Beaver Valley Power Station, Unit No. 1 License Amendment Request No. 268

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#### SEISMIC INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- a. With the number of OPERABLE seismic monitoring instruments less than required by Table 3.3-7, restore the inoperable instrument(s) to OPERABLE status within 30 days.
- b. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report in accordance with 10 CFR 50.4 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.
- c. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

- 4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.
- 4.3.3.3.2 A seismic event greater than or equal to 0.01g shall be reported to the Commission within 1 hour. Each of the above seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 30 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

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|  |                      | 1                                  |
|--|----------------------|------------------------------------|
| SEISMIC MONITORING INST                      | RUMENTATION          | /\                                 |
| INSTRUMENTS AND SENSOR LOCATIONS             | MEASUREMENT<br>RANGE | MINIMUM<br>INSTRUMENTS<br>OPERABLE |
| 1. Triaxial Time-History Accelographs        |                      |                                    |
| a. Containment Foundation                    | ±1g /                | 1*                                 |
| b. Charging Floor - Containment<br>Structure | ± 1 g                | 1*                                 |
| c. Auxiliary Building                        | ± / g                | 1*                                 |
| 2. Triaxial Peak Accelographs                |                      |                                    |
| a. Top of Recirculation Spray<br>Cooler      | <u>+</u> 1 g         | 1                                  |
| b. Recirculation Spray Pump                  | <u>+</u> 1 g         | 1                                  |
| c. RHR Heat Exchanger                        | <u>+</u> 1 g         | 1                                  |
| d. Primary Plant CCW H.X.                    | <u>+</u> 1 g         | 1                                  |
| 3. Triaxial Seismic Switches                 |                      |                                    |
| a. Containment Foundation                    | NA NA                | 1*                                 |
| 4. Triaxial Response-Spectrum Recorders      |                      |                                    |
| a. Containment Foundation                    | Q - 1.2 g            | 1*                                 |
| b. Top Floor of Auxiliary Building           | 0 -1.2 g             | 1                                  |
| c. N.W. Corner of Control Room               | 0 - 1.2 9            | 1                                  |
|  |                      |                                    |
| *With reactor control room indication        |                      |                                    |
|  |                      |                                    |
|  |                      |                                    |
|  |                      |                                    |
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(Proposed Wording)

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## TABLE 4.3-4

# SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| INSTRUMENTS AND SENSOR LOCATIONS             | CHANNEL | CHANNEL CALIBRATION | CHANNEL<br>FUNCTIONAL<br>TEST |
|--|---------|---------------------|-------------------------------|
| 1. Triaxial Time-History Accelographs        |         |                     |                               |
| a. Containment Foundation                    | M*      | R                   | SA                            |
| b. Charging Floor - Containment<br>Structure | M×      | R/                  | SA                            |
| c. Auxiliary Building                        | M*      | R                   | SA                            |
| 2. Triaxial Peak Accelographs                |         |                     |                               |
| a. Top of Recirculation Spray<br>Cooler      | NA /    | R                   | NA                            |
| b. Recirculation Spray Pump                  | NA      | R                   | NA                            |
| c. RHR Heat Exchanger                        | NA NA   | R                   | NA NA                         |
| d. Primary Heat CCW H.X.                     | NA NA   | R                   |                               |
| 3. Triaxial Seismic Switches                 | 100     | Α.                  | NA                            |
| a. Containment Foundation                    | NA      | NA                  | R                             |
| 4. Triaxial Response-Spectrum Recorders      | \       |                     |                               |
| a. Containment Foundation                    | NA      | R                   | NA                            |
| b. Top Floor of Auxiliary Building           | NA      | R                   | NA                            |
| c. N.W. Corner of Control Room               | NA      | R                   | NA                            |
|  | 1       | \                   |                               |
| *Except seismic trigger                      |         |                     |                               |
|  |         |                     |                               |
|  |         |                     |                               |
|  |         |                     |                               |
|  |         |                     |                               |
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DPR-66 INSTRUMENTATION

3/4.3.3.4 (This Specification number is not used.)

Amendment No.

