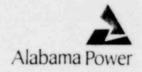
Alabama Power Company 600 North 18th Street Post Office Box 2641 Birmingham, Alabama 35291 Telephone 205 323-5341

F. L. CLAYTON, JR. Senior Vice President



the southern electric system

June 30, 1980

Docket No. 50-364

Director of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Attention: Mr. A. Schwencer

JOSEPH M. FARLEY NUCLEAR PLANT - UNIT 2 SEISMIC QUALIFICATION REVIEW

Gentlemen:

Enclosed is the detailed qualification summary information for each of the non-NSSS mechanical and electrical equipment items selected by the Seismic Qualification Review Team for further evaluation.

Should you have any questions, please advise.

Yours very truly,

2 & Clauton , F. L. Clayton, Jr.

CLB/rt

Enclosure

cc: Mr. R. A. Thomas

Mr. G. F. Trowbridge

Mr. L. Kintner (w/enclosure)

Mr. W. Bradford

895, 11

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

I. Plant h	Name: J. M. Farley Unit 2
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compor	nent Name REACTOR CONTAINMENT AIR COOLER UNITS
1	. Scope: [] NSSS [X] 80P
2	2. Model Number: NA Quantity: 4
	3. Vendor: American Air Filter
	If the component is a cabinet or panel, name and model No. of the devices included:
	5. Physical Description a. Appearance Air Cooler Unit
	b. Dimensions 11'-5" x 11'-5"
	c. Weight 27,820#
	5. Location: Building: Containment
	Elevation: 155'
	7. Field Mounting Conditions [x] Bolt (No, Size) [] Weld (Length)
	3. Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical
	S/S: NA F/B: Y:
•	and following a LOCA Containment during normal operation
	b. Is the equipment required for [] Hot Standby [] Cold Shutdow [X] Both
10	D. Pertinent Reference Design Specifications: SS-1102-14

		[[[[[[[[[[[[[[[[[[
III. Is E	Equipment Available for Insp	ection in the Plant: [X] Yes [] No
IV. Equip	ment Oualification Method:	Test:
		Analysis: X
		Combination of Test and Analysis:
	Test and/or Analy	sis by American Air Filter / EP 495 (name of Company or Laboratory & Report No.)
V. Vibrat	ion Input:	
1. L	pads considered: 1.[X]Seism	nic only 2.[]Hydrodyr mic only 3.[]Explosive only
	.[]Other (Specify)	
		tach the graphs): FNP Seismic spectra- See SS-1102-14
		Direction: See FNP Rusponse Spectra
		=V =
1. (2. (3.)	Single Axis	[] Multi-Frequency: [] sine beat [] Multi-Frequency: [] Sine beat [] Multi-Frequency: [] Sine beat [] Sine
5. 1		ti-Frequency Test [] Yes (Attach TRS & RRS graph:
	Laboratory Mounting:	
	1. [] Bolt (No, Si	ize) [] Weld (Length) []
		fied: [] Yes [] No [] Not Applicable
		fications made:
10. 0	Other tests performed (such	as fragility test, including results):

-	plete:
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[X] Dynamic Analysis: [] Time-History - [X] Response Spectrum
3.	Model Type: [X] 3D [] 2D [] 1D
	[] Finite Element [X] Beam [] Closed Form Soluti
4.	[X] Computer Codes: STRESST, DYSTRESS, DYNAL
	Frequency Range and No. of modes considered: 35cps; 18 modes
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [x] SRSS []Other:_
6.	Damping: NA Basis for the damping used: (specify)
	Support Considerations in the model: NONE
8.	Critical Structural Elements:
	Governing Load
4	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

B. Max. Defle ion Location

Effect Upon Functional Operability

1.	Plant Name	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II.	Componen	Name REACTOR CAVITY HYDROGEN DILUTION FANS
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: NA Quantity: 2
	3.	Vendor: Joy Manf.
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Fan b. Dimensions 25'L x 13.5"R
		c. Weight Fan 385 lbs. Motor 130 lbs./Steel Inlet Bell & Screen 15 lb
	6.	Location: Building: Containment
		Elevation: 129'
	7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) S/S: NA F/B: V:
	9.	a. Functional Description: Dilution of Hydrogen in Reactor Cavity
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
	10.	Pertinent Reference Design Specifications: SS-1102-106

III. Is	Equipment Available for Insp	ection in the Plant: [] Yes	[] No
IV. Equ	ipment Oualification Method:	Test:	
		Analysis: X	
		Combination of Test and Analysis:	
	Test and/or Analy	sis by Joy-Manf. Company (name of Company or Laborato	ory & Report No.)
V. Vibr	ation Input:		
1.	Loads considered: 1.[X]Seism	ic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify)	5.[]Combination of	
2.	Required Response Spectra (at	tach the graphs): FNP Seismic Ana	lysis-
3.	Required Acceleration in Each	Direction: See FNP Response Spect	ra
	S/S =F/B	=V =	
1. 2. 3.	[] Single Axis No. of Qualification Tests:	[] Multi-Frequency: [] rando [] Multi-Axis OBE SSE Other	beat specify)
	Frequency Range:		
		ti-Frequency Test [] Yes (Attach	
		S = F/B =	_
	Laboratory Mounting:		
		ze) [] Weld (Length)	
		ied: [] Yes [] No [] Not Ap	
9.	lest Results including modi	ications made:	
10.	Other tests performed (such	as fragility test, including resu	lts):

	plete:					
1.	Description of Test includi	ng Results:_				
2.	Method of Analysis:					
	[X] Static Analysis []E	quivalent St	atic Analy	sis		
	[] Dynamic Analysis: [] T	ime-History esponse Spec	trum			
3.	Model Type: [x] 3D	[] 2	D	[]10		
	[] Finite Ele	ment [X] B	eam	[] [1	osed Form Sol	ution
4.	[] Computer Codes:					
	Frequency Range and No. of	modes conside	ered:			
	[X] Hand Calculations					
5.	Method of Combining Dynamic	Responses:	[] Absol	ute Sum	[] SRSS	
6.	Damping:Basis	for the dam	ing used:	(specify)	
	Support Considerations in t					
	Critical Structural Element					
		overning Load				
Α.	0	r Response ombination	Seismic Stress	Total Stress	Stress Allowable	
	Shaft			3064psi		
3.	Max. Deflection Location	1	Eff		Functional bility	

1.	Plant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR .
II.	Componen	t Name EMERGENCY AIR COMPRESSOR
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 10T3NLE10 Quantity: 2
	3.	Vendor: Ingersoll-Rand Company
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Type 30 Air Compressor b. Dimensions 70'L x 66'H 26"W c. Weight 1,500#
	6.	Location: Building: Auxiliary Elevation: 100'
	7.	Field Mounting Conditions [X] Bolt (No. 8 , Size5/8") [] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) S/S: NA F/B: Y:
	9.	a. Functional Description: Redundancy to Main Air Compressor
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [] Both Possible use after steam line break
	10.	Pertinent Reference Design Specifications: SS-1102-136

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test: X.
Analysis:
Combination of Test and Analysis:
Test and/or Analysis by Wyle Laboratories 42746-1 (name of Company or Laboratory & Report No.
Y. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive on
· 4.[]Other (Specify) 5.[]Combination of
FNP Seismic Response Spectrum- 2. Required Response Spectra (attach the graphs) See SS-1102-136
3. Required Acceleration in Each Direction: See FNP Response Spectra
S/S = F/B = V =
VI. If Qualification by Test, then Complete: 1. [] Single Frequency [X] Multi-Frequency: [] sine beat 2. [] Single Axis [X] Multi-Axis 3. No. of Qualification Tests: OBE 4 SSE 1 Other 4. Frequency Range: 1 Hz - 40 Hz
5. TRS enveloping RRS using Multi-Frequency Test [x] Yes (Attach TRS & RRS grap
6. Input g-level Test at S/S = NA F/B = V =
.7. Laboratory Mounting:
1. [X] Bolt (No. 8 , Size 5/8") [] Weld (Length) []
8. Functional operability verified: [X] Yes [] No [] Not Applicable
9. Test Results including modifications made:
10. Other tests performed (such as fragility test, including results):

	Description of Test including Results:
	best iperon of fest including Results.
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping: Basis for the damping used:
7.	Support Considerations in the model:
3.	Critical Structural Elements:
	Governing Load
A.	Or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

Page No. 7 Report No. 42741-1

FULL SCALE SHOCK SPECTRUM (g Pcak) 42746 J/N_ 1.0 0 10 図 100 🗆 . 1000 🗅 6-8-74 Date _ DAMPING 1/2% 100 200 FIGURE 1 1000 Frequency (Hz) CUSTOMER Ingersoll-Rand AXIS __ Vertical and Lateral

LOCATION NO. __ VCA

TEST RUN NO. _

SPECIMEN____

5/N_

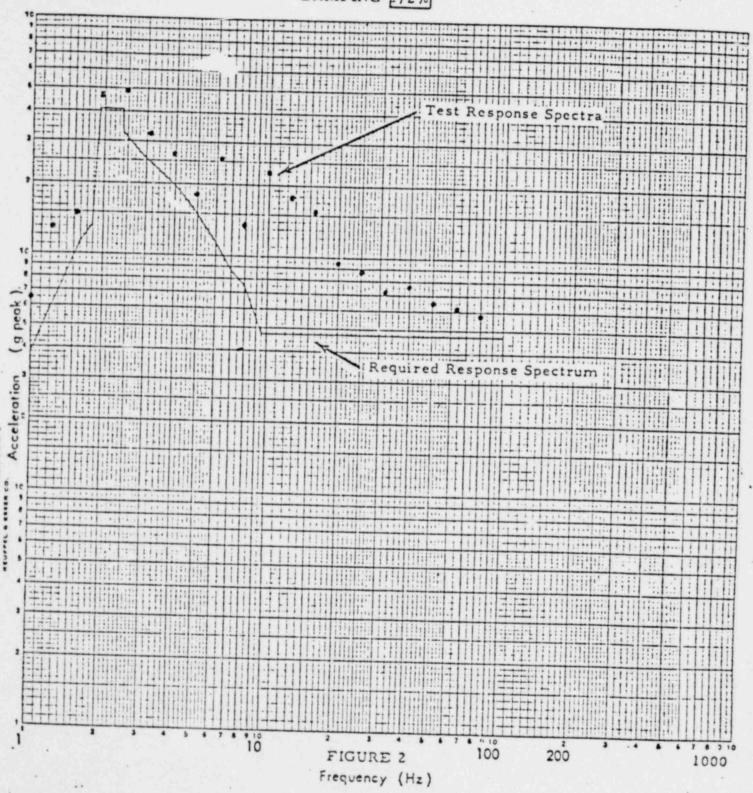
Page No. 8 Report No. 42746-1

FULL SCALE SHOCK SPECTRUM (g Peak) 1.0口 10 図 100 🗆 1000 🗆

42746 Page _

DAMPING 1/2%

Date __ 6-8-74



CUSTOMER Ingersoll-Rand SPECIMEN_

5/N_

AXIS Vertical and Lateral LOCATION NO. HCA TEST RUN NO. ____

Page No. 9 Report No. 427-11.-1 FULL SCALE SHOCK SPECTRUM (g Peak) 42746 J/N. Page -10 区 1.00 100 🗆 1000 🗆 Date _ DAMPING 1/2% 100 200 1000 FIGURE 3 Frequency (Hz) CUSTOMER Ingersoll-Rand AXIS Longitudinal/Vertical SPECIMEN_ LOCATION NO. _ VCA

TEST RUN NO. _

5/N_

Page No. 10 Report No. 42746-1 FULL SCALE SHOCK SPECTRUM (g Peak) 42746 Page . 1.0 0 10 区 100 E 1000 6-8-74 Date. DAMPING L. Test Response Spectra . 10 200 100 1000 FIGURE 4 Frequency (Hz)

AXIS Longitudinal/Vertical

HCA

LOCATION NO ..

CUSTOMER Ingersoll-Rand

SPECIMEN_

Accel

lant Name	e: J.M. Farley Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
Componen	t Name COMPONENT COOLING WATER HEAT EXCHANGER
1.	Scope: [] NSSS [x] BOP
2.	Model Number: NA Quantity: 3
3.	Vendor: Struthers Wells Corporation
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Desc.iption a. Appearance Tubular Heat Exchanger
	b. Dimensions 52"I.D. x 29'-0" Long
	c. Weight 53,000 lbs dry 84,250 Flooded
6.	Location: Building: Auxiliary
	Elevation: 100'
7.	Field Mounting Conditions [X] Bolt (No. 4 , Size 1") [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/S: 25.9 Hz F/B: Y:
9.	a. Functional Description:
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications: SS-1302-11
	1. 1. 2. Component 1. 2. 3. 4. 5. 6. 7. 8. 9.

III. Is	s Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Ear	uipment Oualification Method: Test:
	Analysis: X
	Combination of Fest and Analysis:
	Test and/or Analysis by Struthers Wells Corporation (name of Company or Laboratory & Report No.)
V. Vib	ration Input:
1.	Loads considered: 1.[x]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
2.	Required Response Spectra (attach the graphs): See FNP Response Spectra
3.	Required Acceleration in Each Direction: See FNP Response Spectra
	S/S =
1. 2. 3.	Qualification by Test, then Complete: [] Single Frequency
5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
5.	Input g-level Test at S/S = [] No F/B = V =
. 7.	Laboratory Mounting:
	1. [] Bolt (No, Size) [] Weld (Length) []
8.	Functional operability verified: [] Yes [] No [] Not Applicable
9.	Tes Results including modifications made:
10.	Other tests performed (such as fragility test, including results):

	Description of Test including Results:
2.	Method of Analysis:
	[X] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History - [] Response Spectrum
3.	Mode' Type: [X] 3D [] 2D [] 1D
	[] Finite Element [X] Beam [] Closed Form Solution
4.	[X] Computer Codes: TUSUP
	Frequency Range and No. of modes considered:
	[X] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
5.	/
	Damping:Basis for the damping used:
7.	/
7.	Damping: Basis for the damping used:
7.	Damping:Basis for the damping used:
7.	Damping: Basis for the damping used:
7.	Damping: Basis for the damping used:
7.	Damping: Basis for the damping used:

	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
omponer	nt Name SUMP PUMP
1.	Scope: [] NSSS [X] BOP
2.	Model Number: GVBS-3K Quantity: 9
3.	Vendor: Crane Chempump
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Sump Pump
	b. Dimensions 12'-1/8" x 10'-3/4" (Varies)
	c. Weight 102.8# (Varies)
6.	Location: Building: Auxiliary & Containment
	Elevation: Varies with loca 'on
7.	Field Mounting Conditions [X] Bolt (No, Size) Varies [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical
	S/S: NA F/B: V:
9.	a. Functional Description: To pump water out of a sump.
	b. Is the equipment required for [] Hot Standby [] Cold Shutdon
	[X] Both Leak Detection .

