



## Duquesne Light

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May 14, 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  
Request for Information Concerning Seismic Equipment  
Qualification Program

Gentlemen:

Enclosed is a sample copy of Duquesne Light Company's preliminary seismic qualification report form which was requested by Mr. Arnold Lee of your organization. We are willing to discuss this with Mr. Lee and other members of your organization and will be contacting Mr. Lee in the near future to set up an agreeable date to do so.

If there are any questions, please contact Mr. C. Hill at (412) 787-5141.

DUQUESNE LIGHT COMPANY

By

E. J. Woolever

Vice President

CLH/wjs  
Attachment

cc: Mr. G. Walton, NRC Resident Inspector (w/attachment)  
Mr. M. Licitra, Project Manager (w/attachment)  
Mr. H. R. Denton, Director NRR (w/attachment)  
Mr. D. Eisenhut, Director Division of Licensing (w/attachment)  
Mr. T. Novak, Assistant Director Division of Licensing (w/attachment)  
Mr. M. Ley, NRC Project Manager (w/attachment)  
Mr. A. Lee, NRC Equipment Qualification Branch (w/attachment)

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CLH/wjs  
Attachment

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## INTRODUCTION

THE MASTER LISTING OF SEISMIC AND DYNAMIC QUALIFICATION SUMMARY AND STATUS OF SAFETY-RELATED EQUIPMENT (REPORT NO. SQT-001) INCLUDES ALL QA CATEGORY 1 EQUIPMENT FOR WHICH SEISMIC QUALIFICATION DOCUMENTATION MUST BE PROVIDED. EXCLUDED FROM THIS LISTING ARE:

(A) PIPE MOUNTED IN-LINE EQUIPMENT - FLEXHOSES, ORIFICE PLATES, VENTURIS, RTD THERMOWELLS, PIPING THIMBLES, PIPING EXPANSION JOINTS, MANUAL VALVES WITHOUT EXTENDED STRUCTURES (VALVES WITH EXTENDED STRUCTURES ARE INCLUDED)

(B) EQUIPMENT SUPPORTS - PIPING, TUBING AND INSTRUMENTATION SUPPORTS, PIPE RUPTURE RESTRAINTS

(C) ELECTRICAL CABLE, CABLETRAY SYSTEMS, CONDUIT SYSTEMS, PENETRATIONS (ELECTRICAL), JUNCTION BOXES.

THE DATA ITEMS CONTAINED IN THIS REPORT ARE DESCRIBED BELOW.

### EQUIPMENT ID:

IN GENERAL, THE EQUIPMENT ID CONSISTS OF THE UNIT NO. (2 FOR BEAVER VALLEY UNIT 2), SYSTEM CODE (THREE LETTERS) AN ASTERISK, FOLLOWED BY THE EQUIPMENT CODE (ONE TO FOUR LETTERS) AND A NUMERIC ID.

STANDARD SYSTEM AND EQUIPMENT CODES ARE DEFINED WITHIN THE LISTING. NON-STANDARD CODES ARE SHOWN IN ATTACHMENT A.

### EQUIPMENT:

DESCRIPTION: DESCRIPTION OF EQUIPMENT OR ITS SERVICE.

VENDOR: THE COMPANY ACCEPTING THE OVERALL RESPONSIBILITY FOR MEETING THE SPECIFICATION REQUIREMENTS.

VENDOR MODEL: MODEL NUMBER DEFINED BY THE VENDOR FOR THE PRIMARY EQUIPMENT.

MANUFACTURER: COMPANY RESPONSIBLE FOR SUPPLYING SECONDARY EQUIPMENT TO THE VENDOR.

MANUFACTURER MODEL: MODEL NUMBER DEFINED BY THE MANUFACTURER FOR THE SECONDARY EQUIPMENT.

PRELIMINARY

PRELIMINARY

QUAL. REPORT: STONE AND WEBSTER REFERENCE FILE NUMBER OR WESTINGHOUSE2  
REPORT NUMBER FOR THE SEISMIC QUALIFICATION DOCUMENT

SPEC: EQUIPMENT SPECIFICATION NUMBER ("2BVS-" PORTION IS DROPPED)

LOCATION:

BLDG: BUILDING IN WHICH EQUIPMENT IS LOCATED (SEE ATTACHMENT B FOR  
BUILDING CODES).