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(Next page is 3/4 3-44)
(Proposed Wording)

#### 3/4.3.3 MONITORING INSTRUMENTATION

#### 3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that:
1) the radiation levels are continually measured in the areas served
by the individual channels; 2) the alarm or automatic action is
initiated when the radiation level trip setpoint is exceeded; and
3) sufficient information is available on selected plant parameters
to monitor and assess these variables following an accident. This
capability is consistent with the recommendations of NUREG-0737,
"Clarification of TMI Action Plan Requirements," October, 1980.

#### 3/4.3.3.2 MOVABLE INCORE DETECTORS

The OPERABILITY of the movable incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core. The OPERABILITY of this system is demonstrated by irradiating each detector used and determining the acceptability of its voltage curve.

For the purpose of measuring  $F_Q(Z)$  or  $F_{AH}^N$ , a full incore flux map is used. Quarter-core flux maps, as defined in WCAP-8648, June 1976, may be used in recalibration of the excore neutron flux detection system, and full incore flux maps or symmetric incore thimbles may be used for monitoring the Quadrant Power Tilt Ratio when one Power Range Channel is inoperable.

## 3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes."

3/4.3.3.4 DELETED

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(This Specification number is not used.)

#### ATTACHMENT A-2

Beaver Valley Power Station, Unit No. 2 License Amendment Request No. 143

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#### SEISMIC INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- With the number of OPERABLE seismic monitoring instruments a. less than required by Table 3.3-7, restore the inoperable instrument(s) to OPERABLE status within 30 days.
- With one or more seismic monitoring instruments inoperable b. for more than 30 days, prepare and submit a Special Report in accordance with 10 CFR 50.4 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.
- The provisions of Specification 3.0.3 are not applicable. C.

#### SURVEILLANCE REQUIREMENTS

- 4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.
- 4.3.3.3.2 A seismic event greater than or equal to 0.01g shall be reported to the commission within 1 hour. Each of the above seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 30 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion A Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

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BEAVER VALLEY - UNIT 2

3/4 3-46 Amendment No. 97

(Proposed Wording)

|         | TABLE 3.3-7                |  |
|---------|----------------------------|--|
| SEISMIC | MONITORING INSTRUMENTATION |  |

| INS  | TRUMENTS AND SENSOR LOCATIONS  | MEASUREMENT<br>RANGE | MINIMUM<br>INSTRUMENTS<br>OPERABLE |
|------|--|----------------------|------------------------------------|
| 1.   | TRIAXIAL TIME-HISTORY ACCELEROGRAPHS (   | (1)(2)(4)            |                                    |
|      | a. Containment Mat el. 692'-11"  | ±1g /                | 1                                  |
|      | b. Containment Operating Floor<br>el. 767'-10"                                   | ± 1 g                | 1                                  |
|      | c. Switchyard  | ± 1 g/               | 1                                  |
|      | d. Containment Building - Steam<br>Generator Support Cubicle<br>No. 1 el. 718'6" | ± 1/g                | 1                                  |
|      | e. Aux. Building - at center of Mat, el 710'6"                                   | ± 1 g                | 1                                  |
|      | f. Aux. Building - at base of 480 volt MCC (MCC-2-E03), el. 755'6"               | ± 1 g                | 1                                  |
| 2.   | TRIAXIAL PEAK ACCELEROGRAPHS   |                      |                                    |
|      | a. Containment Bulding -<br>RHS heat exchanger (2RHS-E21A)<br>el. 715'-6"        | ± 2 g                | 1                                  |
|      | b. Containment Building - Six Inch<br>SI Pipe (2SIS-006-269-1(A))<br>el 741'-5"  | ± 2 g                | 1                                  |
|      | c. Aux. Building - MCC-2-E03<br>e1. 755'-6"                                      | ≠ 5 g                | 1                                  |
| 3.   | TRIAXIAL SEISMIC SWITCH (3)  |                      |                                    |
| 4    | a. Containment mat   | N/A                  | 1                                  |
| 4.   | RESPONSE SPECTRUM ANALYZER   |                      |                                    |
|      | a. Control Room  | N/A                  | 1                                  |
| NOTE | S<br>Units a. b. c are wired to accelerogra                                      | nh recorders in      | the Control                        |

(Proposed)

(1) Units a, b, c are wired to accelerograph recorders in the Control Room. Units d, e, and F are self contained units

(2) Each accelerograph trigger setpoint is set at 0.01g.

