6	1			
RAD ZONE: SG (App.B)						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April, 19, 1984.
 2. MEQ File 067-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: *J. A. ...*

Date: 9-6-84

Checked by: *[Signature]*

Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 073-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-073	Maximum Temperature (degrees F)	369	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Swing Check Valve	Maximum Pressure (psig)	45	1	245	2 (Section 2.3)	None
MANUFACTURER: Walworth	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: Various	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	Not Sensitive	2 (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 073-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Saige Martin Date: 9/6/84
 Checked by: J. Ross Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 73A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-73A	Maximum Temperature (degrees F)	369	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Swing Check Valve	Maximum Pressure (psig)	45	1	285	2 (Section 2.3)	None
MANUFACTURER: Velan	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: VCW015-AZ-3 VCW060-AZ-3	Containment Spray	2,000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2,000 Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1.5×10^9	2 (Section 2.2)	None
LOCATION: RC	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Inside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 73A-1, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: *S. J. Pala* Date: 9-8-84
 Checked by: *[Signature]* Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 075-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
			REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-075	Maximum Temperature (degrees F)	369	1	1490	² (Section 2.1)	None
EQUIPMENT TYPE: Piston Check Valve	Maximum Pressure (psig)	45	1	880	² (Section 2.3)	None
MANUFACTURER: Velan	Maximum Relative Humidity (%)	100	1	100	² (Section 2.4)	None
MODEL NO.: Various	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	2×10^7	1	1×10^{10}	² (Section 2.2)	None
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	1.8×10^8	1			
RAD ZONE: Containment						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 075-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Chapman Date: 9/26/84
 Checked by: RP Date: 9/26/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 076-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-076	Maximum Temperature (degrees F)	164	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Butterfly Valve	Maximum Pressure (psig)	1.45	1	153	2 (Section 2.3)	None
MANUFACTURER: Henry Pratt	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 1100	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.2×10^5	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Auxiliary Building 722'	401.5 Day Accident Radiation Dose (Rads)	1×10^7	1			
RAD ZONE: 76						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 076-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Alc. Roblin Date: 7/6/84
 Checked by: [Signature] Date: 9/26/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 076-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-076	Maximum Temperature (degrees F)	180	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Butterfly Valve	Maximum Pressure (psig)	1.47	1	153	2 (Section 2.3)	None
MANUFACTURER: Henry Pratt	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 1130	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.2×10^5	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: RB (Rod Control Area)	401.5 Day Accident Radiation Dose (Rads)	5×10^6	1			
RAD ZONE: General Area						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1981.
 2. MEQ File 076-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 076-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-076	Maximum Temperature (degrees F)	120	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Butterfly Valves	Maximum Pressure (psig)	Slightly Negative	1	45	2 (Section 2.3)	None
MANUFACTURER: Henry Pratt	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: N-MKII	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	2×10^7	2 (Section 2.2)	None
LOCATION: SG 691'	401.5 Day Accident Radiation Dose (Rads)	2×10^7	1			
RAD ZONE: D						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 076-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 076-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-076	Maximum Temperature (degrees F)	369	1	At Least 369	2 (Section 2.1)	None
EQUIPMENT TYPE: Motor Operated Butterfly Valves	Maximum Pressure (psig)	45	1	153	2 (Section 2.3)	None
MANUFACTURER: Henry Pratt	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 1400	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	4×10^4	1	2×10^7	2 (Section 2.2)	Yes 2 (Section 2.2)
LOCATION: Reactor Containment	401.5 Day Accident Radiation Dose (Rads)	2×10^8	1			
RAD ZONE: Outside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 076-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 76A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-76A	Maximum Temperature (degrees F)	164	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Butterfly Valve	Maximum Pressure (psig)	1.45	1	153	2 (Section 2.3)	None
MANUFACTURER: Posi Seal International	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2144	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	2×10^7	2 (Section 2.2)	None
LOCATION: AB 730	401.5 Day Accident Radiation Dose (Rads)	1×10^7	1			
RAD ZONE: 76						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 76A-01, Rev. A.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 76A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-76A	Maximum Temperature (degrees F)	369	1	369	2 (Section 2.1)	None
EQUIPMENT TYPE: butterfly Valve	Maximum Pressure (psig)	45	1	45	2 (Section 2.3)	None
MANUFACTURER: Posi Seal International	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 2144, 2484	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	3 x 10 ⁸	2 (Section 2.2)	None
LOCATION: Reactor Containment	401.5 Day Accident Radiation Dose ((Rads)	2 x 10 ⁸	1			
RAD ZONE: Outside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 76A-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: J. A. Fanta Date: 7/6/84
 Checked by: J. J. Gray Date: 7/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 077-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-077	Maximum Temperature (degrees F)	120	1	1200	² (Section 2.1)	None
EQUIPMENT TYPE: Gate Valve	Maximum Pressure (psig)	Slightly Negative	1	150	² (Section 2.3)	None
MANUFACTURER: Walworth	Maximum Relative Humidity (%)	90	1	100	² (Section 2.4)	None
MODEL NO.: 16"-N5202WE	Containment Spray	N/A	1	N/A	² (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^{10}	² (Section 2.2)	None
LOCATION: SG 718'-6"	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: D						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 077-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Bzuba Date: 9/6/84
 Checked by: Kenneth D. Moody Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 82A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-82A	Maximum Temperature (degrees F)	204	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Gate Valve	Maximum Pressure (psig)	1.45	1	175	2 (Section 2.3)	None
MANUFACTURER: Anchor-Darling	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: Various	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.5×10^9	2 (Section 2.2)	None
LOCATION: Aux. Bldg. Safeguards Building	401.5 Day Accident Radiation Dose (Rads)	7×10^7 (see Note 1)	1			
RAD ZONE: SG Zone D						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 082A-01, Rev. 0.