ELEV: ELEVATION IN FEET ABOVE MEAN SEA LEVEL (00000 IF NOT  
YET ASSIGNED)

MTG: MOUNTING CONDITION

CF FOR CONCRETE FLOOR MOUNTING  
CM FOR CONCRETE WALL MOUNTING  
DM FOR DIRECT MOUNTING (PIPE MOUNTED, DUCT MOUNTED ETC)  
HM FOR HANGER MOUNTING  
RM FOR RACK MOUNTING  
CM FOR CABINET MOUNTING  
EM FOR EQUIPMENT MOUNTING  
SM FOR SUPPORT MOUNTING (NSSS SUPPLIED EQUIPMENT)

LOADS:

SEIS: INDICATE IF SEISMIC LOADS ARE APPLICABLE. YES (Y) OR NO (N).

OTHER DYN: INDICATE IF OTHER DYNAMIC LOADS ARE APPLICABLE. YES (Y)  
OR NO (N).

REQ'D INPUT (ZPA): APPLICABLE G LEVEL FOR SSE; HORIZONTAL AND  
VERTICAL DIRECTIONS COMPARED, HIGHER VALUE SHOWN.  
FOR LINE MOUNTED EQUIPMENT IT IS 3G.

QUAL METH: (QUALIFICATION METHOD)

ANLYS: ANALYSIS 'S' FOR STATIC  
'D' FOR DYNAMIC  
'N' FOR NOT APPLICABLE

TEST FREQ. TEST FREQUENCY: 'SF' FOR SINGLE FREQUENCY  
'MF' FOR MULTIPLE FREQUENCY  
'NA' FOR NOT APPLICABLE

TEST DIR. TEST DIRECTION: 'SD' FOR SINGLE DIRECTION  
'MD' FOR MULTIPLE DIRECTION  
'NA' FOR NOT APPLICABLE

NAT FREQS: (LOWEST NATURAL FREQUENCY)

F/B FRONT TO BACK  
S/S SIDE TO SIDE  
VERT VERTICAL

F1 RIGID

NATURAL FREQUENCY GREATER THAN THE CUTOFF  
FREQUENCY FOR THE BUILDING

NATURAL FREQUENCY GREATER THAN 33 HZ (NSSS  
SUPPLIED EQUIPMENT)

F2 SEMIRIGID

PRELIMINARY

PRELIMINARY

ONE NATURAL FREQUENCY LESS THAN 33 HZ (NSSS  
SUPPLIED EQUIPMENT)

F3 FLEXIBLE

NATURAL FREQUENCIES LESS THAN THE CUTOFF  
FREQUENCY FOR THE BUILDING

NATURAL FREQUENCIES LESS THAN 33 HZ (NSSS  
SUPPLIED EQUIPMENT)

FOR TESTING THE AVAILABLE FREQUENCIES FROM TEST REPORTS ARE SHOWN  
FOR ANALYSIS THE CALCULATED FREQUENCY IS SHOWN UNDER F/B.  
'NAV' INDICATES NOT AVAILABLE

PRELIMINARY

STATUS:

SQ: SEISMIC QUALIFICATION STATUS

- A. THE QUALIFICATION AND ASSOCIATED DOCUMENTATION ARE COMPLETE
- B. THE QUALIFICATION TESTING IS FINISHED BUT THE ASSOCIATED  
DOCUMENTATION IS NOT YET SUBMITTED OR IS STILL IN REVIEW.
- C. THE QUALIFICATION PLAN/PROCEDURE IS DOCUMENTED, BUT  
TESTING HAS NOT YET BEGUN.
- D. EQUIPMENT TO BE QUALIFIED.
- E. EQUIPMENT IS JUDGED NOT QUALIFIABLE AND WILL BE REPLACED  
WITH QUALIFIED EQUIPMENT.

