

05-15-97 08:21:52

GPU NUCLEAR

B/A No. 128108

W/O No. 95-552A-52108

SEISMIC QUALIFICATION

No. SQ - T1 - EG - T - 0001B - 2

REVISION 0

COMPONENT: EG - T - 0001B - 2

SUBCOMPONENT(S): _____

Sheet 1 of 4

SMY
12/12/95 ADDED SHEET A1 of 4

EVALUATED BY: *RH Ltc.*

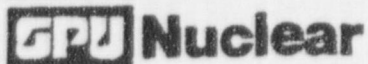
DATE *17 Sep 93*

EVALUATED BY: *JWL*

DATE *9-17-93*

9706040096 970528
PDR ADOCK 05000289
P PDR

all



DOCUMENT NO.
SQ-T1-EG-T-0001B-2

TITLE
EDG IS 412 START 2 RESERVOIR TANK

REV	SUMMARY OF CHANGE	APPROVAL	DATE
0	<p>9/17/93 COMPLETION DATE OF ORIGINAL SQ-PACKAGE</p> <p>7/14/95 REVISED SQ-PACKAGE TO REFLECT NEW DIESEL GENERATOR RESPONSE SPECTRA (SEE EQE CALC# 42105-C-004, FIG 2) ADDED ATTACHMENT A (2 SHEETS)</p>	<p><i>RASVOJELI</i> RASVOJELI</p> <p><i>S.M. Lazovclak</i> S.M. Lazovclak</p> <p><i>[Signature]</i></p>	<p>7/14/95</p> <p>12/12/95</p> <p>4/2/96</p>



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SQUG DATA FILE INDEX

COMPONENT TAG NUMBER EG-T-0001B2

DESCRIPTION EDG 1B AIR START 2 RESERVOIR

DOCUMENTS

NUMBERS/STATUS

- SEWS _____ ✓
- GMS-2 (TECHNICAL FUNCTIONS DATA SURVEY) _____ ✓
- PHYSICAL DRAWING/ASSEMBLY DRAWING PT-8027 X (A026E) ✓
- VENDOR CATALOG/DATA/INSTRUCTION MANUAL _____
- INSTALLATION SPECIFICATION _____
- SEISMIC ANALYSIS/TEST REPORTS/CALCS _____
- CONCRETE OR PAD DRAWINGS, SPECS, BLOCK WALLS _____
- EMBEDDED STEEL DRAWINGS _____
- ANCHORAGE DRAWING/DETAILS/AIDS 421-401 ✓
- FIELD CHANGE DOCS./MNCR'S _____

OTHER IF-157-02-001

RL 4/22/95
signature

GENERIC ISSUES

- ___ POTENTIAL OUTLIER
- ___ BASE PLATE PLUG WELDS
- ___ OTHERS

DISPOSITION

- ___ NEED MORE DATA
- ___ KNOWN OUTLIER
- ___ SEISMIC DATA ACCEPTABLE, CONFIRMATION WALKDOWN ONLY

ANCHORAGE CALCULATIONS: ___ EXIST ___ PERFORM IN FIELD

COMMENTS VERIFY ANCHORAGE PAD DETAILS HAVE NOT BEEN FOUND. PAD MAY NOT BE REINFORCED OR ATTACHED TO CONCRETE.

READY FOR SQUG WALKDOWN

Alander
Seismic Capacity Engineer (SCE)

SCREENING EVALUATION WORK SHEET (SEWS)

Equip. ID No. EG-T-0001B-2 Equip. Class 21 - Tanks and Heat Exchangers

Equipment Description EDG 1B AIR START 2 RESERVOIR TANK

Location: Bldg. DG Floor El. 305 Room, Row/Col "B" DG BLDG NR DIESEL

Manufacturer, Model, Etc. (optional) MORRISON BROS. CO.

SHELL CAPACITY VS DEMAND

Buckling capacity of shell of large, flat-bottom, vertical tank is equal to or greater than demand:

Y N U (N/A)

ANCHOR BOLTS AND EMBEDMENT

Capacity of anchor bolts and their embedments is equal to or greater than demand:

R4774.95
(Y) (N) U N/A COMMENT 1

CONNECTION BETWEEN ANCHOR BOLTS AND SHELL

Capacity of connections between the anchor bolts and the tank shell is equal to or greater than the demand:

(Y) N U N/A

FLEXIBILITY OF ATTACHED PIPING

Attached piping has adequate flexibility to accommodate motion of large, flat-bottom, vertical tank:

*(Y) N U N/A COMMENT 2

TANK FOUNDATION

Ring-type foundation is not used to support large, flat-bottom, vertical tank:

Y N U (N/A)

IS EQUIPMENT SEISMICALLY ADEQUATE?

