

QA CONDITION 1

IMPELL CORP.

FOR
DUKE POWER COMPANY
ENGINEERING DEPARTMENT, MECHANICAL SECTION
VERIFICATION OF DESIGN CALCULATIONS

DOCUMENT
CONTROL DATE

DEC 2 1983

DUKE POWER COMPANY
DESIGN ENGINEERING

Station and Unit Number	Catwba Nuclear Station, Units 1 and 2
Title of Calculation	ITT Grinnell Seismic Qualification Documents
Revision Number and Date	including the below specified reports.*
Equipment Identification	4"-150# Active Diaphragm Valve with 14 NAT1 Rotork, Safety Class 2, Duke Item 5B-473, MPSC P.O. E-66449-11
Reference: Duke File No.	CN-1205.04
EDS Number	0093-210-476.2

I certify that the above calculation has been reviewed as described, and is in accordance with the design criteria established by Duke Power Company Specification CNS-1205.04-00-001, through Addendum 3, dated March 11, 1980.

Reviewed by:

[Signature]
Impell Corp.

Date 10/14/83

Based on the above independent review of a certified stress report, this document verifies Duke Power Company Design Analysis requirements, and is hereby approved.

By

[Signature]

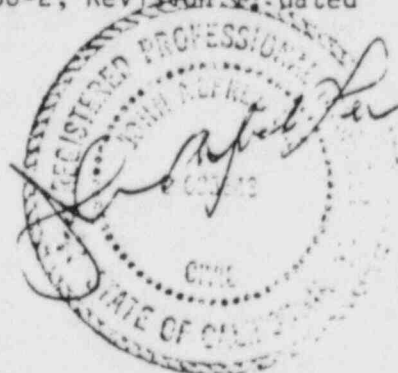
Date 10/20/83

CNM 1205.04-0445

- * - Seismic Calculations No. W-156, Appendix B, Revision 1, dated September 1983
- Static Deflection Test Results Report No. W-156-A, dated September, 1980
- Impell Seismic Qualification Analysis No. 136-2, Revision 1, dated October 10, 1983



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PDR ADOCK 05000413
PDR



IMPELL CORPORATION

ACCEPTABLE
UNACCEPTABLE

Name of Equipment
Classification
Description
Location
Number Required
Name of Vendor

2. FORMAT AND PRESENTATION

- Title of Report
- Name of Person Performing Calculations
- Name of Person Checking Calculations
- Index of Report Contents
- References:
 - Drawings and Sketches
 - Data
 - Applicable Sections of Codes
 - Computer Programs
 - Formulae
 - Others
- Vendor Certification
- Statement of Assumptions
- Statement of Limitations
- Presentation of Results:
 - Tabulation of Stresses
 - Tabulation of Displacements
 - Comparison with Allowables
 - Equipment Anchorage/Support
- Presentation of Conclusions
- Description of Modeling
- Description of Equipment Operation & Performance

3. APPLICABLE DESIGN CRITERIA

FSAR/PSAR

ASME Section III

General Design Specification

Individual Equipment Specification

Other: Specification CNS-1205.04-00-0001, Add. 3
3/11/80

YES
NO

A
N/A

X	
X	

X	
X	

4. ANALYTICAL PROCEDURE

Manual Calculations

Computer Calculations

Test Results Report No. W-156-A, Sept. 1980

Other: Static Deflection Test Procedure No 2344
REV. 2, 2/25/80

X	
X	
X	
X	

X	
X	
X	
X	

5. LOADS CONSIDERED

Self-Weight

Thermal

Pressure

Seismic OBE

Seismic DBE

Rupture

External/Mechanical

Other: As per specification

X	
X	
X	
X	
X	
X	

X	
X	
X	
X	
X	
X	

6. LOAD COMBINATIONS

Normal

Upset

Emergency

Faulted

Other: As per specification

X	

X	

7. SUMMARY OF REVIEW

The seismic qualification documents submitted by ITT-Grinnell Corp. are acceptable with the additional analysis of Impell Calc. No. 136-1, Rev. 1, regarding theyfundamental frequency of 20.12 Hertz and the structural adequacy of the replaced SA 193, GR B7, pillars. The change of the pillar steel is indicated on Duke letter dated September 28, 1983.

8. CONCLUSIONS

Acceptable as Presented

Acceptable with Additions - Imep11 Calc. 136-1

Not Acceptable

X	