- Notes: 1. Postulated accident radiation dose includes 5×10^7 rad recirculating fluid dose.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Sonia Hase Date: 10-16-84
 Checked by: [Signature] Date: 10-16-84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 091-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-091	Maximum Temperature (degrees F)	220	1	300	2 (Section 2.1)	None
EQUIPMENT TYPE: Plug Valve	Maximum Pressure (psig)	1.45	1	615	2 (Section 2.3)	None
MANUFACTURER: XOMOX (Atwood & Morrill)	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 1366 BW (XOMOX-7 Trim)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1 x 10 ⁶	1	7 x 10 ⁶	2 (Section 2.2)	Yes See Ref. 2 (Section 2.2)
LOCATION: Aux. Bldg. 710', 718'	401.5 Day Accident Radiation Dose (Rads)	9 x 10 ⁶	1			
RAD ZONE: 19, 72						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 091-01, Rev. 1.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 091-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-091	Maximum Temperature (degrees F)	120	1	300	2 (Section 2.1)	None
EQUIPMENT TYPE: Plug Valve	Maximum Pressure (psig)	Slightly Negative	1	275	2 (Section 2.3)	None
MANUFACTURER: XOMOX (Atwood-Morrill)	Maximum Relative Humidity (%)	90	1	100	2 (Section 2.4)	None
MODEL NO.: 166-SW (XOMOX-7 Trim)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	7×10^6	2 (Section 2.2)	None
LOCATION: SG 741	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: B						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 091-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 091-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-091	Maximum Temperature (degrees F)	369	1	225	2 (Section 2.1)	Yes See Ref. 2 (Section 2.1)
EQUIPMENT TYPE: Plug Valve	Maximum Pressure (psig)	45	1	275	2 (Section 2.3)	None
MANUFACTURER: XOMOX (Atwood-Morrill)	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 166-BW (UHMWP Trim)	Containment Spray	2000 ppm Boron; NaOH pH = 8.5 - 10.5	1	2000 ppm Boron; NaOH pH = 8.5 - 10.5	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	1 x 10 ⁸	2 (Section 2.2)	Yes See Ref. 2 (Section 2.2)
LOCATION: Containment	401.5 Day Accident Radiation Dose (Rads)	2 x 10 ⁸	1			
RAD ZONE: Outside Crane Wall						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 091-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 091-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BV-091	Maximum Temperature (degrees F)	180	1	225	2 (Section 2.1)	None
EQUIPMENT TYPE: Plug Valve	Maximum Pressure (psig)	1.47	1	275	2 (Section 2.3)	None
MANUFACTURER: XOMOX (Atwood-Morrill)	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 166-BW (UHMWP Trim)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^8	2 (Section 2.2)	None
LOCATION: RB 732	401.5 Day Accident Radiation Dose (Rads)	5×10^6	1			
RAD ZONE: Gen Area						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 091-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 092-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-092-01	Maximum Temperature (degrees F)	327	1	1200	2 (Section 2.1)	None
EQUIPMENT TYPE: Gate Valve	Maximum Pressure (psig)	2.07	1	1600	2 (Section 2.3)	None
MANUFACTURER: Borg-Warner	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 435XAB5-001	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^{10}	2 (Section 2.2)	None
LOCATION: MV776 RAD ZONE: Table IV	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 092-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: E. Zentner Date: 8-84