III. Is Equipment Available for Inspection in the Flant: [X] Yes [No
IV. Eouipment Qualification Method: Test:
Analysis: X
Combination of Test and Analysis: NA
Test and/or Analysis by Chempump A-18219 (name of Company or Laboratory & Report No.)
V. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
- 4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): FNP Response Spectra- See SS-1302-12
3. Required Acceleration in Each Direction: See FNP Response Spectra
S/S = F/B = ; V =
VI. If Qualification by Test, then Complete:
1. [] Single Frequency [] Multi-Frequency: [] sine beat
2. [] Single Axis [] Multi-Axis
3. No. of Qualification Tests: OBE SSE Other
4. Frequency Range:(specify)
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
6. Input g-level Test at S/S = F/B = V =
. 7. Laboratory Mounting:
1. [] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified: [] Yes [] No [] Not Applicable
9. Test Results including modifications made:
10. Other tests performed (such as fragility test, including results):

Con	mplete:						
1.	Description	of Test incl	uding Re	sults:_			
2.	Method of Ar						
		Analysis [sis	
	[] Dynamic	Analysis: [Time-H Respons				
3.	Model Type:	E] 3D		[]20		[x] 10	
		[] Finite 8	lement	[X] Be	am	[] []	osed Form Solut
4.	[] Computer	Codes:					
	Frequency Ra	inge and No.	of modes	conside	red:		
	[X] Hand Cal	culations					
5.	Method of Co	ombining Dynam	nic Respo	onses:	[] Absol		
6.	Damping:	Bas	is for t	he damp	ing used:	(specify	')
7.	Support Cons	iderations in	the mod	del:	Support	Pipe	
8.	Critical Str	ructural Eleme	ents:				
	Tdaa*!#!*!	on Location	Governi or Res; Combina		Seismic Stress	Total Stress	Stress Allowable
Α.	Identificati	OH LOCALION	COMBINE				
۹.	Support Pipe Weld - S.Pip		COMPTHE			2,495	18,800 .250min
A.	Support Pipe		COMPTHE			2,495	18,800
A.	Support Pipe Weld - S.Pip Pump Cover		COMPTHE			2,495 .096 1,965	18,800 .250min ±18,800
в.	Support Pipe Weld - S.Pip Pump Cover	e pe to Cover			Eff	2,495 .096 1,965 1,765	18,800 .250min ±18,800

I. <u>P1</u>	ant Nam	e: J. M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel PWR
II. c	omponen	t Name BORIC ACID TANKS
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: NA Quantity: 2
	3.	Vendor: Mitternight Boiler Works, Inc.
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Vessel Cylindrical b. Dimensions 25'H x 12'-9"Ø
		c. Weight 13,670#
	6	Location: Building: Auxiliary
		Elevation: 100'
	7,	Field Mounting Conditions [X] Bolt (No. 8 , Sizel.5"0) [] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: 50 Hz F/B: V:
	9.	a. Functional Description: Containment of Boric Acid
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
	10.	Pertinent Reference Design Specifications: SS-1102-30

•

111.	Is	Equipment Available for Ins	pection in	the Plant: [X] Yes [:	No No
TV.	Eau	ipment Qualification Method:	Test: _			
			Analysis:	X		
			Combinati	ion of Test ar	nd Analysis: _	
		Test and/or Anal	ysis by UI (nam	RS/John A. Blu me of Company	or Laboratory &	Report No.)
٧.	Vibr	ration Input:				
	1.	Loads considered: 1.[X]Seis	mic only 2.	[]Hydrodynas	mic only 3.[]E	xplosive only
		4.[]Other (Specify)	5.[]Cor	mbination of_		
	2.	Required Response Spectra (a	ttach the	graphs): FNP S	eismic Spectra- S-1102-30	
		Required Acceleration in Eac				
		S/S = F/B			V =	
VI.	1. 2. 3.	Qualification by Test, then [] Single Frequency [] Single Axis No. of Qualification Tests: Frequency Range:	[] Mu	SSE		
					Yes (Attach TRS	& RRS graphs
	5.	TRS enveloping RRS using Mu Input g-level Test at	/5 =	[] ! F/B	No :	V =
		Laboratory Mounting:				
		1. [] Bolt (No,	ize)	[] Weld (Le	ngth) []	
	8.	Functional operability veri				
	9.	Test Results including mod	fications	made:		
	10.	Other tests performed (such	as fragil	ity test, inc	luding results)	:

1.	Description of Test including Re	sults:	
2.	Method of Analysis:		
	[] Static Analysis [] Equiva	lent Static Ana	lysis
	[X] Dynamic Analysis: [X] Time-H	istory se Spectrum	
3.	Model Type: [] 3D	[] 20	[x] 10
	[] Finite Element	r 7 p	[] Closed Form Solution
	E J Finite Element	L 1 beam	
4.	[] Computer Codes:	[] Beam	{X} Mass Point
4.			{X} Mass Point
4.	[] Computer Codes:		{X} Mass Point
	[] Computer Codes:	considered: N	{X} Mass Point A olute Sum [] SRSS
5.	[] Computer Codes: Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Resp	considered: Nother	{X} Mass Point A olute Sum [] SRSS r: (specify)
5.	[] Computer Codes: Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Respondence of Combining D	considered: Nother Conses: [X] Absorb []Other the damping used	{X} Mass Point A olute Sum [] SRSS r: (specify) d:
s. 6.	[] Computer Codes: Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Resp Damping: NA Basis for Support Considerations in the mo	considered: Notes onses: [X] Absolute damping used del: Support 1	{X} Mass Point A olute Sum [] SRSS r: (specify) d:
s. 6.	[] Computer Codes: Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Respondence of Combining D	considered: Notes onses: [X] Absolute damping used del: Support 1	{X} Mass Point A olute Sum [] SRSS r: (specify) d:
5.	Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Resp Damping: NA Basis for Support Considerations in the modes Critical Structural Elements: Se	considered: Notes onses: [X] Absorber []Other the damping used del: Support 1: ee also SS-1102-ing Load ponse Seismin	{X} Mass Point A olute Sum [] SRSS r: (specify) d: ugs
5.	Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Resp Damping: NA Basis for Support Considerations in the mo Critical Structural Elements: Se	considered: Notes onses: [X] Absorber []Other the damping used del: Support 1 are also SS-1102-ing Load ponse Seismin	{X} Mass Point A olute Sum [] SRSS r: (specify) d: ugs 30 c Total Stress
5.	Frequency Range and No. of modes [X] Hand Calculations Method of Combining Dynamic Resp Damping: NA Basis for Support Considerations in the modes Critical Structural Elements: Second Sec	considered: Notes onses: [X] Absorber []Other the damping used del: Support 1 are also SS-1102-ing Load ponse Seismin	{X} Mass Point A colute Sum [] SRSS r: (specify) d: ugs 30 c Total Stress Stress Allowable

I. Plan	t Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Com	oonen	t Name LIMIT SWITCH
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: EA-170 Quantity:
	3.	Vendor: NAMCO
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Limit Switch Box b. Dimensions 3"x2"x1"
		c. Weight Less than 11 lbs.
	6.	Location: Building: Auxiliary
		Elevation: Varies according to location
	7.	Field Mounting Conditions [X] Bolt (No. 2 , Size #10) Varies according [] Weld (Length) to location
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: NA F/B. V:
	9.	a. Functional Description: Position indication
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [] Both NA .
	10	[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
	10.	Pertinent Reference Design Specifications:

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No

IV.	Equipment Qualification Method: Test: X.
	Analysis:
	Combination of Test and Analysis:
	Test and/or Analysis by Acme-Cleveland Development Company (name of Company or Laboratory & Report No.)
٧. ١	dibration Input:
	1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
	2. Required Response Spectra (attach the graphs): See FNP Response Spectra
	3. Required Acceleration in Each Direction: See FNP Response Spectra
	S/S = F/B = V =
VI.	<pre>If Qualification by Test, then Complete: 1. [x] Single Frequency</pre>
	5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs)
	6. Input g-level Test at S/S = F/B = V =
	7. Laboratory Mounting: 0.6g + 9.52g over range of 1-35 Hz
	1. [X] Bolt (No. 2 , Size#10) [] Weld (Length) []
	8. Functional operability verified: [X] Yes [] No [] Not Applicable
	9. Test Results including modifications made: The trip position of each switch remained within the required limit.
	10. Other tests performed (such as fragility test, including results): Fragility, Sine Sweep, Sine Dwell - All switches performed with no malfunctions for all tests

	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History - [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Soluti
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable
M.	
^.	
^•	

1.	Plant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR x
		NSSS: Westinghouse 3. A/E: Bechtel BWR
II.	Componen	t Name SERVICE WATER PUMP
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 2700 Quantity: 5
	3.	Vendor: Johnston Pump Company
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Service water pump
		b. Dimensions 30"Ø / Head-175'
		c. Weight 1127#
	6.	Location: Building: Service water structure
		Elevation: 191'-6"
	7.	Field Mounting Conditions [X] Bolt (No. 4 , Size 1 3/8) [] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: 16.33 Hz F/B: V: 145 Hz
	9.	a. Functional Description:
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown
		[x] Both
	10.	Pertinent Reference Design Specifications: SS-1105-7

III. Is Equipment Available for Inspecti	on in the Flant: [x] Yes [] No
IV. Equipment Qualification Method: Tes	
Ana	lysis: X
Com	bination of Test and Analysis:
Test and/or Analysis	Nickerson/Brown Consulting Engineers (name of Company or Laboratory & Report No.)
V. <u>Vibration Input</u> :	
1. Loads considered: 1.[]Seismic o	nly 2.[]Hydrodynamic only 3.[]Explosive only
· 4.[]Other (Specify)5.	[X]Combination of Seismic and Operating
2. Required Response Spectra (attach	the graphs): See SS-1105-7
3. Required Acceleration in Each Dir	ection: See FNP Response Spectra
S/S =F/B =	V =
VI. If Oualification by Test, then Compl. 1. [] Single Frequency [2. [] Single Axis [3. No. of Qualification Tests: OBE 4. Frequency Range:	Multi-Frequency: [] random [] sine beat [] Multi-Axis SSE Other (specify)
5. TRS enveloping RRS using Multi-F	requency Test [] Yes (Attach TRS & RRS graphs)
6. Input g-level Test at S/S =	F/B = V =
.7. Laboratory Mounting:	
1. [] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified:	[] Yes [] No [] Not Applicable
9. Test Results including modificat	ions made:
10. Other tests performed (such as f	ragility test, including results):

1	December of Tees () // Personal
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[X] Dynamic Analysis: [] Time-History [X] Response Spectrum
3.	Model Type: [] 3D [X] 2D [] 1D
	[] Finite Element [X] Beam [] Closed Form Solution
4.	[X] Computer Codes: BMDAT, CANBM, SCANBM, MOMTS, BEAM, MDLDF, SMOMTS
	Frequency Range and No. of modes considered: 5 modes
	[x] Hand Calculations
5.	Method of Combining Dynamic Responses: [X] Absolute Sum [] SRSS []Other:
6.	Damping: 3%OBE,5%DBE Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load
4	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

B. Max. Deflection Location

Effect Upon Functional Operability

. Plant Nam	e: J.M. Farley Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
I. Componen	t Name EXCESS FLOW CHECK VALVE
1.	Scope: [] NSSS [X] BOP
2.	Model Number: FVL 48F Quantity:
3.	Vendor: Marotta Scientific Controls
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance 3" Nom Dia. Solenoid Opgr. b. Dimensions 10"(L) x 4.25"(W) x 7.75"(H)
	c. Weight NA
6	Location: Building: CTMT Bldg.
	Elevation: 108'-6" P-23
7.	Field Mounting Conditions [] Bolt (No, Size) [X] Weld (Length 13")
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/S: NA F/B: Y:
9.	a. Functional Description: Limit excess flow from containment.
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [] Both
10.	Pertinent Reference Design Specifications:

111.	Is	Equipment Available for Inspection in the Plant: [X] Yes [] No
IV.	Eau	uipment Qualification Method: Test: X
		Analysis:
		Combination of Test and Analysis:
		Test and/or Analysis by American Environments Company. Inc. (name of Company or Laboratory & Report No.)
٧.	Vib:	ration Input:
	1.	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
		4.[]Other (Specify) 5.[]Combination of
	2.	Required Response Spectra (attach the graphs): See FNP Response Spectra
	3.	Required Acceleration in Each Direction:
		S/S = 3g
vi.	1. 2. 3.	Oualification by Test, then Complete: [X] Single Frequency
		TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs [] No
		Input g-level Test at $S/S = 3g$ $F/B = 3g$ $V = 3g$
	. 7.	Laboratory Mounting: Clamped between Flanges
		1. [] Bolt (No, Size) [] Weld (Length) []
	8.	Functional operability verified: [] Yes [] No [X] Not Applicable
	٥.	Test Results including modifications made: No modifications, No physical damage - Post seismic operation revealed no malfunctions
	10.	Other tests performed (such as fragility test, including results): Hydro test - No physical damage or seat leakage

Con	plete:
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
۸.	Governing Load or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