(3) Triaxial seismic switch setpoints: horizontal sensor: 0.049g

vertical sensor: 0.037g

(4) Triaxial time-history accelerograph - Units a and c are input directly to the response spectrum analyzer in the Control Room.

## TABLE 4.3-4

## SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| /   |      |   | CHANNEL | CHANNEL     | CHANNEL<br>FUNCTIONAL |
|-----|------|---|---------|-------------|-----------------------|
| INS | TRUM | MENTS AND SENSOR LOCATIONS  | CHECK   | CALIBRATION | TEST                  |
| 1.  | TRI  | AXIAL TIME HISTORY ACCELEROGRAPHS   |         | /           |                       |
|     | a.   | Containment Mat. el.<br>692'-11"  | M*      | R**         | SA                    |
|     | b.   | Containment Operating floor el. 767'-10"                                      | Max     | R**         | SA                    |
|     | c.   | Switchyard  | M*      | R           | SA                    |
|     | d.   | Containment Building - Steam<br>Generator Support Cubicle<br>No. 1 el. 718'6" | N/A     | /R**        | N/A                   |
|     | e.   | Aux. Building - at center of Mat, el 710'6"                                   | N/A     | R           | N/A                   |
|     | f.   | Aux. Building - at base of 480 volt MCC (MCC-2-E03), el. 755'6"               | N/A     | R .         | N/A                   |
| 2.  | TRI  | AXIAL PEAK ACCELEROGRAPHS   |         |             |                       |
| }   | a.   | Containment Building -<br>RHS heat exchanger (2RHS-E21A)<br>el. 715'-6"       | N/A     | R**         | N/A                   |
|     | b.   | Containment Building -8ix inch<br>SI pipe (2SIS-006-269-X(A))<br>el. 741'-5"  | N/A     | R**         | N/A                   |
|     | c.   | Aux. Building - MCC-2E03<br>el 755'-6"  | N/A     | R           | N/A                   |
| 3.  | TRI  | AXIAL SEISMIC SWITCHES  |         |             |                       |
|     | a.   | Containment mat   | N/A     | N/A         | R**                   |
| 4.  | RES  | PONSE SPECTRUM ANALYZER   |         |             |                       |
|     | a.   | Control Room  | N/A     | R           | N/A                   |

<sup>\*</sup>Except seismic trigger
\*\*The specified surveillance interval during the first fuel cycle may be
extended to coincide with completion of the first refueling cutage.

BEAVER VALLEY - UNIT 2

Amendment No. 10

NPF-73 INSTRUMENTATION

3/4.3.3.4 (This Specification number is not used.)

BEAVER VALLEY - UNIT 2 3/4 3-47 Amendment No.

(Next page is 3/4 3-52) (Proposed Wording)

BASES

## 3/4.3.3.3 SEISMIC INSTRUMENTATION

(This Specification number is not used.)

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes."

3/4.3.3.4 DELETED L

- (CThis Specification number is not used.

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#### 3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of 10 CFR 50.

3/4.3.3.6 (This Specification number is not used).

#### 3/4.3.3.7 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the chlorine detection systems ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," January 1977.

#### ATTACHMENT B

Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2 License Amendment Request No. 268 and 143 RELOCATION OF SEISMIC INSTRUMENTATION SPECIFICATION

#### A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment will relocate the seismic monitoring instrumentation requirements contained in Technical Specification (TS) 3/4.3.3.3 to the Licensing Requirements Manual (LRM) based on the guidance provided in Generic Letter (GL) "Relocation of Selected Technical Specifications Requirements Related to Instrumentation." The Bases section for Specification 3/4.3.3.3 will also be relocated to the LRM. The appropriate Index pages, Table Index page (BVPS Unit No. 1 only), Technical Specification pages and Bases pages will be revised to reflect the removal of the seismic monitoring instrumentation specification from the Technical Specifications. An additional Specification page will be added to reflect that Specification Number 3/4.3.3.4 is not used. This additional page will also denote the number of the following page. The Bases section will also be modified to denote that Specification Number 3/4.3.3.4 is not used.