Checked by: Kenneth D. Morley Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 135-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-135	Maximum Temperature (degrees F)	120	1	176	2 (Section 2.1)	None
EQUIPMENT TYPE: Rotary Pump	Maximum Pressure (psig)	Slightly Negative	1	23	2 (Section 2.3)	None
MANUFACTURER: Crane-DeMing	Maximum Relative Humidity (%)	90	1	100	2 (Section 2.4)	None
MODEL NO.: 1549 Size 3HF	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1.0×10^3	1	4.4×10^6	2 (Section 2.2)	None
LOCATION: SG 718'-6"	401.5 Day Accident Radiation Dose (Rads)	1.0×10^6	1			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 135-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 157-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-157-01	Maximum Temperature (degrees F)	125	1	300	2 (Section 2.1)	None
EQUIPMENT TYPE: Damper	Maximum Pressure (psig)	.59	1	Greater than .59	2 (Section 2.3)	None
MANUFACTURER: AWV	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: DAA-P-3274	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	4×10^4	1	5×10^6	2 (Section 2.2)	None
LOCATION: AB 780	401.5 Day Accident Radiation Dose (Rads)	1.6×10^5	1			
RAD ZONE: 80						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 157-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 185-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-185	Maximum Temperature (degrees F)	125	1	160	2 (Section 2.1)	None
EQUIPMENT TYPE: Damper (Air Operated)	Maximum Pressure (psig)	.59	1	4.33	2 (Section 2.3)	None
MANUFACTURER: American Warming & Ventilation	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: DAAP 7402 (Damper) 14130-1 (Actuation)	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	2 (Section 2.2)	None
LOCATION: Auxiliary Building 773	401.5 Day Accident Radiation Dose (Rads)	2×10^3	1			
RAD ZONE: 79						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 185-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 185-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-185	Maximum Temperature (degrees F)	180	1	248	2 (Section 2.1)	None
EQUIPMENT TYPE: Damper	Maximum Pressure (psig)	1.47	1	4.33	2 (Section 2.3)	None
MANUFACTURER: American Warming & Ventilation	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: DAAP 7402	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
<u>LIMITING ENVIRONMENT</u>	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^7	2 (Section 2.2)	None
LOCATION: RB 728	401.5 Day Accident Radiation Dose (Rads)	5×10^6	1			
RAD ZONE: General Area						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 185-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 185-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-185	Maximum Temperature (degrees F)	230	1	248	2 (Section 2.1)	None
EQUIPMENT TYPE: Damper	Maximum Pressure (psig)	1.45	1	4.33	2 (Section 2.3)	None
MANUFACTURER: American Warming & Ventilation	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: DAAP 7402	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^7	2 (Section 2.2)	None
LOCATION: Auxiliary Building 748	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: 77						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 185-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 185-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-185	Maximum Temperature (degrees F)	327	1	248	2 (Section 2.1)	Yes 2 (Section 2.1)
EQUIPMENT TYPE: Damper	Maximum Pressure (psig)	1.45	1	4.33	2 (Section 2.3)	None
MANUFACTURER: American Warming & Ventilation	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: DAAP 7402	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^7	2 (Section 2.2)	None
LOCATION: Main Steam Valve House	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: Main Steam Valve House	Radiation Dose (Rads)					

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 185-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: J. D. Paule Date: 9/26/84
 Checked by: [Signature] Date: 9/26/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 208-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-208	Maximum Temperature (degrees F)	120	1	180	2 (Section 2.1)	None
EQUIPMENT TYPE: Pump	Maximum Pressure (psig)	Slightly Negative	1	4000	2 (Section 2.3)	None
MANUFACTURER: Bingham-Willamette	Maximum Relative Humidity (%)	90	1	100	2 (Section 2.4)	None
MODEL NO.: 6 stage turbine driven and 8 stage motor driven	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	4×10^6	2 (Section 2.2)	None
LOCATION: SG 718'	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 208-01, Rev. 0