B. Max. Deflection Location

Effect Upon Functional Operability

I. Plant !	Name: J.M. Farley Unit 2
1.	. Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compor	nent Name RELIEF VALVE
	I. Scope: [] NSSS [X] BOP
	2. Model Number: NA Quantity:
	3. Vendor: Lonergan
	4. If the component is a cabinet or pinel, name and model No. of the devices included:
	5. Physical Description a. Appearance 3/4" x 1" 150# Valve b. Dimensions 9" x 6"
	c. Weight 9 lbs.
	5. Location: Building: Auxiliary
	Elevation:
	7. Field Mounting Conditions [x] Bolt (No. 4 , Size 5/8") [] Weld (Lengtn)
	B. Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/S: 202 Hz F/B: V:
	9. a. Functional Description: Overpressurization relief
	b. Is the equipment required for [] Hot Standby [] Cold Shutdow [] Both
10	2. Pertinent Reference Design Specifications:
	7597-20-M6i

III.	Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IY.	Equipment Qualification Method: Test:
	Analysis: X
	Combination of Test and Analysis:
	Test and/or Analysis by Lonergan (name of Company or Laboratory & Report No.)
٧.	Vibration Input:
	1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
	2. Required Response Spectra (attach the graphs): See FNP Response Spectra
	3. Required Acceleration in Each Direction:
	S/S = 3g F/B = 3g V = 3g
VI.	If Qualification by Test, then Complete: 1. [] Single Frequency [] Multi-Frequency: [] sine beat []
	2. [] Single Axis [] Multi-Axis
	3. No. of Qualification Tests: OBE SSE Other (specify)
	1. Frequency Range:
	5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
	6. Input g-level Test at S/S = [] No F/B = V =
	7. Laboratory Mounting:
	1. [] Bolt (No, Size) [] Weld (Length) []
	8. Functional operability verified: [] Yes [] No [] Not Applicable
	9. Test Results including modifications made:
	10. Other tests performed (such as fragility test, including results):

Con	plete:								
1.	Description	of Test incl	uding Res	ults:_					
					· Amy				
2.	Method of An	alysis:							
	[X] Static A	nalysis [] Equival	ent St	atic Anal	ysis			
	[] Dynamic /	Analysis: [Time-Hi Respons	story e Spec	trum				*
3.	Model Type:	[] 3D		[x] 2	D	Ε] 10		
		[] Finite 8	lement	[X] B	eam	Ι] [10:	sed Form	Solution
4.	[] Computer	Codes:		1				-	
	Frequency Ran								
	[x] Hand Cald								
	# / *								
5.	Method of Con	mbining Dynam	nic Respo	nses:	[] Abso	lute :	Sum	[] SRSS	
	Method of Con					TEDA	ciful		
6.	Method of Con	Bas	sis for t	he dam	oing used:	(spe	cify)		
6. 7.	Method of Con	Bas iderations in	sis for t	he dam	oing used:	(spe	cify)		
6. 7. 8.	Method of Con Damping: Support Consi Critical Stru	Basiderations in	the modents: Governion Resp	ng Loan	Flange d Seismic	Tot	cify)	Stress	
6. 7.	Method of Con Damping: Support Consi	Basiderations in	sis for to the modents: Governi	ng Loan	ping used: Flange	(spe	al sess		
6. 7. 8.	Method of Con Damping: Support Consi Critical Stru Identification	Basiderations in	the modents: Governion Resp	ng Loan	Flange d Seismic	Tot	al sess	Stress Allowabl	
6. 7. 8.	Method of Con Damping: Support Consi Critical Stru Identification	Basiderations in	the modents: Governion Resp	ng Loan	Flange d Seismic	Tot	al sess	Stress Allowabl	
6. 7. 8.	Method of Con Damping: Support Consi Critical Stru Identification	Basiderations in	the modents: Governion Resp	ng Loan	Flange d Seismic	Tot	al sess	Stress Allowabl	

Not Calculated

1. <u>P1</u>	ant Name	J.M. Farley Unit 2 Type:
	1. 1	Utility: Alabama Power Company PWR X
	2. 1	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. C	omponent	Name CONTAINMENT PURGE ISOLATION VALVE
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 48" NRIA w/BETTIS T520-SR2 Quantity: 4
	3.	Vendor: Henry Pratt Company
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Butterfly Valve 48" I.D. 69 11/16"(H) x 59 ½" (W) (Valve Only) b. Dimensions 98 5/8" (H) 115 3/4"(W) X 20"(D) (Valve & Actuator)
	6.	c. Weight 6550# valve and operator Auxiliary Building - V281, V284 Location: Building: Containment Building - V282, V283 Elevation: 130'-6"
	7.	Field Mounting Conditions [X] Bolt (No. 44 , Size 1") [X] Weld (Length 138")
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) S/S: NA F/B: Y:
	9.	a. Functional Description: Containment Air supply & exhaust closing time 5 seconds - fail closed
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [] Both Neither
	10.	Pertinent Reference Design Specifications: SS-1102-50

	Equipment Oualification Method: Test:
	Analysis: X
	Combination of Test and Analysis:
	Test and/or Analysis by Henry Pratt Company - Report # D-0006-1 (name of Company or Laboratory & Report No.
v. <u>v</u>	ibration Input:
1	. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	- 4.[]Other (Specify)5.[]Combination of
2	. Required Response Spectra (attach the graphs): See FNP Response Spectra
3	- Required Acceleration in Each Direction:
	S/S = 3g F/B = 3g V = 3g
	If Oualification by Test, then Complete: [] random
	1. [] Single Frequency [] Multi-Frequency: [] sine beat
	2. [] Single Axis [] Multi-Axis
	3. No. of Qualification Tests: OBE SSE Other (specify)
	4. Frequency Range:
	5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
	6. Input g-level Test at S/S = F/B = V =
	7. 'aboratory Mounting:
	1. [] Bolt (No, Size) [] Weld (Length) []
	8. Functional operability verified: [] Yes [] No [] Not Applicable
	9. Test Results including modifications made:
	The second secon

1.	Description of Test . Liuding Results:
2.	Method of Analysis:
	[X] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History . [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [] Beam [x] Closed Form Soluti
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[x] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping:Basis for the damping used:
	Support Considerations in the model: Body assumed fixed
	Critical Structural Elements:
•	Governing Load
	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

B. Max. Deflection Location

Effect Upon Functional Operability

I. Plant Nam	e: J.M. Farley Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Componen	t Name 60" MOTOR OPERATED BUTTERFLY VALVE
1.	Scope: [] NSSS [X] BOP
2.	Model Number: Triton-XL Quantity: 6
3.	Vendor: Henry Pratt Company
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance
	b. Dimensions 73" Dia., 20" length
	c. Weight
6.	Location: Building: River water structure and valve box at S.W. struct
	Elevation: 105'-6" and 183'-0"
7.	Field Mounting Conditions [X] Bolt (No. 52 , Size 1-3/4) Weld (Length)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical):
	S/S: F/B: V:
9.	a. Functional Description: On/off service - separates river water pump trains; river water bypass to pond
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications:

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test:
Analysis: X
Combination of Test and Analysis:
Test and/or Analysis by Henry Pratt Company (name of Company or Laboratory & Report No.
V. <u>Vibration Input</u> :
1. Loads considered: 1.[]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[x]Combination of 1 & 2
2. Required Response Spectra (attach the graphs): See FNP Response Spectra
3. Required Acceleration in Each Direction:
S/S = 3g F/B = 3g V = 3g
YI. If Qualification by Test, then Complete:
1. [] Single Frequency [] Multi-Frequency: [] sine beat
2. [] Single Axis [] Multi-Axis
3. No. of Qualification Tests: OBE SSE Other
4. Frequency Range: (specify)
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
6. Input g-level Test at S/S = [] No F/B = V =
.7. Laboratory Mounting:
1. [] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified: [] Yes [] No [] Not Applicable
9. Test Results including modifications made:
10. Other tests performed (such as fragility test, including results):

	Description of Test incl	uding Results	:		
		The It I was			
2.	Method of Analysis:	man he	full soft of	Southern compression)."	
	[X] Static Analysis [] Equivalent	Static Analy	sis	
	[] Dynamic Analysis: [] Time-Histor] Response Sp	y . ectrum		
3.	Model Type: [X] 3D	[]	20	[] 10	
	[] Finite	Element []	Beam	[X] Closed Form Se	olution
	[] Computer Codes:				
	Frequency Range and No.	of modes cons	idered:		
	[X] Hand Calculations				
5.	Method of Combining Dyna	mic Responses	: [] Absolu	ute Sum [] SRSS	
	Damping:Ba			(Enacieu)	
	Support Considerations i				
	Critical Structural Elem	enes.			
	Critical Structural Elem Identification Location	Governing L or Response		Total Stress	

1.	Utility: Alabama Power Company PWR X
	NSSS: Westinghouse 3. A/E: Bechtel BWR
Componer	nt Name PRESSURE SWITCH
1.	Scope: [: NSSS
2.	Model Number: 604GCX Quantity: 4
3.	Vendor: Custom Component Switches
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Rectangular Aluminum Box with Presand Conduit Conn. b. Dimensions 6-1/4" x 4-3/4"x 2-3/4"
	c. Weight 1½ 1bs.
6.	
6.	c. Weight 1½ 1bs.
	c. Weight 1½ 1bs. Location: Building: River Water Structure
7.	C. Weight 1½ 1bs. Location: Building: River Water Structure Elevation: 105'-0" Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Length) Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonance found S/S: at frequencies F/B: # as S/S Y: # as S/S
7.	C. Weight 1½ 1bs. Location: Building: River Water Structure Elevation: 105'-0" Field Mounting Conditions [X] Bolt (No, Size) Weld (Lengtn) Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonance found S/S: at frequencies F/B: # as S/S 5 - 150 Hz
7.	C. Weight 1½ 1bs. Location: Building: River Water Structure Elevation: 105'-0" Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn) Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonance found S/S: at frequencies F/B: # as S/S 5 - 150 Hz
7.	C. Weight 13 lbs. Location: Building: River Water Structure Elevation: 105'-0" Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn) Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonance found S/S: at frequencies F/B: # as S/S Y: # as S/S 5 - 150 Hz a. Functional Description: Actuates alarm on 20psi decreasing
7.	C. Weight 13g lbs. Location: Building: River Water Structure Elevation: 105'-0" Field Mounting Conditions [X] Bolt (No. , Size) Weld (Lengtn) Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonance found S/S: at frequencies F/B: # as S/S Y: # as S/S 5 - 150 Hz a. Functional Description: Actuates alarm on 20psi decreasing river water header pressure

	Ear	ripment Qualification Method: Test: X
		Analysis:
		Combination of Test and Analysis:
٧.	Vib	Test and/or Analysis by Custom Component Switches (name of Company or Laboratory & Report No.) QTR604GCJR0 -5155-01)
		Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
		4.[]Other (Specify) 5.[]Combination of
		Required Response Spectra (attach the graphs): See FNP Response Spectra
	٥.	Required Acceleration in Each Direction:
		S/S = 3g $F/B = 3g$ $V = 3g$
VI.	If	Oualification by Test, then Complete:
	1.	[X] Single Frequency [] Multi-Frequency: [X] sine beat []
	2.	[X] Single Axis [] Multi-Axis
	3.	No. of Qualification Tests: OBESSEOther
	4.	Frequency Range: 5 - 150 - 5 Hz (specify)
	5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
	6.	Input g-level Test at $S/S = 3g$ $F/B = 3g$ $V = 3g$
	. 7.	Laboratory Mounting:
		1. [x] Bolt (No, Size) [] Weld (Length) []
	8.	Functional operability verified: [X] Yes [] No [] Not Applicable
	9.	Test Results including modifications made: Pressure switch met or exceeded
		all requirements per SQS IEEE standard 344-1971; no electrical contact-chatter o

Con	nplete:
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
ì.	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping:Basis for the damping used:
	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load
A.	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable

B. Max. Deflection Location

Effect Upon Functional Operability

1.	Utility: Alabama Power Company PWR X
	NSSS: Westinghouse 3. A/E: Bechtel BWR
. Componen	t Name 4.15KV SWITCHGEAR
	Scope: [] NSSS [X] BOP
2.	Model Number: NA Quantity: 1 Set
3.	Vendor: Allis-Chalmers
4.	If the component is a cabinet or panel, name and model No. of the devices included: Refer to master parts list for busses 2F, 2G, 2H, 2J, 2K and 2L
5.	Physical Description a. Appearance Vertical Panel
	b. Dimensions Approx 26"W x 71"H x 74"D (each panel)
	c. Weight Approx 2100 pounds - each panel
6.	Location: Building: 2F,2G-Aux bldg. elevation 139'-0" & 121'-0" 2H,2J-Diesel bldg. elevation 155'-0" Elevation: 2K,2L-Serv.water bldg.elevation 188'-6"
7.	Field Mounting Conditions [] Bolt (No, Size) NA [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical
	S/S: 7.5 Hz F/B: 9Hz, 13Hz <u>V: None</u>
9.	a. Functional Description: Class IE 4.16 KV Switchgear
	b. Is the equipment required for [] Hot Standby [] Cold Shutdow
	[X] Both_
10.	Pertinent Reference Design Specifications: SS-1102-38

111. 1	s Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Ec	uipment Oualification Method: Test: X
	Analysis:
	Combination of Test and Analysis: Allis Chalmers Seismic Test Facility Test and/or Analysis by Test. Report 40012-PR-3004 and 8971-ST-937 (name of Company or Laboratory & Report No.)
V. <u>Vit</u>	ration Input:
1.	Loads considered: 1.[x]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
	Required Response Spectra (attach the graphs): OBE & SSE for 3 locations
3.	Required Acceleration in Each Direction: See FNP Response Spectra
	S/S = V =
1.	Qualification by Test, then Complete: [X] Single Frequency [] Multi-Frequency: [] sine beat [X] sine dwell
	[X] Single Axis [] Multi-Axis
	No. of Qualification Tests: OBE SSE Other 20 each axis (specify) Frequency Range: 1 - 30 Hz (Sine dwell)
5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
5.	Input g-level Test at $S/S = 0.5q$ $F/B = 0.5q$ $V = 0.5g$
	Laboratory Mounting:
	1. [x] Bolt (No. 8 , Size 5/8") [] Weld (Length) []
8.	Functional operability verified: [X] Yes [] No [] Not Applicable
9.	Test Results including modifications made: Acceptable - no structural
	damage - some acceptable relay chatter
10.	Other tests performed (such as fragility test, including results):