#### B. DESIGN BASES

10 CFR 100, "Reactor Site Criteria," Appendix A Section VI(a)(3), "Required Seismic Instrumentation," requires that seismic monitoring instrumentation, provided in Specification 3.3.3.3, be available to promptly determine the magnitude of a seismic event so the effect on those plant features important to safety may be evaluated. This capability is provided to permit comparison of the measured response to that used in the design bases for the plant. Comparison of such data is used to determine whether the plant can operate safely, and permit timely action as may be appropriate. The seismic monitoring instrumentation does not actuate any protective equipment or serve any direct role in mitigating an accident.

#### C. JUSTIFICATION

GL 95-10 allows licensees and construction permit holders to relocate certain instrumentation requirements from their Technical Specifications (TSs) by requesting a TS amendment. In GL 95-10, the Nuclear Regulatory Commission (NRC) advised licensees and construction permit holders who had not converted or were not in the process of converting to the improved Standard Technical Specifications (STS) that a TS amendment could be requested to relocate selected instrumentation requirements from the TS. The suggested relocation of certain instrumentation requirements from the TS discussed in the GL was based on regulatory criteria developed by the NRC and described in the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39132) dated July 22, 1993.

The NRC issued a Final Policy Statement to provide the scope and purpose of Technical Specifications for nuclear power plants as required by 10 CFR 50.36. It established a specific set of objective criteria as guidance for determining which regulatory requirements and operating restrictions should be included in Technical Specifications. The policy statement encouraged licensees to implement a voluntary program to update their Technical Specification to be consistent with improved vendorspecific STS issued by the NRC in September 1992. The STS for Westinghouse plants was published as NUREG 1431. Experience in the development of the improved STS and in the review of license amendment requests has led the Commission to conclude that safety benefits can be realized from adopting portions of the improved STS without fully implementing all STS improvements. The four criteria from the Final Policy Statement were codified in an amendment (60 FR 36953) to Section 50.36 "Technical Specifications" of Title 10 of the Code of Federal Regulations (10 CFR 50.36).

Regulations contained in 10 CFR 50.36 specify criteria that TS sections should address to be considered for inclusion in the Technical Specifications. TS requirements not meeting the 10 CFR 50.36 criteria could be considered as candidates for relocation from the TSs.

Based on the 10 CFR 50.36 criteria, the NRC determined that the seismic monitoring instrumentation specification did not warrant inclusion in TSs. The seismic monitoring instrumentation specification was identified in GL 95-10 as a candidate for relocation to licensee-controlled documents.

WCAP 11618 "Methodically Engineered, Restructured and Improved, Technical Specifications" reflects the Westinghouse Owners' Group (WOG) position that the seismic monitoring instrumentation specification does not meet the 10 CFR 50.36 criteria for inclusion in TSs. In an NRC letter dated May 9, 1988, "Murley to Wilgus," the NRC staff documented their conclusion that the seismic monitoring instrumentation specification does not meet the 10 CFR 50.36 criteria for inclusion in TSs.

An evaluation of the seismic monitoring instrumentation with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary:

Seismic monitoring instrumentation is not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. The instrumentation is not installed for, nor capable of, detecting reactor coolant leakage. The NRC's

Final Policy Statement and GL 95-10 explicitly identify the seismic monitoring instrumentation as an example of controls that are not required to be retained in the TS. This instrumentation does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 2: A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier:

Seismic monitoring instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. It is provided to promptly detect and determine the magnitude of a seismic event so that the effect on those plant features, important to safety, may be evaluated. This instrumentation does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier:

The seismic monitoring instrumentation is not a component that is part of the primary success path and it does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. Seismic monitoring instrumentation does not initiate any automatic protective action. This instrumentation does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety:

The seismic monitoring instrumentation has not been shown to be significant to public health and safety by either operational experience or probabilistic risk assessment. The risk assessment section of

WCAP 11618 documents a generic risk assessment for seismic monitoring instrumentation that is applicable to BVPS Unit Nos. 1 and 2. Seismic monitoring instrumentation was not included in the scope of the Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Maintenance Rule Program. This instrumentation does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Based on the above evaluation, the seismic instrumentation does not serve as a protective design feature or part of a primary success path for events that challenge fission product barriers. The seismic monitoring instrumentation does not satisfy the 10 CFR 50.36 criteria and need not be included in the plant technical specifications.