R4774.95
(Y) (N) U

Equip. ID No. EG-T-0001B-2 Equip. Class 21 - Tanks and Heat Exchangers

Equipment Description EDG 1B AIR START 2 RESERVOIR TANK

COMMENTS

1. TANK AND ITS SUPPORTING SKIRT FORM A RIGID ASSEMBLY WHICH ~~STAYS UPRIGHT~~
~~THE LOW ACCELERATIONS THIS IT IS. THE LOW ACCELERATIONS ALSO FORM THE BASIS~~
~~FOR ACCEPTING THE CONCRETE FOUNDATION AND THE LOW FORCES ON THE TANK THROUGHOUT~~
 BOLTS. SEE CALC EG-T-0001A-1 SEW. TANK UNSTABLE UNDER NEW ACCL. SEE EDGE
 CALC # 42105-C-004. OUTWER RAS 7/14/95 10/9/95
2. TANK IS NOT FLAT-BOTTOMED. ATTACHED PIPING IS JUDGED TO HAVE SUFFICIENT FLEXIBILITY
 TO ACCOMMODATE TANK MOVEMENTS.
3. ALL FOUR BOLTS MET GW TORQUE TEST REQD.

PHOTO: 15 SEPT '93 'B' AS, 10

Evaluated by: RA Little
JW

Date: 17 Sept 93
9-17-93

Exhibit 5-1

OUTLIER SEISMIC VERIFICATION SHEET (OSVS)

1. OUTLIER IDENTIFICATION, DESCRIPTION, AND LOCATION

Equipment ID Number EG-T-0001B-2 Equipment Class 21
 Equipment Location: Building 06 Floor Elevation 305
 Room or Row/Column — Base Elevation 305
 Equipment Description EDG 1B AIR START 2 RESERVOIR TANK

2. OUTLIER ISSUE DEFINITION

a. Identify all the screening guidelines which are not met.
(Check more than one if several guidelines could not be satisfied.)

<u>Mechanical and Electrical Equipment</u>		<u>Tanks and Heat Exchangers</u>	
Capacity vs. Demand	___	Shell Buckling ¹	___
Caveats	___	Anchor Bolts and Embedment	___
Anchorage	<u>Y</u>	Anchorage Connections	___
Seismic Interaction	___	Flexibility of Attached Piping ¹	___
Other	___	Other	___
		<u>Cable and Conduit Raceways</u>	
<u>Essential Relays</u>		Inclusion Rules	___
Capacity vs. Demand	___	Other Seismic Performance Concerns	___
Mounting, Type, Location	___	Limited Analytical Review	___
Other	___	Other	___

¹ Shell buckling and flexibility of attached piping only apply to large, flat-bottom, vertical tanks.

b. Describe all the reasons for the outlier (i.e., if all the listed outlier issues were resolved, then the signatories would consider this item of equipment to be verified for seismic adequacy):

TANK HAS INSUFFICIENT FS AGAINST OVERTURNING OR SLIDING
SINCE CONCRETE FOUNDATION PAD IS NOT INTEGRAL WITH FLOOR.

Exhibit 5-1 (Cont'd)

OUTLIER SEISMIC VERIFICATION SHEET (OSVS)

Equipment ID Number EG-T-0001B-2

3. PROPOSED METHOD OF OUTLIER RESOLUTION (OPTIONAL)

a. Define proposed method(s) for resolving outlier.

1. PROVIDE UPPER SUPPORT AT HORIZONTAL BAND AROUND TAPE.

b. Provide information needed to implement proposed method(s) for resolving outlier (e.g., estimate of fundamental frequency).

No 1 - Outlier resolved per Attachment B & C
of SQ-T1-EG-0001A-1 S. Lazorchak 12/12/95

4. CERTIFICATION:

The information on this OSVS is, to the best of our knowledge and belief, correct and accurate, and resolution of the outlier issues listed on the previous page will satisfy the requirements for this item of equipment to be verified for seismic adequacy:

Approved by: (For Equipment Classes #0 - #22, all the Seismic Capability Engineers on the Seismic Review Team (SRT) should sign; there should be at least two on the SRT. One signatory should be a licensed professional engineer. For Relays, the Lead Relay Reviewer should sign.)

RA SVOTELIS

Print or Type Name
Stephen M. Lazorchak

Print or Type Name

RA S. Lazorchak

Signature
S. M. Lazorchak

Signature

7.14.95

Date
12/12/95

Date

Print or Type Name

Signature

Date