Con	omplete: Not Applicable								
1.	Description	of Test inc	luding Res	sults:_		10.00 °			
2.	Method of Ar	nalysis:							
	[] Static A	Analysis [] Equival	lent St	atic Ana	lysis			
	[] Dynamic	Analysis: [] Time-Hi] Respons	story se Spec	trum				
3.	Model Type:	[] 3D		[]2	2D	Ε] 10		
		[] Finite	Element	[]8	Beam	Ε] (1	osed For	n Solution
4.	[] Computer	- Codes:			1		1		والمراولين
	Frequency Range and No. of modes considered:								
		ange and No.							
	Frequency Ra	ange and No.	of modes	consid	dered:	olute	Sum	[] SRS	
5.	Frequency Ra	enge and No. Iculations	of modes	consid	dered:	olute	Sum	[] SRS:	5
5.	Frequency Ra [] Hand Cal Method of Co	enge and No. Culations ombining Dyn	of modes amic Respo asis for t	considences:	ered: [] Abs []Other	olute r: (spe	Sum	[] SRS:	5
5. 6. 7.	Frequency Ra [] Hand Call Method of Co Damping: Support Cons	enge and No. Culations ombining Dyn B ciderations	of modes amic Responsasis for the mode	considences:	ered: [] Abs []Other	olute r: (spe	Sum	[] SRS:	5
5. 6. 7. 8.	Frequency Ra [] Hand Call Method of Co Damping: Support Cons	enge and No. Iculations ombining Dyn B siderations ructural Ele	of modes amic Responsable for the modes ments: Governing or Responsable for Responsable for the modes amic Responsable for	considences: the dametel:	[] Abs []Othe	olute r: (special:	Sum	[] SRS:	5

ı.	Plant Nam	e: J.M. Farley Unit 2 Type:
		Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II.	Componen	t Name MEDIUM VOLTAGE ELECTRICAL PENETRATION
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 127D1643 Quantity: 6
	3.	Vendor: General Electric Company
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Cylindrical Weldment b. Dimensions Approx 60" (not including J Boxes)
		c. Weight_
	6.	Location: Building: Containment
		Elevation: 139'-0"
	7.	Field Mounting Conditions [] Bolt (No, Size) [X] Weid (Length_100%) Circumferencial
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: no resonant frequen-F/B: # S/S Cles below 33Hz V: # S/S
	9.	a. Functional Description: Pressure tight containment penetration for electrical circuits
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [x] Both
	10.	Pertinent Reference Design Specifications:
		SS-1102-64

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test: X
Analysis:
Combination of Test and Analysis: San Jose Test Facility Test and/or Analysis by General Electric Company (name of Company or Laboratory & Report No.
V. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): OBE & SSE RRS for containment @
3. Required Acceleration in Each Direction:
S/S = .12g ZPA F/B = .11g ZPA V = .108g ZPA
VI. If Qualification by Test, then Complete: [] random
1. [X] Single Frequency [] Multi-Frequency: [X] sine beat [X] sine dwell
2. [X] Single Axis [X] Multi-Axis 96 sine dwell
3. No. of Qualification Tests: OBE SSE Other 20 sine beat (specify)
4. Frequency Range: 1 - 33 Hz
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
6. Input g-level Test at $S/S = .25q$ $F/B = 1.0q$ $V = 0.5g$
.7. Laboratory Mounting: 100%
1. [] Bolt (No, Size) [X] Weld (Length) []
8. Functional operability verified: [X] Yes [] No [] Not Applicable
9. Test Results including modifications made: Acceptable - no structural damage-
no pressure decay, no electrical malfunctions
10. Other tests performed (such as fragility test, including results):

2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
5.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress
	Identification Location Combination Stress Stress Allowable

I.	Plant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR x
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II.	Componen	t Name POWER CENTER TRANSFORMER
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: PAV0123 & PAV0126 Quantity:
	3.	Vendor: Westinghouse Electric Corporation
	4.	If the component is a cabinet or panel, name and model No. of the devices included: NA
	5.	Physical Description a. Appearance Metal enclosed structure PAV 0126 35" x 20½" x 62-3/4" b. Dimensions PAV 0123 44½" x 25½" x 78"
		c. Weight PAV0123 3100 lbs. PAV0126 1510 lbs.
	6.	Location: Building: Auxiliary Building, River Intake
		Elevation: Aux. Bldg. 121', 139' & 155' River Intake- 102'
	7.	Field Mounting Conditions [] Bolt (No, Size) NA [] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: 10Hz
	9.	a. Functional Description: Part of Power Distribution System
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [x] Both
	10	Pertinent Reference Design Specifications:
	10.	ss-1102-44

III. <u>I</u>	s Equipment Available for Insp	ection in the Plant: [)	(] Yes [] No
IV. Ear	uipment Qualification Method:	Test:	
		Analysis:	
		Combination of Test and	d Analysis: X
	Test and/or Analy	sis by Westinghouse-Repo	ort #SBR-73-3 or Laboratory & Report No.
V. Vib	ration Input:		
1.	Loads considered: 1.[x]Seism	ic only 2.[]Hydrodynam	ic only 3.[]Explosive only
	4.[]Other (Specify)	5.[]Combination of	
	Required Response Spectra (at	Doctor	sea Spactra for ORE
	Required Acceleration in Each		
		•	
1.	Oualification by Test, then O [X] Single Frequency [A] Single Axis	[] Multi-Frequency:	[] random [X] sine beat []
			Other
	No. of Qualification Tests:		(specify)
	Frequency Range: 0.5Hz to		
5.	Input g-level Test at S	0.5g(1-5Hz) [] N S = 1.0g(5-10Hz) F/B 0.5g(10-25Hz)	es (Attach TRS & RRS graph V = same V = same
	Laboratory Mounting: NA	0.59(10-25H2)	
	1. [] Bolt (No S	ze) [] Weld (Len	gth) []
8.	Functional operability verif	fied: [X] Yes [] No	[] Not Applicable
9.	Test Results including modified damage	fications made: Acceptab	ole - no structural
10.	Other tests performed (such	as fragility test, incl	uding results):

Con	Complete:	
1.	1. Description of Test including Results: Prototy	pe test of larger transformer
	(1500 KVA), single frequency, single axis resona	ance-search and sine beat
2.	2. Method of Analysis:	
	[X] Static Analysis [] Equivalent Static Ana	llysis
	. [] Dynamic Analysis: [] Time-History . [] Response Spectrum	
3.	3. Model Type: [] 3D	[x] 1D
	[] Finite Element [X] Beam	[] Closed Form Solution
4.	. [] Computer Codes:	
	Frequency Range and No. of modes considered:	
	[X] Hand Calculations	
5.	Method of Combining Dynamic Responses: [] Abs	r:
6.	Damping:Basis for the damping use	(specify)
7.	. Support Considerations in the model:	
8.	3. Critical Structural Elements:	
	Governing Load	. Tatal Carres
A.	or Response Seismi Location Combination Stress	c Total Stress Stress Allowable

B. Max. Deflection Location
N/A

Tie Plate

Top of core &

coil

Effect Upon Functional Operability

1500KVA= 643psi - Vibration tested 1000KVA= 257psi

300KVA= 355psi

III. Is	Equipment Available for Insp	ection in t	he Plant: [] Yes	[] No
IV. Equ	ipment Qualification Method:	Test:	X		
		Analysis:			
		Combinatio	n of Test and		: lo. 72LSP-T
	Test and/or Analy			APPOLO Sy	
V. Vibr	ation Input:				
1.	Loads considered: 1.[X]Seism	ic only 2.[]Hydrodynam	ic only 3.	Explosive only
	4.[]Other (Specify)	5.[]Comb	ination of		
2.	Required Response Spectra (at	tach the gr	aphs): and F	& SSE RRS - River Intak	Aux. Bldg.
3.	Required Acceleration in Each	Direction:	See FNP resp	onse spect	ra
	S/S =			V =	
1. 2. 3.	<pre>[x] Single Frequency [x] Single Axis No. of Qualification Tests: Frequency Range: 5 - 500 F</pre>	[] Mult [] Mult OBE	i-Axis	[X] sine	beat sweep Resonance search,
5.	TRS enveloping RRS using Mul Input g-level Test at S/	ti-Frequenc	y Test [] Ye	es (Attach	TRS & RRS graphs
	Input g-level Test at S/ Laboratory Mounting:	5 = 0.09			_
	1. [x] Bolt (No, Si	ze) [] Weld (Len	gth)	[]
8.	Functional operability verif	fed: [X] Y	es [] No	[] Not Ap	plicable
9.	Test Results including modifications		de: Accepta	ble - no s	tructural damage
10.	Other tests performed (such	as fragilit	y test, incl	uding resu	lts):

1.	Description	of Test in	luding Re	sults:				
2.	Method of A	nalysis:						
	[] Static	Analysis] Equiva	lent St	atic Anal	ysis		
	[] Dynamic	Analysis:] Time-H] Respon	istory se Spec	trum			
3.	Model Type:	[]30		[]2	D	[]	10	
		[] Finite	Element	[]B	eam	[]	Closed Form	Solution
4.	[] Computer	r Codes:						
	Frequency Ra	ange and No.	of modes	consid	ered:			
	[] Hand Cal	le plations						
5.	Method of Co	ombining Dyr	namic Resp	onses:	[] Abso []Other	lute Sur	m [] SRSS	
6.	Damping:		Basis for	the dam		Traccia	fy)	
	Support Cons							
	Critical Str							
			Govern	ing Loa	d			
۸.	Identificati	ion Locatio	or Res		Seismic Stress	Total Stress	Stress Allowabl	e
					Ef	fect Un	on Function	al
	Max. Deflect	tion Loc	ation		-		rability	17 11

ı.	Plant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Southern Co. BWR Services
II.	Componen	t Name BATTERIES
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 3DCJ-3 Quantity: 4
	3.	Vendor: C & D Batteries (Division of ELTRA Corporation)
	4.	If the component is a cabinet or panel, we and model No. of the devices included:
	5.	Physical Description a. Appearance
		b. Dimensions 5-9/32"W x 7-3/8"D x 10-5/16"H
		c. Weight 27# each
	6.	Location: Building: Service Water
		Elevation: 188'-9"
	7.	Filld Mounting Conditions [] Bolt (No, Size) in-Rack [] Weld (Length)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: 27 Hz F/B: None below 33 Hz V:None below 33 Hz
	9.	a. Functional Description: Provide 125V.D.C. Power
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown
		[X] Both_
	10.	Pertinent Reference Design Specifications:

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Cualification Method: Test: X
Analysis:
Combination of Test and Analysis:
Test and/or Analysis byTTI Testing Laboratories, Inc. (name of Company or Laboratory & Report No.)
V. Vibration Input:
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction:
S/S = 0.16g (ZPA) $F/B = 0.16g (ZPA)$ $V = 0.15g (ZPA)$
VI. If Qualification by Test, then Complete: 1. [x] Single Frequency [] Multi-Frequency: [] sine beat [X] sine dwell 2. [] Single Axis [x] Multi-Axis
3. No. of Qualification Tests: OBE SSE Other 3 sine dwell test: (specify)
4. Frequency Range: 27HZ,33 Hz
5. TRS enveloping RRS us g Multi-Frequency Test [] Yes (Attach TRS & RRS graphs [] No
6. Input g-level Test at $S/S = 1.6g$ $F/B = 1.5g$ $V = 1.3g$
.7. Laboratory Mounting:
1. [X] Bolt (No. 20 , Size 1/2") [] Weld (Length) []
8. Functional operability verified: [x] Yes [] No [] Not Applicable
9. Test Results including modifications made: no malfunction
10. Other tests performed (such as fragility test, including results):

	plete:						
1.	Description o	of Test inc	luding Results:		-		-
2.	Method of Ana	lysis:					
	[] Static An	alysis [] Equivalent S	tatic Ana	lysis		ļ
	[] Dynamic A	nalysis: [] Time-History] Response Spe	ctrum			
3.	Model Type:	[] 3D	[]	2D	[] 10		
		[] Finite	Element []	Beam	[] Clos	ed Form Solut	ic
4.	[] Computer	Codes:					
	Frequency Ran	ge and No.	of modes consid	dered:			
	[] Hand Calc	ulations					
5.	Method of Com	bining Dyna	mic Responses:	[] Abso	olute Sum [] SRSS	
6.	Damping:	Ва	sis for the dar	mping used	(specify)		
			n the model:				
	Critical Struc	ctural Elem	ents:				
8.							
8.			Governing Los or Response	ad Seismic	Total Si	tress	

1.	Plant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: SCSI BWR
II.	Componen	t Name BATTERY CHARGERS
	1.	Scope: [] NSSS
	2.	Model Number: 1ARR130AC3 Quantity: 2
	3.	Vendor: C & D Batteries (Division of ELTRA Corporation)
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance
		b. Dimensions 17"W x 14½"D x 12"H
		c. Weight 60#
	6.	Location: Building: Service Water
		Elevation: 188'-9"
	7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Length)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: None below 33 Hz F/B: None below 33 Hz Y: None below 33 Hz
	9.	a. Functional Description: Maintain charge on 125 V.D.C. batteries.
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
	10.	Pertinent Reference Design Specifications:

III. Is Equipment available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test: X
Analysis:
Combination of Test and Analysis:
Test and/or Analysis byTII Testing Laboratories, Inc. (name of Company or Laboratory & Report No.
V. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive on
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction:
S/S = 0.16g(ZPA) $F/B = 0.16g(ZPA)$ $V = 0.15g(ZPA)$
VI. If Qualification by Test, then Complete: 1. [X] Single Frequency [] Multi-Frequency: [] sine beat [X] sine dwell 2. [X] Single Axis [X] Multi-Axis 3. No. of Qualification Tests: OBE SSE Other 3 sine dwell test (specify)
4. Frequency Range: 27HZ,33 Hz
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
6. Input g-level Test at $S/S = 1.6g$ $F/B = 1.5g$ $V = 1.3g$
.7. Laboratory Mounting:
1. [X] Bolt (No. 8 , Size 4") [] Weld (Length) []
8. Functional operability verified: [] Yes [] No [] Not Applicable
9. Test Results including modifications made: no malfunction
10. Other tests performed (such as fragility test, including results):