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 209A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-209A	Maximum Temperature (degrees F)	130	1	300	2 (Section 2.1)	None
EQUIPMENT TYPE: Globe Valve	Maximum Pressure (psig)	1.45	1	150	2 (Section 2.3)	None
MANUFACTURER: Copes-Vulcan	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: D-100, 8"	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.0×10^7	2 (Section 2.2)	None
LOCATION: AB 737	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: 77						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 209A-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: Sandra Yezzi Date: 7/1/84
 Checked by: [Signature] Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 209A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-209A	Maximum Temperature (degrees F)	327	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: Globe Valve	Maximum Pressure (psig)	2.07	1	1110	2 (Section 2.3)	None
MANUFACTURER: Copes-Vulcan	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: D-100, 10"	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.5×10^9	2 (Section 2.2)	None
LOCATION: Main Steam Valve House	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: Main Steam Valve House						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 209A-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 211-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-211	Maximum Temperature (degrees F)	327	1	850	2 (Section 2.1)	None
EQUIPMENT TYPE: MSIV	Maximum Pressure (psig)	2.07	1	1100	2 (Section 2.3)	None
MANUFACTURER: EPG/Gulf and Western	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 24" Ball Valve	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1.5×10^9	2 (Section 2.2)	None
LOCATION: Main Steam Valve House	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: Main Steam Valve House						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 211-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: M. J. Jaska Date: 9-6-84
 Checked by: [Signature] Date: 9/6/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 225-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-225	Maximum Temperature (degrees F)	327	1	350	2 (Section 2.1)	None
EQUIPMENT TYPE: Safety Valve	Maximum Pressure (psig)	2.07	1	1075	2 (Section 2.3)	None
MANUFACTURER: Crosby	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: HA65FN	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	3.4×10^4	2 (Section 2.2)	None
LOCATION: Main Steam Valve House	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: Main Steam Valve House						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 225-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 653-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-653	Maximum Temperature (degrees F)	120	1	325	2 (Section 2.1)	None
EQUIPMENT TYPE: Recirculation Control Valve	Maximum Pressure (psig)	Slightly Negative	1	1380	2 (Section 2.3)	None
MANUFACTURER: Yarway	Maximum Relative Humidity (%)	90	1	90	2 (Section 2.4)	None
MODEL NO.: 5302	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	1×10^7	2 (Section 2.2)	None
LOCATION: SG 733'	401.5 Day Accident Radiation Dose (Rads)	7×10^6	1			
RAD ZONE: E						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-1:9, Revision 5, April 19, 1984.
 2. MEQ File 653-01, Rev. 0.

Duquesne Light Company
 Beaver Valley Power Station, Unit No. 2
 Impell Job No. 1290-005-1671

Prepared by: J. Z...

Date: 9-18-84

Checked by: [Signature]

Date: 9/18/84

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 657-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-657	Maximum Temperature (degrees F)	120	1	Not Sensitive	2 (Section 2.1)	None
EQUIPMENT TYPE: Safety And Relief Valve	Maximum Pressure (psig)	Slightly Negative	1	2200	2 (Section 2.3)	None
MANUFACTURER: Dresser	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 3-1914J-2	Containment Spray	N/A	1	N/A	2 (Section 2.5)	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	Not Sensitive	2 (Section 2.2)	None
LOCATION: SG 724'	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: F						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 657-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 666A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-666A	Maximum Temperature (degrees F)	130	1	180	2 (Section 2.1)	None
EQUIPMENT TYPE: Control Valve w/Airset	Maximum Pressure (psig)	1.15	1	15	2 (Section 2.3)	None
MANUFACTURER: Hammel Dahl Conoflow	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL Nos.: 77/3254/001, 003, 004 & FH60XT-KXG1 (Airset)	Containment Spray	N/A	N/A	N/A	N/A	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	5 x 10 ⁶	2 (Section 2.2)	None
LOCATION: AB759	401.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: 53, 78						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 666A-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 666A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-666A	Maximum Temperature (degrees F)	130	1	250	2 (Section 2.1)	None
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	1.45	1	15	2 (Section 2.3)	None
MANUFACTURER: Hammel Dahl Conoflow	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 77/3254/005	Containment Spray	N/A	N/A	N/A	N/A	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	3 x 10 ⁶	1	5 x 10 ⁶	2 (Section 2.2)	None
LOCATION: AB759	401.5 Day Accident Radiation Dose (Rads)	0	1			
RAD ZONE: 53						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 666A-01, Rev. 0.

MECHANICAL EQUIPMENT ENVIRONMENTAL QUALIFICATION WORKSHEET

MEQ File No. 666A-01

EQUIPMENT DESCRIPTION	ENVIRONMENTAL PARAMETER	POSTULATED ENVIRONMENT		QUALIFIED ENVIRONMENT		OUTSTANDING ITEMS
		VALUE	REFERENCE	VALUE	REFERENCE	
SPEC./P.O. NO.: 2BVS-666A	Maximum Temperature (degrees F)	130	1	175	2 (Section 2.1)	None
EQUIPMENT TYPE: Control Valve	Maximum Pressure (psig)	1.45	1	15	2 (Section 2.3)	None
MANUFACTURER: Hammel Dahl Conoflow	Maximum Relative Humidity (%)	100	1	100	2 (Section 2.4)	None
MODEL NO.: 77/3254/008 & 009	Containment Spray	N/A	N/A	N/A	N/A	None
LIMITING ENVIRONMENT	40-Year Normal Radiation Dose (Rads)	1×10^3	1	5×10^6	2 (Section 2.2)	None
LOCATION: AB762	401.5 Day Accident Radiation Dose (Rads)	1×10^6	1			
RAD ZONE: 78						

- References: 1. "Environmental Conditions for Equipment Qualification Requirements," 2BVM-119, Revision 5, April 19, 1984.
 2. MEQ File 666A-01, Rev. 0.