INS: INSTALLATION STATUS

- A. INSTALLATION IS COMPLETE. EQUIPMENT IS READY FOR SERVICE.
- B. EQUIPMENT MOUNTING/HOOKUP IS COMPLETED, BUT SIGNIFICANT  
PARTS OF THE EQUIPMENT ARE NOT YET INSTALLED.
- C. EQUIPMENT IS LOCATED AT ITS INTENDED SERVICE LOCATION,  
BUT MOUNTING AND/OR HOOKUP IS NOT COMPLETE.
- D. EQUIPMENT IS NOT INSTALLED AND IS NOT AVAILABLE FOR  
INSPECTION.

RRS REF: PAGE NUMBER FROM AMPLIFIED RESPONSE SPECTRA BOOK  
(PROVIDED SEPARATELY).

CODES: APPLICABLE CODES AND STANDARDS.

PRELIMINARY

## ATTACHMENT A

## NON STANDARD EQUIPMENT CODES

EQUIPMENT CODE	EQUIPMENT DESCRIPTION
*****	*****
BCMONA	BALL DETECTOR(NESTINGHOUSE)
CABL	CABLE(NESTINGHOUSE)
CSFN	CONTROL SWITCH TO FAN
CSBKR	CONTROL SWITCH TO BREAKER
CSHIX	CONTROL SWITCH TO MIXER
CSHOV	CONTROL SWITCH TO MOV
CSP	CONTROL SWITCH TO PUMP
CSTCV	CONTROL SWITCH TO TEMP.
CSHCC	CONTROL SWITCH TO MOTOR CONTROL CENTER
CSUH	CONTROL SWITCH TO UNIT HEATER
COOL	CLEANOUT OXYGEN LON(NESTINGHOUSE)
CSSTRM	CONTROL SWITCH STARTER MOTOR
CVV	CONDUCTIVITY VALVE
ESUP	HEAT EXCHANGER SUPPORT
ENP	HEAT EXCHANGER NIPPLE
ESSBS	ESSENTIAL BUS
EUH	ELECTRIC UNIT HEATER (SAME AS UHE)
FGST	FLOW GLASS SPEED TRANSMITTER
FTA	FLOW TRANSMITTER ALARM
IOD	ION EXCHANGER DIFFERENTIAL
ILMOV	INDICATING LIGHT TO MOV
IRT	CURRENT RECORDING TEMPERATURE
K	PRESSURE(MISCELLANEOUS)
LSS	LOW SELECTOR SWITCH
LPS	LIGHTING PANEL SWITCH/STARTER
LTHOV	LEVEL TRANSMITTER TO MOV
ORSP	OXYGEN RECORDER SEPARATOR(NESTINGHOUSE)
REL	RELAY
ROORSP	REST ORIFICE OXYGEN RECORDER SEPARATOR (NESTINGHOUSE)
SAFSW	SAFETY SWITCH
SNP	SUMP
SN	SNUBBER
SSEL	SELECTOR SWITCH TO ELEVATOR
SSFN	SELECTOR SWITCH TO FAN
SSCRN	SELECTOR SWITCH TO CRANE
ST'FN	STARTER TO FAN
STRM	STARTER TO MOTOR
STRP	STARTER TO PUMP
SHYC	SWITCHYARD
TRFN	POWER TRANSFORMER FAN
TRSHOV	TRANSFORMER TO MOV
VIL	VISCOSITY INDICATOR 'GHT
VI'BS	VITAL BUS SWITCH
VERTBD	VERTICAL BOARD - MAIN TROL BOARD
BENCHBD	BENCHBOARD - MAIN CONT BOARD
DCFLD	DIRECT CURRENT FLANGE ?
LSCC	LEVEL SWITCH CONDUCTIV CONTROLLER

PRELIMINARY

PRELIMINARY

LSCO  
STRBL  
SLTCAB  
CRLD  
RDOORCP  
VS-D  
HCC  
PNL  
  
XXX

LEVEL SWITCH CONTROLLER CLEANOUT  
STRAINER/STARTER BLENDER  
SWITCH LOW TO CABINET  
OXYGEN RECORDER(MESTINGHOUSE)  
RESTRICTION ORIFICE(MESTINGHOUSE)  
VISCOSITY SWITCH TO DOOR  
MOTOR CONTROL CENTER  
PANEL - EQUIP CODE AND/OR SYSTEM  
EX: PNL\*REL-250  
POWER FEEDER MISCELLANEOUS