,	
1.	Description of Test including Results:
	•
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History - [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS
	[]Other: (specify)
6.	Damping: Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load
Α.	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable
A.	Identification Location Combination Stress Stress Allowable

B. Max. Deflection Location

Effect Upon Functional Operability

1. <u>P</u>	lant Nam	e: J.M. Farley Unit 2 Type:
	1.	Utility: Alabama Power Company PWR x
	2.	NSSS: Westinghouse 3. A/E: SCSI BWR
II.	Componen	t Name BATTERY RACK
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: NA Quantity: 2
	3.	Vendor: C & D Batteries (Division of ELTRA Corporation)
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance
		b. Dimensions 3'-0"W x 13 5/8"D x 30 13/16"H c. Weight 85#
	6.	Location: Building: Service Water
		Elevation: 188'-9"
	7.	Field Mounting Conditions [X] Bolt (No. 6, Size 3/8") [] Weld (Length)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: very large F/B: 28.6 Hz V: 56.6 Hz
	9.	a. Functional Description: support 20 batteries
		b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
	10.	Pertinent Reference Design Specifications:

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test:
Analysis: X
Combination of Test and Analysis:
Test and/or Analysis by Alabama Power Company (name of Company or Laboratory & Report No.
V. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive onl
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction:
S/S = 0.16g ZPA F/B = 0.15g ZPA V = 0.15g ZPA
VI. If Oualification by Test, then Complete: 1. [] Single Frequency [] Multi-Frequency: [] sine beat 2. [] Single Aris. []
2. [] Single Axis [] Multi-Axis
3. No. of Qualification Tests: OBE SSE Other (specify)
4. Frequency Range:
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
6. Input g-level Test at S/S = F/B = V =
.7. Laboratory Mounting:
1. [] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified: [] Yes [] No [] Not Applicable
9. Test Results including modifications made:
10. Other tests performed (such as fragility test, including results):

	Description of Test including Results:
2.	Method of Analysis:
	[X] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [X] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[X] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
5.	Damping:Basis for the damping used:
	Support Considerations in the model: No flexibility in hold down bolts
3.	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress Identific tion Location Combination Stress Stress Allowable
	No element significantly stressed.
	Max. Deflection Location . Effect Upon Functional Operability

I. P'ant Nam	ne: J.M. Farley Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: SCSI BWR .
II. Componer	nt Name DIESEL GENERATOR RELAY PANEL
1.	Scope: [] NSSS [X] BOP
2.	Model Number:Custom BuiltQuantity: _ 5
3.	Vendor: Wolfe & Mann Manufacturing Company
4.	If the component is a cabinet or panel, name and model No. of the devices included: relays CFVB, HFA, HEA, RRX147, 1AV, GFD12, 1HCV, 1AC, 1CW, CEH51A, switch M4
5.	Physical Description a. Appearance b. Dimensions 24"W x 25½"D x 90"H c. Weight NA
ε.	Location: Building: Diesel Slevation: 155'-0"
7.	Field Mounting Conditions [X] Bolt (No. 4 , Size ½") [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) No res found in S/S: 1-33 Hz F/B: Same as S/S V: Same as S/S
9.	a. Functional Description: Diesel Protection
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications:

III.	Is	Equipment Available for Inspection in the Plant: [X] Yes [] No
IV.	Equ	inment Oualification Method: Test: X
		Analysis:
		Combination of Test and Analysis:
		Test and/or Analysis by Wyle Labs Report No. 42613-1 (name of Company or Laboratory & Report No.)
٧.	Vibr	etion Input:
	1.	Loads considered: 1.[x]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
		4.[]Other (Specify) 5.[]Combination of
	2.	Required Response Spectra (attach the graphs): See FNP response spectra
	3.	Required Acceleration in Each Direction:
		S/S = 0.2g ZPA F/B = 0.2g ZPA V = 0.13g ZPA
VI.	If	Oualification by Test, then Complete:
	1.	[X] Single Frequency [] Multi-Frequency: [X] sine beat
	2.	[] Single Axis [X] Multi-Axis
	3.	No. of Qualification Tests: OBE SSE Other 7 sine beat tests (specify)
	٤.	Frequency Range: 1.5Hz - 27 Hz
		TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
	6.	Input g-level Test at $S/S = 0.2g$ [] No $V = 0.13g$
		Laboratory Mounting:
		1. [X] Bolt (No, Size) [] Weld (Length) []
	8.	Functional operability verified: [X] Yes [] No [] Not Applicable
	9.	Test Res. 11s including modifications made: CFVB relay chattered at 1.5,
		2, 4, 5 Hz otherwise structural integrity and performance was demonstrated
	10.	Other tests performed (such as fragility test, including results): Resonance Frequency Search

	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
5.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress
A.	Identification Location Combination Stress Stress Allowable

I. Plant Nam	e: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: SCSI BWR
II. Componen	t Name Relays for Diesel Generators
1.	Scope: [] NSSS [X] BOP
2.	Model Number: 7012 PCL & 7022 PE Quantity: 25
· 3.	Vendor: Agastat
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance b. Dimensions 3½"W x 3"D x 4½"H
	c. Weight 2#
6.	Location: Building: Diesel
	Elevation: 155'
7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/S: NA F/B: V:
9.	a. Functional Description: Diesel Control
	b. Is the equipment required for [] Hot Standby [] Cold Shutdow [X] Both
10.	Pertinent Reference Design Specifications:

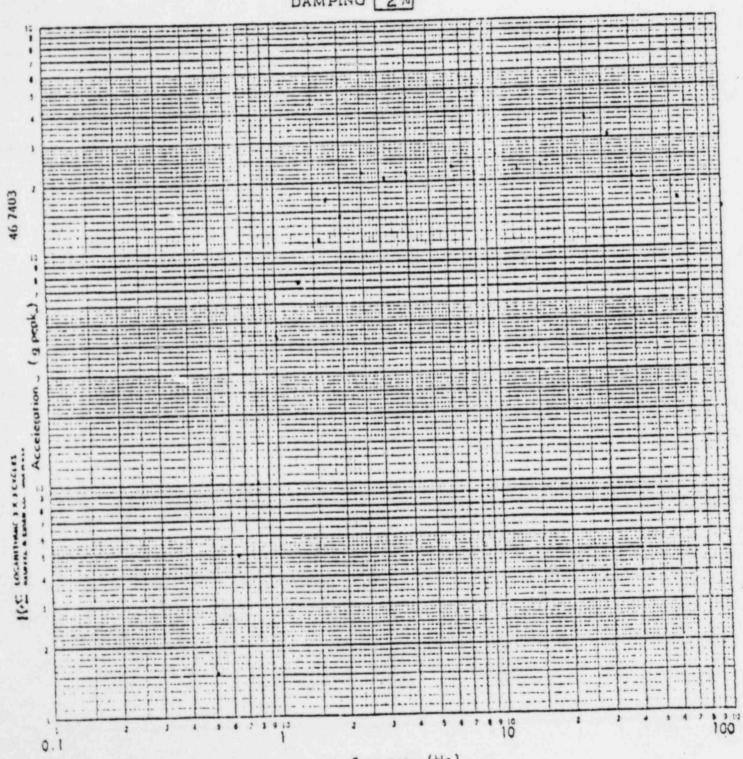
III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test: X
Analysis:
Combination of Test and Analysis:
Test and/or Analysis by Wyle Labs Report 43375-1 (name of Company or Laboratory & Report No.)
V. <u>Vibration Input</u> :
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction: See FNP response spectra
S/S = V =
VI. If Qualification by Test, then Complete: [X] random 1. [] Single Frequency
5. TRS enveloping RRS using Multi-Frequency Test [X] Yes (Attach TRS & RRS graphs 6. Input g-level Test at S/S = NA F/B = V =
.7. Laboratory Mounting:
1. [X] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified: [X] Yes [] No [] Not Applicable
9. Test Results including modifications made: No contact chatter greater than 100 msec
10. Other tests performed (such as fragility test, including results): Fragility Test

	plete:
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History - [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other: (specify)
6.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress
Α.	Identification Location Combination Stress Stress Allowable
	Max. Deflection Location . Effect Upon Functional Operability

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 0 10 0 100 0 1000 0

DAMPING 2%



Frequency (Hz)

LOCATION NO. CONTROL

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 0 10 0 100 5 1000 0

DAMPING 2%

されるのではないないとなる とれているいいいいというと

			-	-	-		H			-					-					-			1	1		-	+-
		====			1	-	++				-				-	- 31	1 -	-		1				-			4-
		-			1	-	11		-	+-	-	_			1					-			-	+	1		1_
		-			+ 1	1	1:1		-	1=					+	+=+	-				-111255			1	1 -		
1 1 1 1 1	1		-	-					177		-		-		-	1:1:	1						1:	-			-
-:-1::							-			-					= 1	E		==		-1"-	===	===		-		= 1	=
					-	- [-[:]		+	::=	-				-	: 1:1	: -:							-	=		-
Marketon Britain			===		-	-	++		-		.,,				=1	-1-1				- :-			1:2	1			-1
				-	-		1	-					****		-					-+-			1		1		1
				-			::.!		-				****	1		-1-1	-			-		-	1	1	1	E	7
		-		-	-		11		t E	EH		Ties.	-	-		-12	1		1			!		: :::			
::::::::	= ==	1					1								=				11-	-					1=	-	-1
		1==1	-		-1-		1						=		c	=1:1			1:::		===	==	-	1 =	=		-1
		1==	===	::: ::	#=			====	1		=1:=	-	-				-							-	-	1	11.
	===			===		2			-			-	****			=1:1	-1:	T	-			-	- 1			1=1	-1
					-1		: 1-1		-1:-	1::	** ***					-			-		7-	1	-	-	-	1	-
	4.	-				1-	-		-			-	1		-		- 1		+			-	:1:	1	1.		-1
		+				17	:1:						-	-	+	TIT							-			1-1	-1
1-1-1		-	11.	+	-+ .	1 1	-+-	7	11.			T	1			11			+:1-		-	1	-	-1-		1-1	-1
		-			- 1 -	1	-1.		7.			Lett	1	111	-	-	1		-	_							
					***		-				****	-	-	-	-		1-1-	-				1 =	-1-				- 1
					-		·F		-1							-	1-		-	-		1=	-	=1=		-	-
						1.1						+	-	-			11.	7	-		-	+-	-	-	+	-	-
			-	-	-	1	-	1						+		-	1.1.	. 1				1	-		1	1	-
	-		-					-	_	-	-	-	1	1	1		17:		1			1 -=	-		-	-	
		-		===	-+-	1 -		1				1==			=		11.					-				-1-	
						-					= 1::	-	-		=	-	1.1:		1		===:	: =	==	= =			
				=			-			- :		:==	= :=		-		11					-				-	-
	-											-	-		1=		1.1							-		=1=	1.
					-	1:	1:1:			-	-	-			-	t=t.	1:1		-1								1
					- 1	1	1-1:	+	-1-						-	-	1:1:		-11	==1:	-				- 1	4	T.
	BE B					-			-				= 1		1=		11	12.3		= 1	1.			=	-	-	-
*****						-	-1							=	-	=		11.00 × 18.1		-			= 1=	= +			E
							1-1						= =		=	1:1:	1-1		-1		===	-					-
			-		-	+	+++	-				-1	===		=	-	33				-	===	=:	=1:	-	7	-
						- 1 -	1.1								1	1-1	-1-1						=::::	1:		= :	1
		- bear				1-	1.1						- ! -		1-	1	4-1					-	_			-	1
						1	17							-	-	1:1	1.1									-+-	1
		-					1-1			!					7-	1-1	4-1							-1	-		1
	***					1	1.1	1							4 -	+++	-1.1								-	1	1
		4 1.00			-	_	1						-	-	- 1	1-1	-							- +		-	+
		E4-8181				-	-	-					===			-1-1	- 1					1		!	1	_	-
			***		-	-1-	-	-		-					1		- 1 -						+		+	-+	1
or a season was						1						-	-	-	-	-	-			1							
						- 1	1.1	-			**		-1.		1		-1-	-				-		-			1:
			1 112	-	-	7	-					-		. +		: 1:1		:=	1-		7						-1
-17: 1			1-0-0	1-		11	-	1 :=	. 13				-		-	-	= -				=-:					:1	-}
						-1-		-1=					=	=	=		-1:									-1	-
		=1::-	1 = .:-	1	111	- 1.							-		-	-	= -	-									-1
				• • • •		. 40	1:					===			-	=	:1-	1::									1
							1.	1.								-1-		***						-	-	-	-
				-	-	-	-	-	-	-	1			- 12 .		-		===					-		-	1 = 1	-
		-=1:	1	1	1		1				-	-			-		-1:	-			-	-			1		-
			1	1				1.1	==	****						-	1:1	-							1:::	1-=1	-
				1 =		1	-	F - F - X - X					-		-	-		-	-		-		-	***	1	1-1	
	The second second					-		1.			1		=1		-		1-1-	1		-	-				1	-:-	-1
	market - 1		1	-			1	1 -	-				!		-	-+-	1.								-		-
				-	*	-	-+-	1-					=			===	-	-	-						1	1	
			-	and a some	1		1										1-1			-	:				1		
			-				1	11.00								-	11	1									1
				+		1-1	1.	1.1		*** **	1			_	_	-	11	-		-			_	-	-		
-			-	-	-		-	9 1-1	-		1	1				1		17			5	1		•	,		
					3	7 1												0									

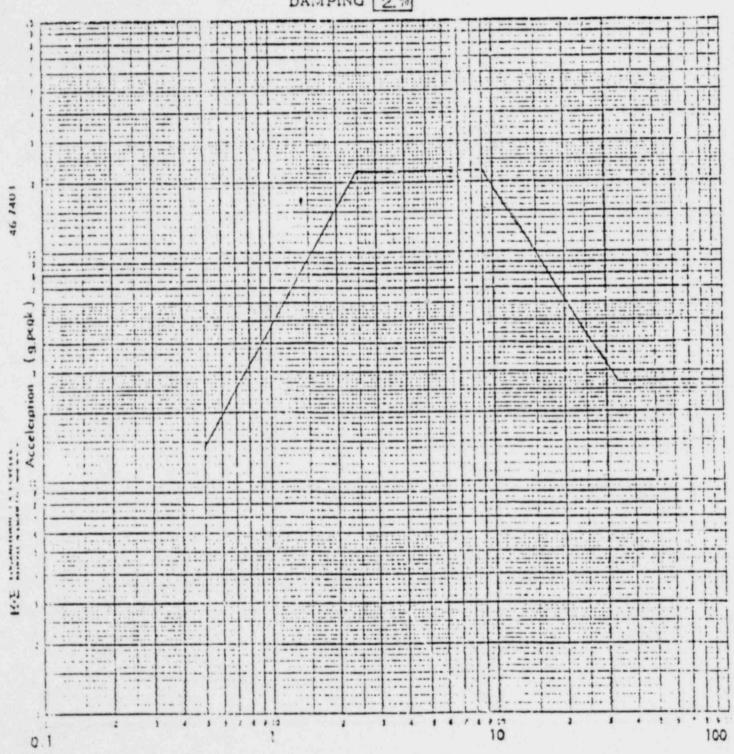
Frequency (Hz)

LOCATION NO. CONTEST

FULL SCALE SHOCK SPECTRUM (g Peak)

1.0 口 10 口 100 図 1000 口

DAMPING 2.%



Frequency (Hz)

FIGURE 2

REQUIRED PESPONSE SPECTRUM
28 CURVE OF FIGURE 2 OF APPENDIX III MULTIPLIED BY 1.414

. Plant Na	me: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compone	ent Name ESF Equipment Rm. Cooler Thermostats
1.	Scope: [] NSSS [X] BOP
2.	Model Number: TP-8101 Quantity:
3.	Vendor: Barber Colman
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Thermostat b. Dimensions 2"x4"
6.	c. Weight 1-2 lbs. Location: Building: Auxiliary Elevation: Vary according to elevation (100'-121')
7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) S/S: NA F/B: V:
9.	a. Functional Description: Monitor temp and regulate
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications: SS-1102-11

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test:
Analysis:
Combination of Test and Analysis:
Test and/or Analysis by Donald R. Houser (name of Company or Laboratory & Report No.)
V. Vibration Input:
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See 58-1102-1
3. Required Acceleration in Each Direction. See FNP response spectra
S/S = F/B = V =
VI. If Qualification by Test, then Complete:
1. [X] Single Frequency [] Multi-Frequency: [X] sine beat
2. [] Si ;le Axis [X] Multi-Axis excitation
3. No. of Qualification Tests: OBE SSE Other excitation/manuall (specify)
4. Frequency Range: 10HZ-60HZ(via magnet exciting) 1HZ-6HZ(via manual exciting)
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs)
6. Input g-level Test at "/S = NA F/B = V =
.7. Laboratory Mounting:
1. [X] Bolt (No. 8-32, Size 4") [] Weld (Length) []
8. Functional operability verified: [X] Yes [] No [] Not Applicable
9. Test Results including modifications made: No modifications; the only occurances
where contact switching appeared to occur have been attributed to loose or diswir test instrumentation.
10. Other tests performed (such as fragility test, including results): NA

<pre>Frequency Range and No. of modes considered: [] Hand Calculations 5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS</pre>		
[] Static Analysis [] Equivalent Static Analysis [] Dynamic Analysis: [] Time-History [] Response Spectrum 3. Model Type: [] 3D	2.	Method of Analysis:
[] Dynamic Analysis: [] Time-History		열매일 없었다면서 회사 이번에 따라 이 사람이 되었다면 보고 있다면 하나 있다면 하는데 하는데 없다.
[] Finite Element [] Beam [] Closed Form Set 4. [] Computer Codes: Frequency Range and No. of modes considered: [] Hand Calculations 5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS [] Other: (specify)		[] Dynamic Analysis: [] Time-History
<pre>Frequency Range and No. of modes considered: [] Hand Calculations 5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS</pre>	3.	Model Type: [] 3D [] 2D [] 1D
Frequency Range and No. of modes considered: [] Hand Calculations 5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other: (specify)		[] Finite Element [] Beam [] Closed Form Solution
[] Hand Calculations 5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:	4.	[] Computer Codes:
5. Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other: (specify)		Frequency Range and No. of modes considered:
(specify)		[] Hand Calculations
(specify)	5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
basis for the damping used:	6.	Damping:Basis for the damping used:
7. Support Considerations in the model:	7.	Support Considerations in the model:
8. Critical Structural Elements:	8.	Critical Structural Elements:
Governing Load		
or Response Seismic Total Stress A. Identification Location Combination Stress Stress Allowable		

I. Plant N	ame: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: SCSI BWR
II. Compor	ent Name D.C. Distribution Cabinet
1	. Scope: [] NSSS [X] BOP
2	. Model Number: 18-2-D-93210-4 Quantity: 2
	. Vendor: ITE Imporial Corp.
4	. If the component is a cabinet or panel, name and model No. of the devices included: Molded case circuit breakers EH-2-B015
•	b. Dimensions 32"width 65" height 5-3/4 depth
	c. Weight NA
	Location: Building: Service Water
	Elevation: 188'9"
	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) No resonance Y: below 33 HZ
•	a. Functional Description: 125 v. D.C. Distribution
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10	Pertinent Reference Design Specifications:

III. Is	Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equ	ipment Oualification Method: Test: x
	Analysis:
	Combination of Test and Analysis:
	Test and/or Analysis by ITE Imperial Corp Report R-STS-6 (name of Company or Laboratory & Report No.)
V. Vibr	ration Input:
1.	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
2.	Required Response Spectra (attach the graphs): See FNP response spectra
3.	Required Acceleration in Each Direction: See FNP response spectra
	S/S = V =
1.	Qualification by Test, then Complete: [X] Single Frequency [] Multi-Frequency: [X] Cont. sinusoid [X] Multi-Axis
3.	No. of Qualification Tests: OBE SSE Other (specify)
4.	Frequency Range: 1-26 HZ
5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
6.	Input g-level Test at $S/S = 0.55g$ [] No $F/B = 0.65g$ $V = 0.47g$
. 7.	Laboratory Mounting:
	1. [X] Bolt (No. 4 , Size 3/8") [] Weld (Length) []
8.	Functional operability verified: [X] Yes [] No [] Not Applicable
9.	Test Results including modifications made: No malfunction
10.	Other tests performed (such as fragility test, including results):

	Description of Test including Results:	
2.	Method of Analysis:	
	[] Static Analysis [] Equivalent Static Anal	ysis
	[] Dynamic Analysis: [] Time-History . [] Response Spectrum	
3.	Model Type: [] 3D	[]10
	[] Finite Element [] Beam	[] Closed Form Solution
4.	[] Computer Codes:	
	Frequency Range and No. of modes considered:	
	[] Hand Calculations	
5.	Method of Combining Dynamic Responses: [] Abso []Other	lute Sum [] SRSS
5.	Damping: Basis for the damping used	(specify)
7.	Support Considerations in the model:	
8.	Critical Structural Elements:	
	Governing Load or Response Seismic	
	Identification Location Combination Stress	Stress Allowable

I. Plant Na	me: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compone	nt Name Pressure Transmitter
1.	Scope: [] NSSS [X] BOP
2.	Model Number: 59PM Quantity: 15
3.	Vendor: VERITRAK/W
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Aluminum Housing & Terminal Box b. Dimensions 9"x9"x9"
	c. Weight 17 lbs.
6.	Location: Building: Auxiliary Building
	Elevation: 104' - 140'
7.	Field Mounting Conditions [X.] Bolt (No. 2 , Size 3/8") [] Weld (Length)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical No resonances S/S: Below 35HZ F/B: # S/S V: # S/S
9.	a. Functional Description: Consists of measuring cell that converts
	force into an AC impedance bridge unbalance
	b. Is the equipment required for [] Hot Standby [] Cold Shutdow [X] Both
10.	Pertinent Reference Design Specifications: SS-1102-86
	(Seismic, Class I)

IV.	Equipment Oualification Method: Test: X.
	Analysis:
	Combination of Test and Analysis:
	Test and/or Analysis by Westinghouse Astro Nuclear Lab - Report #SD40 (name of Company or Laboratory & Report No.)
٧.	Vibration Input:
	1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
	2. Required Response Spectra (attach the graphs): See FNP response spectra
	3. Required Acceleration in Each Direction: See FNP response spectra
	S/S =
YI.	If Oualification by Test, then Complete:
	1. [X] Single Frequency [] Multi-Frequency: [X] sine beat
	2. [X] Single Axis [] Multi-Axis
	3. No. of Qualification Tests: OBE SSE Other (specify)
	4. Frequency Range: 1.0 to 35.0 HZ
	5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs [] No
	6. Input g-level Test at $S/S = .5 \text{ to } 4.0g$ $F/B = .5 \text{ to } 4.0g$ $V = .33 \text{ to}$
	.7. Laboratory Mounting:
	1. [x] Bolt (No. 2 , Size 3/8") [] Weld (Length) []
	8. Functional operability verified: [X] Yes [] No [] Not Applicable
	9. Test Results including modifications made: Performed satisfactorily (mecahnical electrically)
	10. Other tests performed (such as fragility test, including results): None Resonance Frequency Search

2.	Method of Analys	is:						
	[] Static Analy	sis []	Equiva1	ent Sta	tic Analy	sis		
	[] Dynamic Ana	ysis: []	Time-Hi Respons	story e Spect	.rum			
3.	Model Type: []] 3D		[] 20		[]10		
	Ε:	Finite El	ement	[] Be	am	[] 0	losed Form	Soluti
4.	[] Computer Cod	es:						
	Frequency Range	and " of	nodes	conside	red:			
	[] Hand Calcula	tions						
5.	Method of Combin	ning Dynami	c Respo	nses:	[] Absol	ute Sum	[] SRSS	
6.	Damping:	Basi	s for t	he damp	ing used:	(specify	()	
7.	Support Consider	ations in	the mod	e1:				
8.	Critical Structu	ral Elemen	ts:					
٨.	Identification		Governi or Resp Combina	onse	Seismic Stress	Total Stress	Stress Allowable	
. ^•	Identification	Lt action	CONDINE	LION	201.672	251622	ATTOWADTO	•

I. Plant Nam	e: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Componen	t Name Level Transmitter
1.	Scope: [] NSSS [X] BOP
2.	Model Number: XM-36490 Quantity: 2
3.	Vendor: Delaval, Gems Sensor Div.
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Ball Float (captive) b. Dimensions 24"x12"
	c. Weight 50 lbs.
6.	Location: Building: Containment
	Elevation: 110'
7.	Field Mounting Conditions [X] Bolt (No. 8 , Size 7/8") [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) No resonance Y: below 33HZ
9.	a. Functional Description: Ball Flo c actuates fixed reed switches that provide a linear resistance vs position
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [x] Both
10.	Pertinent Reference Design Specifications: SS-1102-86
	(3000F, 62.1 PSIG, 2x10 ³ RADS, Seismic Class I

III. Is	Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equi	pment Cualiffication Method: Test: X
	Analysis:
	Combination of Test and Analysis:
	Test and/or Analysis by Testing Lab Inc. Report (name of Company or Laboratory & Report No.)
V. Vibra	tion Input:
1. 1	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
	4.[]Other (Specify) 5.[]Combination of
2. 1	Required Response Spectra (attach the graphs): See FNP response spectra
	Required Acceleration in Each Direction: See FNF response spectra
	S/S = V =
VI. <u>If (</u>	Oualification by Test, then Complete: [] random
1.	[] random [] Single Frequency: [X] sine beat []
2.	[] Single Axis [X] Multi-Axis Resonance Freq. Sea
3.	No. of Qualification Tests: OSE SSE Other Seismic Dwell Test (specify)
4.	Frequency Range: 4 to 33 HZ
5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs)
6.	Input g-level Test at $S/S = 3.0q$ $F/B = 3.0q$ $V = 2.0q$
. 7.	Laboratory Mounting:
	1. [] Solt (No, Size) [] Weld (Length) [X] Combination
8.	Functional operability verified: [X] Yes [] No [] Not Applicable
9.	Test Results including modifications made: Performed Satisfactorily
10.	Other tests performed (such as fragility test, including results): None

1.	Description	of Test in	cluding Re	sults:				
2.	Method of An	alysis:						
	[] Static A	nalysis	[] Equiva	lent St	atic Analy	sis		
	[] Dynamic /	Analysis:	[] Time-H [] Respon	istory se Spec	trum			**
3.	Model Type:	[]3D		[]2	0	[] 10)	
		[] Finit	e Element	[]8	eam	[] []	csed Form So	lutio
4.	[] Computer	Codes:						
	Frequency Ran	nge and No.	of modes	consid	ered:			
	[] Hand Cald	culations						
					F 7 441		- 1	
5.		mbining Dy	namic Resp	onses:	[]Other:	ute Sum	[] SKZS	
5.	Method of Cor	mbining Dy	namic Responses	onses: the dam	Other:	(specify	() SK22	
٥.	Method of Con		Basis for	the dam	oing used:			
7.	Method of Cor	iderations	in the mod	the dam	oing used:			
7.	Method of Cor Damping: Support Const Critical Str.	iderations uctural Ele	in the modernts: Governor Res	ing Load	d Seismic	Total	Stress	
7.	Method of Cor Damping: Support Cons	iderations uctural Ele	in the modernts: Governor Res	ing Load	ping used:			
7.	Method of Cor Damping: Support Const Critical Str.	iderations uctural Ele	in the modernts: Governor Res	ing Load	d Seismic	Total	Stress	

I. Plant	Name: J.M. Farley - Unit 2 Type:
1	Utility: Alabama Power Company PWR X
2	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compo	nent Name Air Operated Globe Valve
	1. Scope: [] NSSS [X] BOP
	2. Model Number: 6" - Globe Cage Trim Quantity: 1
	3. Vendor: Hammell - Dahl
	4. If the component is a cabinet or panel, name and model No. of the devices included:
	5. Physical Description a. Appearance Large Dome Chamber b. Dimensions 36"
	c. Weight 218 lbs.
	5. Location: Building: Containment
	Elevation: 111'
	7. Field Mounting Conditions [] Bolt (No, Size) [X] Weld (Lengtn)
	B. Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/3. 27HZ F/S: Y:
	9. a. Functional Description: Air operated Globe Valve
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown
	[X] Both
10	D. Pertinent Reference Design Specifications: SS-1102-036
	(150 PSIG. 200°F OBE 3G's Horizontal and Vertical