PRELIMINARY

## ATTACHMENT B

## BUILDING CODES

DESCRIPTION	BUILDING
*****	
AUXILIARY BLDG	AB
CONTROL BLDG	CB
CONDENSATE POLISHING BLDG	CP
CABLE TUNNEL (UNDERGROUND)	CA
COOLING TOWER PIPE HOUSE	CT
CABLE VAULT	CV
COOLING TOWER	CHS
DECONTAMINATION BLDG	DC
DIESEL GENERATOR BLDG	DG
FUEL BLDG	FB
ALTERNATE INTAKE STRUC.	IS
PRIMARY INTAKE STRUC.	IT
MAIN TRANS AREA	MI
MAIN STEAM VALVE AREA	MV
PURGE DUCT	PD
PIPE TUNNEL AREA	PT
ROD CONTROL AREA	RB
REAC CONTAINMENT	RC
SERVICE BLDG	SB
SAFEGUARDS AREA	SG
TURBINE BLDG	TB
SSS TRANS AREA	ST
VALVE PIT	VP
WASTE HANDLING BLDG	WH
YARD AREA	YD
PIPE TUNNEL (YARD)	PC
WAREHOUSE (UNIT 1)	WHS
CABLE TUNNEL (AUXILIARY BLDG)	UT
ED	

PRELIMINARY

PRELIMINARY



DOCKET NO. 50-412

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

REPORT DATE 05/09/84

ENGINEER: STONE & WEBSTER  
NSSS SUPPLIER: WESTINGHOUSE

SYSTEM CHS - CHEMICAL & VOLUME CONTROL SYSTEM

[illegible]

PRELIMINARY

ILPORT NO. SQT-001

PLANT NAME BVPS-UNIT 2  
UTILITY DUQUESNE LIGHT CO.

DECKET NO. 50-412

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

REPORT DATE 05/09/84

ENGINEER: STONE & WEBSTER  
NASS SUPPLIER: WESTINGHOUSE

SYSTEM HVR - VENTILATION - REACTOR PLANT

EQUIPMENT ID	DESCRIPTION	VENDOR	VEND MODEL	MANUFACTURER	QUAL REPORT	SPEC	MANUFAC MODEL	BLDG ELEV	HTG	SEIS	OTHER	REQ'D	ANLYS	TEST	TEST	F/B	S/S	VERT	SQ	INS	STATUS

FN - FAN

2HVR*FN201A	RC AIR RECIRC FAN	JOY MANUFACTURE CO	66-30-1770/870	RELIANCE ELECTRIC	2610-100-150-048C	150	5008-UCZ "G" TYPE P	RC 00693	CF	Y	N	00.098	S	NA	NA	F1	NAV	NAV	A	A	
2HVR*FN201B	RC AIR RECIRC FAN	JOY MANUFACTURE CO	66-30-1770/870	RELIANCE ELECTRIC	2610-100-150-048C	150	5008-UCZ "G" TYPE P	RC 00693	CF	Y	N	00.098	S	NA	NA	F1	NAV	NAV	A	A	
2HVR*FN201C	RC AIR RECIRC FAN	JOY MANUFACTURE CO	66-30-1770/870	RELIANCE ELECTRIC	2610-100-150-048C	150	5008-UCZ "G" TYPE P	RC 00693	CF	Y	N	00.098	S	NA	NA	F1	NAV	NAV	C	D	
2HVR*FN206A	MAIN STM VLV AREA RECIRC FAN	JOY MANUFACTURE CO	36-24-1770	RELIANCE ELECTRIC	2610-100-150-093A	150	365T CZ TYPE P	MV 00774	CF	Y	N	00.340	S	NA	NA	F1	NAV	NAV	A	A	
2HVR*FN206B	MAIN STM VLV AREA RECIRC FAN	JOY MANUFACTURE CO	36-24-1770	RELIANCE ELECTRIC	2610-100-150-093A	150	365T CZ TYPE P	MV 00774	CF	Y	N	00.340	S	NA	NA	F1	NAV	NAV	A	A	

PRELIMINARY