III.	Is	Equipment Available for Inspection in the Plant: [x] Yes [] No
IV.	Equ	sipment Qualification Method: Test:
		Analysis: X
		Combination of Test and Analysis:
		Test and/or Analysis by Hammell - Dahl Report #538 (name of Company or Laboratory & Report No.)
٧.	Vibr	ration Input:
	1.	Loads considered: 1.[]Seismic only 2.[]Hydrodynamic only 3.[]Explosive _aly
	٠.	4.[]Other (Specify)5.[x]Combination of Gravity, Hydrodynamic
	2.	Required Response Spectra (attach the graphs): See FNP response spectra
	3.	Required Acceleration in Each Direction:
		S/S = 3g
VI.	<u>If</u>	Oualification by Test, then Complete:
	1.	[] Single Frequency [] Multi-Frequency: [] sine beat []
	2.	[] Single Axis [] Multi-Axis
	3.	No. of Qualification Tests: OBESSEOther(specify)
	4.	Frequency Range:
	5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
		Input g-level Test at S/S = [] No
	. 7.	Laboratory Mounting:
		1. [] Bolt (No, Size) [] Weld (Length) []
	8.	Functional operability verified: [] Yes [] No [] Not Applicable
	9.	Test Results including modifications made:
	10.	Other tests performed (such as fragility test, including results):

III.	Is Eq	uipment Available for Insp	ection in the Plant: [x] Yes [] No
IV.	Equipm	ment Qualification Method:	Test:
			Analysis: X
			Combination of Test and Analysis:
		Test and/or Analy	sis by Hammell - Dahl Report #538 (name of Company or Laboratory & Report No.)
٧.	Vibrati	on Input:	
	1. Los	ads considered: 1.[]Seism	nic only 2.[]Hydrodynamic only 3.[]Explosive only
	. 4.1]Other (Specify)	5.[X]Combination of Gravity, Hydrodynamic
	2. Rec	quired Response Spectra (at	tach the graphs): See FNP response spectra
	3. Re	quired Acceleration in Each	Direction:
	\$/:	S = 3g F/B	= 3g V = 3g
YI.	If Ou	alification by Test, then	Complete: [] random
	1. [] Single Frequency	[] random [] Multi-Frequency: [] sine beat []
	2. [] Single Axis	[] Multi-Axis
	3. N	o. of Qualification Tests:	OBE SSE Other (specify)
	4. F	requency Range:	
	5. T	RS enveloping RRS using Mu	<pre>lti-Frequency Test [] Yes (Attach TRS & RRS graphs [] No</pre>
	6. I	nput g-level Test at S	/S = V =
	.7. L	aboratory Mounting:	
	1	. [] Bolt (No, S	ize) [] Weld (Length) []
	8. F	unctional operability veri	fied: [] Yes [] No [] Not Applicable
	9. 1	est Results including modi	fications made:
	10. 0	ther tests performed (such	as fragility test, including results):

_	olete:				
1.	Description of Test	including Results:		- 1	
2.	Method of Analysis:				
	[X] Static Analysis	[] Equivalent S	tatic Analy	sis	
	[] Dynamic Analysis	: [] Time-History [] Response Spe	ctrum		
3.	Model Type: [] 3D	[x]	2D	[] 10	
	[] Fin	ite Element [X]	Beam	[] Closed Form	Solu
4.	[] Computer Codes:_				and the same
	Frequency Range and	No. of modes consi	dered:		
					-
	[X] Hand Calculation	S			
5.	[X] Hand Calculation Method of Combining		[]Other:		
		Dynamic Responses:	[]Other:	(specify)	
6.	Method of Combining	Dynamic Responses:Basis for the da	[]Other: mping used:	(specify)	
6.	Method of Combining	Dynamic Responses:Basis for the da	[]Other: mping used:	(specify)	
6.	Method of Combining Damping: Support Consideratio	Dynamic Responses: Basis for the da ns in the model: Elements: Governing Lo or Response	[]Other: mping used:	(specify)	
6. 7. 8.	Method of Combining Damping: Support Consideratio Critical Structural Identification Local	Dynamic Responses: Basis for the da ns in the model: Elements: Governing Lo or Response	[]Other: mping used: ad Seismic Stress	(specify) Total Stress	PSI
6. 7. 8.	Method of Combining Damping: Support Consideratio Critical Structural Identification Local Bonnet Bolting Bonn Actuator Yoke	Dynamic Responses:	[]Other: mping used: ad Seismic Stress	Total Stress Stress Allowable	PSI
6. 7. 8.	Method of Combining Damping: Support Consideratio Critical Structural Identification Local Bonnet Bolting Bonn Actuator Yoke	Dynamic Responses:	[]Other: mping used: ad Seismic Stress	Total Stress Stress Allowable	PSI
6. 7. 8.	Method of Combining Damping: Support Consideratio Critical Structural Identification Loca Bonnet Bolting Bonn Actuator Yoke Clamp Nut	Dynamic Responses:	[]Other:_ mping used:_ ad Seismic Stress 15	Total Stress Stress Allowable	PSI PSI

ı.	Plant Nam	e: J.M. Farley - Unit 2 Type:
	1.	Utility: Alabama Power Company PWR X
	2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II.	Componen	t Name Air Operated Globe Valve
	1.	Scope: [] NSSS [X] BOP
	2.	Model Number: 6" EP 667 Size 80 Quantity: 3
	3.	Vendor: Fisher Controls
	4.	If the component is a cabinet or panel, name and model No. of the devices included:
	5.	Physical Description a. Appearance Large Control Valve
		b. Dimensions 73"×25"
		c. Weight 1290 lbs.
	6.	Location: Building: Auxiliary Building
		Elevation: 141'
	7.	Field Mounting Conditions [] Bolt (No, Size) [X] Weld (Lengtn)
	8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
		S/S: 15HZ F/B: 15HZ V: 15HZ
	9.	a. Functional Description: Air Operated Globe Valve for main stream pressure relief
		b. Is the equipment required for [X] Hot Standby [] Cold Shutdown [] Both
	10-	Pertinent Refere se Design Specifications: SS-1102-49
		(Seismic Class I)

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Oualification Method: Test:
Analysis: X
Combination of Test and Analysis:
Test and/or Analysis by Fisher Controls Seismic Certification (name of Company or Laboratory & Report No
Y. Vibration Input:
1. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive on
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction:
S/S = 3g F/B = 3g V = 3g
YI. If Qualification by Test, then Complete: [] random
1. [] Single Frequency [] Multi-Frequency: [] random 2. [] Single Avis [] Multi-Axis
2. [] Single Axis [] Multi-Axis
3. No. of Qualification Tests: OBE SSE Other (specify)
4. Frequency Range:
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS gra
6. Input g-level Test at S/S = F/B = V =
. 7. Laboratory Mounting:
1. [] Bolt (No, Size) [] Weld (Length) []
8. Functional operability verified: [] Yes [] No [] Not Applicable
9. Test Results including modifications made:
10. Other tests performed (such as fragility test, including results):

2.	Method of Analysis:				
	[] Static Analysis	[] Equivalent	Static Analy	sis	
	[X] Dynamic Analysis:	[] Time-Histor [X] Response Sp			
3.	Model Type: [X] 3D	[]	20	[]10	
	[X] Finit	e Element []	Beam	[] [] []	sed Form Solution
4.	[X] Computer Codes:	eismic 3		4	
	Frequency Range and No	o. of modes cons	idered: NA		
	[] Hand Calculations				
5.	Method of Combining Dy	rnamic Responses	: [] Absol []Other:		[X] SRSS
5.	Damping: NA	Basis for the d	amping used:	(specify)	
7.	Support Considerations	in the model:_			
3.	Critical Structural El	ements:			
	Identification Locati	Governing L or Response on Combination	Seismic		Stress Allowable
	Yoke Leg Bonnet			9,683 PSI 986.9 PSI	26,250 PSI 26,250 PSI

I. Plant Na	me: J.M. Farley - Unit 2 Type:
1.	Ut.lity: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. <u>Compone</u>	nt Name Solenoid Valves
1.	Scope: [] NSSS [A] BOP
2.	Model Number: HT8320A108V Quantity: 2
3.	Vendor: Automatic Switch Co.
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Brass 3 Port Body, Topmounted Colb. Dimensions 2"Lx4"Hx2'W
	c. Weight 1½ 1bs.
6.	Location: Building: River Water Structure
	Elevation: 104'-0"
7.	Field Mounting Conditions [X] Boit (No, Size) [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical)
	S/C: F/B: Y:
9.	a. Functional Description: On low air pressure from compressor, valve switches over to nitrogen bottle.
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications:
10.	

IV.	Equ	ipment Qualification Method: Test: X
		Analysis:
		Combination of Test and Analysis:
		Test and/or Analysis by Automatic Switch Co. Report #1357 - 7/20/72 (name of Company or Laboratory & Report No.)
٧.	Vibr	ration Input:
	1.	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
		4.[]Other (Specify)5.[]Combination of
	2.	Required Response Spectra (attach the graphs): See FNP response spectra
	3.	Required Acceleration in Each Direction: See FNP response spectra
		S/S =
VI.	<u>If</u>	Oualification by Test, then Complete: [] random
	1.	[X] Single Frequency [] Multi-Frequency: [] sine beat [] NA
	2.	[X] Single Axis [] Multi-Axis
	3.	No. of Qualification Tests: OBE SSE Other (specify)
	4.	Frequency Range: Minimum 20 HZ
	5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
	5.	Input g-level Test at $S/S = $
	. 7.	Laboratory Mounting: 4.3g to 6.0g
		1. [X] Bolt (No, Size) [] Weld (Length) []
	٤.	Functional operability verified: [X] Yes [] No [] Not Applicable
	9.	Test Results including modifications made: Valves did not malfunction
		after u-load was applied

	Description of Test including Results:	_
		_
•	Method of Analysis:	
	[] Static Analysis [] Equivalent Static Analysis	
	[] Dynamic Analysis: [] Time-History - [] Response Spectrum	
	Model Type: [] 3D [] 1D	
	[] Finite Element [] Beam [] Closed Form Solution	ion
	[] Computer Codes:	
	Frequency Range and No. of modes considered:	
	[] Hand Calculations	
	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:	
	Damping: Basis for the damping used:	
	Support Considerations in the model:	
	Critical Structural Elements:	
	Governing Load	
	or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable	

1. Plant	Name: J.M. Farley - Unit 2
1	. Utility: Alabama Power Company PWR X
2	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Compo	nent Name River Water Level Transmitter
	I. Scope: [] NSSS [X] BOP
	2. Model Number: 1152DP6A22PB Quantity: 2
	3. Vendor: Rosemont Engineering Co.
	4. If the component is a cabinet or panel, name and model No. of the devices included:
	5. Physical Description a. Appearance Flanges & Capsule on bottom, electron on top
	c. Weight 12 lbs.
	Location: Building: Roof - River Water Structure Elevation: 130'-9"
	7. Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
	B. Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical):
	S/S: 24HZ F/B: 26HZ Y: 68HZ
	in bubble tube, send signal to control room
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
1	2. Pertinent Reference Design Specifications:

Analysis: Combination of Test and Analysis: Test and/or Analysis by Rosemount Inc. RMT - 117145 (name of Company or Laboratory & Report No.) ration Input: Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only 4.[]Other (Specify) 5.[]Combination of
Test and/or Analysis by Rosemount Inc. RMT - 117145 (name of Company or Laboratory & Report No.) ration Input: Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
name of Company or Laboratory & Report No.) ration Input: Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
Required Response Spectra (attach the graphs): See FNP response spectra
Required Acceleration in Each Direction: See FNP response spectra
S/S = V =
Qualification by Test, then Complete: [X] Single Frequency [X] Single Axis
Frequency Range: 22HZ - 78HZ (specify)
. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs
Input g-level Test at $S/S = 3q$ $F/B = 3q$ $V = 3q$
. Laboratory Mounting:
1. [X] Bolt (No, Size) [] Weld (Length) []
. Functional operability verified: [X] Yes [] No [] Not Applicable
. Test Results including modifications made: Resonance found with panel mounting basket, no significant change in transmitter out put

2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other: (specify)
6.	Damping: Basis for the damping used:
	Support Considerations in the model:
8.	Critical Structural Elements:
	Governing Load
	or Response Seismic Total Stress

I. Plant Nam	e: J.M. Farley - Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Componer	t Name Pressure Switch (Used for Level Alarms)
1.	Scope: [] NSSS [X] BOP
2.	Model Number: 604GZ1 Quantity: 2
3.	Vendor:Custom Componet Switches, Inc.
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Rectangular Aluminum Box with Presspand Condust Conn. b. Dimensions 4½"Wx6½ 1×2-3/4"D
	c. Weight 24 ounces
6.	Location: Building: Mounted on Roof Service Water Structure
	Elevation: 206'6"
7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
. š.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical): No resonant frequencies S/S: found 5-150HZ F/B: #S/S V: #S/S
٠.	a. Functional Description: Switch gives alarm on low pond level
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications:

IV.	Equipa	ment Qualification Method:	Test: X	
			Analysis:	
			Combination of Test and	Analysis:
		Test and/or Analy	/sis by Custom Components (name of Company o	Sw. Inc, QTR604GCJR05155-0 r Laboratory & Report No.
٧.	Vibrati	ion Input:		
	1. Lo	ads considered: 1.[X]Seism	nic only 2.[]Hydrodynami	c only 3.[]Explosive only
	. 4.	[]Other (Specify)	5.[]Combination of	
	2. Re	quired Response Spectra (at	ttach the graphs): See FM	NP response spectra
	3. Re	quired Acceleration in Each	n Direction: See FNP resp	ponse spectra
	5/	S =F/B		V =
YI.	-	alification by Test, then		[] random
		X] Single Frequency		[] sine beat [X] continuous sine
		X] Single Axis		
	3. N	o. of Qualification Tests:	OBE	Other (specify)
	4. F	requency Range: 5-150-5HZ		_
	5. T	RS enveloping RRS using Mu	Iti-Frequency Test [] Ye	es (Attach TRS & RRS graph
	5. I	nput g-level Test at S	$/S = \frac{0.64}{30}$ F/B	$V = \frac{0.64g}{3g}$ to $V = \frac{0.64g}{3g}$
		aboratory Mounting:		
	1	. [X] Bolt (No, S	ize) [] Weld (Len	gth) []
	8. F	unctional operability veri	fied: [X] Yes [] No	[] Not Applicable
	9. T	est Pesults including modi	fications made: No elect	rical contact chatter,
			sonant frequencies observ	

1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
6.	Damping:Basis for the damping used:
7.	Support Considerations in the model:
	Critical Structural Elements:
	Governing Load or Response Seismic Total Stress
A.	Identification Location Combination Stress Stress Allowable

I. Plant Nam	e: J.M. Farley -Unit 2 Type:
1.	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
II. Componer	t Name Float Type Level Switch
1.	Scope: [] NSSS [X] BOP
2.	Model Number: Series SL-200 Ass. No. 83842-A2 Quantity: 10
3.	Vendor: Robertshaw Controls Co Levelac Level Switches
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Cast Float Housing & Explosion Proo Switch Assembly b. Dimensions 7"Wx19"Hx7"D
	c. Weight 35 lbs.
6.	Location: Building: Diesel Building - Engine Rooms & Oil storage Rooms
	Elevation: 155'-0"
7.	Field Mounting Conditions [] Bolt (No, Size) [] Weld (Lengtn) [X] Bolted to Field FAB. Seismic Bracket
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) no resonance S/S: 5 - 33HZ F/B: #S/S V: #S/S
9.	a. Functional Description: Switch gives alarm on rising level in room located
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown
	[X] Both
10.	Pertinent Reference Design Specifications:

III.	Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV.	Equipment Oualification Method: Test: X
	Analysis:
	Combination of Test and Analysis:
	Test and/or Analysis by Ogden Technology Lab, Inc. Job #70682 (name of Company or Laboratory & Report No.)
v. <u>v</u>	ibration Input:
1	. Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Esplosive only
	4.[]Other (Specify) 5.[]Combination of
2	. Required Response Spectra (attach the graphs): See FNP response spectra
3	. Required Acceleration in Each Direction: See FNP response spectra
	S/S = F/B = V =
VI.	If Oualification by Test, then Complete:
	1. [X] Single Frequency [] Multi-Frequency: [] sine beat [X] continuous sine
	2. [X] Single Axis [] Multi-Axis
	3. No. of Qualification Tests: OBE SSE Other (specify)
	4. Frequency Range: 5-33 HZ
	5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graphs [] No 0.5g,
	6. Input g-level Test at $S/S = 1.5 + 5.0q$ $F/B = 1.5 + 5.0q$ $V = 1.5 + 5.0q$
	7. Laboratory Mounting:
	1. [x] Bolt (No, Size) [] Weld (Length) []
	8. Functional operability verified: [x] Yes [] No [] Not Applicable
	9. Test Results including modifications made: Switch chattered on No. 1 sw
1	no chatter on No. 2 sw (Switch chatter = electrical discontinuity) except at 33HZ from 2.0g to 5.0g. Other tests performed (such as fragility test, including results):
	보는 것을 보고 있는 것을 하는 것을 하는 것을 하는 것을 보고 있다. 그런 사람들이 되었다면 보고 있는 것을 하는 것을 하는 것을 하는 것을 하는 것을 하는 것을 하는 것을 보고 있다. 그런 것을

2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History [] Response Spectrum
3.	Model Type: [] 3D [] 1D
	[] Finite Element [] Beam [] Closed Form Soluti
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
	Damping: Basis for the damping used:
	Support Considerations in the model:
2.	Critical Structural Elements:
	Governing Load
	or Response Seismic Total Stress

	Utility: Alabama Power Company PWR X
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR
omponer	nt Name Pressure Switch
1.	Scope: [] NSSS [X] BOP
2.	Model Number: 604GZM1 Quantity: 2
3.	Vendor:Custom Component Switches Inc.
4.	If the component is a cabinet or panel, name and model No. of the devices included:
5.	Physical Description a. Appearance Rectangular Aluminum box with Press & conduit conn. b. Dimensions 4½"Wx6½"Hx2-3/4"D
	c. Weight 24 ounces
6.	Location: Building: Inside Service Water Intake Structure
	Elevation: 191'-0"
7.	Field Mounting Conditions [X] Bolt (No, Size) [] Weld (Lengtn)
	Natural Fr. quencies in Each Direction (Side/Side, Front/Back, Vertical) No resonant frequencies S/S: found 5 + 150 HZ F/B: #S/S V: #S/S
٠.	S/S: found 5 + 150 HZ F/B: #S/S V: #S/S
	a. Functional Description: On low air pressure, switch gives alarm
	1/0-
	a. Functional Description: On low air pressure, switch gives alarm and switch over signal to solenoid valve to apply No back-up supply.
	a. Functional Description: On low air pressure, switch gives alarm

III. <u>I</u>	Is Equipment Available for Inspection in the Plant: [X] Yes [] No	
IV. Eo	nuipment Oualification Method: Test: X	
	Analysis:	
	Combination of Test and Analysis:	
	Test and/or Analysis by Custom Component Sw. Inc., QTR604GCJR0 (name of Company or Laboratory & Report	No.)
v. <u>vib</u>	bration Input:	
1.	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive	only
	4.[]Other (Specify) 5.[]Combination of	
	Required Response Spectra (attach the graphs): See FNP response spectra	
3.	Required Acceleration in Each Direction: See FNP response spectra	
	S/S =	
1.	f Oualification by Test, then Complete: [] random [] Multi-Frequency: [] sine beat [[] x] Single Frequency: [] sine beat [[] x] continuous sine [] Multi-Axis [] Multi-Axis [] Multi-Axis [] SSE Other (specify) Frequency Range: 5-150-5 HZ	
	. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS of 0.64g to 0.64g to 0.64g to $V = \frac{1}{2}$	graphs).64g t
. 7.	. Laboratory Mounting:	
	1. [x] Bolt (No, Size) [] Weld (Length) []	
8.	. Functional operability verified: [X] Yes [] No [] Not Applicable	
	. Test Results including modifications made: No electrical contact chatter,	
	premature actuation, or resonant frequencies observed.	
10	. Other tests performed (such as fragility test, including results):	

Con	molete:
1.	Description of Test including Results:
2.	Method of Analysis:
	[] Static Analysis [] Equivalent Static Analysis
	[] Dynamic Analysis: [] Time-History . [] Response Spectrum
3.	Model Type: [] 3D
	[] Finite Element [] Beam [] Closed Form Solution
4.	[] Computer Codes:
	Frequency Range and No. of modes considered:
	[] Hand Calculations
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other:
	Damping: Basis for the damping used:
7.	Support Considerations in the model:
8.	Critical Structural Elements:
۸.	Governing Load or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable
	Effect Upon Functional
8.	Max. Deflection Location . Operability

	Utility: Alabama Power Company PWR X
	NSSS: Westinghouse 3. A/E: Bechtel BWR X
	n333: westinghouse 3. A/E: beciter DAK
I. Compone	nt Name Power Supply
1.	Scope: [] NSSS [X] BOP
2.	Model Number: N11048 Quantity: 2
3.	Vendor: North Electric Co.
4.	If the component is a cabinet or panel, name and model No. of the devices included: N/A
5.	Physical Description a. Appearance Ventilated sheet metal housing b. Dimensions 3½"x5"x6½"
	c. Weight 7 lbs.
6.	Location: Building: Control Room (Aux. Bldg.)
	Elevation: 157-6"
7.	Field Mounting Co Jitions [X] Bolt (No, Size) [] Weld (Lengtn)
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) No resonance S/S between 5-20HZ F/B: #S/S Y: #S/S
9.	a. Functional Description: Power Supply for level and temperature
	Instrument loops
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both
10.	Pertinent Reference Design Specifications:

III.	Is	Equipment Available for Inspection in the Plant: [X] Yes [] No
IV.	-Eau	ipment Qualification Method: Test: X.
		Analysis:
		2. 1321 Combination of Test and Analysis:
::.	<u>::</u>	Test and/or Analysis by North Electric Co. 662-1780-19611 (name of Company or Laboratory & Report No.)
٧.	Vibr	etion Input:
	1.	Loads considered: 1.[X]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
		4.E]Other (Specify) 5.[]Combination of
	2.	Required Response Spectra (attach the graphs): See FNP response spectra
		Required Acceleration in Each Direction: See FNP response spectra
		S/S =
		S. Proposition of Associate
YI.	If	Qualification by Test, then Complete:
	1.	[X] Single Frequency [] Multi-Frequency: [] sine beat [X] continuous sweep
	2.	[X] Single Axis [] Multi-Axis
	3.	No. of Qualification Tests: OBE SSE Other (specify)
	4.	Frequency Range: 15 to 55 HZ
	5.	TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph
	6.	Input g-level Test at S/S =0.172g to 2.32g F/B = # S/S V = # S/S
	. 7.	Laboratory Mounting:
		1. [X] Bolt (No, Size) [] Weld (Length) []
	3.	5 2 W 5 2 W 5 2 W 5 2 W 6 2 W
	9.	
		satisfactorily before, during and after all tests.
	10.	Other tests performed (such as fragility test, including results): Shock, temp. shock, and humidity.

	plete:					
1.	Description of Test inclu	ding Results:				
Ĭ						
2.	Method of Analysis:					
	[] Static Analysis []	Equivalent S	tatic Analy	rsis		
	[] Dynamic Analysis: []	Time-History Response Spe	ctrum			
3.	Model Type: [] 3D	[]	2D	E] 10		
	[] Finite E	lement []	Beam	[] Closed Form Se	olution	
1.	[] Computer Codes:					
	Frequency Range and No. of modes considered:					
	[] Hand Calculations					
5.	Method of Combining Dynam	ric Responses:	[] Absol	ute Sum [] SRSS (specify)		
6.	Damping:Bas	is for the da	mping used:	(specity)		
7.	Support Considerations in	the model:				
3.	Critical Structural Elements:					
		Governing Lo				
۸.	Identification Location	or Response Combination	Seismic Stress	Total Stress Stress Allowable		
			Eff	fect Upon Functional		
3.	Max. Deflection Locat	ion		Operability		

I. Plant Nam	ne: J.M. Farley Unit 2 Type:				
1.	Utility: Alabama Power Company PWR X				
2.	NSSS: Westinghouse 3. A/E: Bechtel BWR				
II. Componer	nt Name DIFFERENTIAL PRESSURE SWITCHES				
1.	Scope: [] NSSS [X] BOP				
2.	Model Number: 288A Quantity: 2				
3.	Vendor: Barton Instrument Corporation				
4.	If the component is a cabinet or panel, name and model No. of the devices included: N/A				
5.	Physical Description a. Appearance Dial & Switches Front, Cell on Back b. Dimensions 7½"W x 7½"H x 5½"D				
	c. Weight 8 lbs.				
6.	Location: Building: River Water Structure				
	Elevation: 106'-6"				
7.	Field Mounting Conditions [] Bolt (No. , Size) [] Weld (Lengtn) [X] Bolt on Seismic Mount (Field Fab)				
8.	Natural Frequencies in Each Direction (Side/Side, Front/Back, Vertical) no resonance for range F/B: of frequency 1-60Hz Y: # F/B				
9.	a. Functional Description: Switch Alarms on Decreasing AP across lube water piping				
	b. Is the equipment required for [] Hot Standby [] Cold Shutdown [X] Both				
10.	Pertinent Reference Design Specifications:				

III. Is Equipment Available for Inspection in the Plant: [X] Yes [] No
IV. Equipment Qualification Method: Test: X
Analysis:
Combination of Test and Analysis:
Test and/or Analysis by Wyle Lab 53178 (name of Company or Laboratory & Report No.)
Y. <u>Vibration Input</u> :
1. Loads considered: 1.[x]Seismic only 2.[]Hydrodynamic only 3.[]Explosive only
4.[]Other (Specify) 5.[]Combination of
2. Required Response Spectra (attach the graphs): See FNP response spectra
3. Required Acceleration in Each Direction: See FNP response spectra
S/S = F/B = V =
VI. If Oualification by Test, then Complete: 1. [x] Single Frequency [] Multi-Frequency: [] sine beat [X] sine dwell 2. [x] Single Axis [] Multi-Axis 3. No. of Qualification Tests: OBE SSE Other 11 sine dwell temperature (specify)
4. Frequency Range: 10HZ to 58HZ
5. TRS enveloping RRS using Multi-Frequency Test [] Yes (Attach TRS & RRS graph [] No F/B = $3q$ V = $2q$
.7. Laboratory Mounting:
1. [X] Bolt (No, Size) [] Wel (Length) []
8. Functional operability verified: [X] Yes [] No [] Not Applicable
9. Test Results including modifications made: No resonances detected in Sw.#1,
Sw.#2 detected resonance in X-axis at 29HZ. 39HZ. and 58HZ. SW#2 relay had chatter at sine dwell at 38HZ with 3g input. 10. Other tests performed (such as fragility test, including results):

	Description of Test including Results:						
2.	Method of Analysis:						
	[] Static Analysis [] Equivalent Static Analysis						
	[] Dynamic Analysis: [] Time-History . [] Response Spectrum						
3.	Model Type: [] 3D [] 2D [] 1D						
	[] Finite Element [] Beam [] Closed Form Solution						
4.	[] Computer Cudes:						
	Frequency Range and No. of modes considered:						
	[] Hand Calculations						
5.	Method of Combining Dynamic Responses: [] Absolute Sum [] SRSS []Other: (specify)						
6.	Damping:Basis for the damping used:						
7.	Support Considerations in the model:						
8.	Critical Structural Elements:						
۸.	Governing Load or Response Seismic Total Stress Identification Location Combination Stress Stress Allowable						
Q	Max. Deflection Location						