The relocation of seismic instrumentation requirements identified in GL 95-10 represents a line-item TS improvement that will enable BVPS to revise seismic instrumentation requirements for both Units without requesting a license amendment. The seismic instrumentation requirements that are removed from the TS and relocated to the LRM will be controlled by the provisions of 10 CFR 50.59, "Controls, Tests, and Experiments." This will ensure that NRC review and approval is requested should a change exceed the regulatory threshold; i.e., involves an unreviewed safety question. Summaries of 50.59 safety evaluations written to revise the LRM will be submitted to the NRC as part of the periodic report of changes, tests and experiments in accordance with 10 CFR 50.59. Attachments D-1 and D-2 (for BVPS Unit No. 1 and No. 2, respectively) contain draft markups to reflect the relocation of Specification 3/4.3.3.3 to the LRM.

A Condition Report (CR) identified that the BVPS Unit No. 2 seismic monitoring instrumentation could not be set exactly at the specified values stated in Technical Specification Table 3.3-7 "Seismic Monitoring Instrumentation" because the setpoints in the field are nominal settings and have a tolerance associated with the values. This tolerance associated with the setpoints would not allow strict adherence to the Technical Specification requirements stated in Table 3.3-7. Specifically, the accelerograph seismic trigger and triaxial seismic switch setpoints cannot be set exactly at the specified values expressed in Table 3.3-7 due to limitations of the installed instrumentation. Failure to recognize a seismic event greater than or equal to the values specified in Table 3.3-7 could result in inadequate operator actions or in not reporting the seismic event to the NRC, in accordance with the requirements of Technical Specification surveillance requirement 4.3.3.3.2. Administrative controls for the Seismic Monitoring System have been implemented for BVPS Unit No. 2. These administrative controls ensure that the seismic monitoring instrumentation

setpoints are set conservative with respect to the values stated in the TS to ensure that operator actions are taken and that the necessary reporting requirements of TS 4.3.3.3.2 are met. The relocation of the seismic monitoring instrumentation requirements contained in TS 3/4.3.3.3 to the LRM will permit modification of these requirements under the provisions of 10 CFR 50.59. Therefore, the need for the current administrative controls for the seismic instrumentation setpoints can then be eliminated through a change to these requirements under the 10 CFR 50.59 process.

The proposed revisions to the Index pages, Table Index page (BVPS Unit No. 1 only), Specification pages and Bases pages are necessary to reflect the deletion of Specification 3/4.3.3.3 from the Technical Specifications and relocation to the LRM. revisions are also necessary to reflect that Specification Number 3/4.3.3.3 is no longer used. These proposed changes will make it clear to a TS user that this Specification number is not used. Changes to a Specification page and Bases page are also included to reflect that Specification Number 3/4.3.3.4 is not used. This Specification was removed from the Technical Specifications by Amendment No. 220 (TAC No. MA3839) for BVPS Unit No. 1 and by Amendment No. 97 (TAC No. MA3840) for BVPS Unit No. 2. This proposed change will make it clear to a TS user that this Specification number is not used. The modified Specification page also includes a note which states the number of the following page. Amendments 220 and 97 deleted pages from the Technical Specifications. This resulted in non-sequential page numbering. This proposed change will clarify that this lapse in page numbering is intentional.

#### D. SAFETY ANALYSIS

In Generic Letter 95-10, the staff provided the rationale for allowing the relocation of the seismic monitoring instrumentation specification. Its decision was based on TS criteria contained in 10 CFR 50.36. According to the GL, the staff concluded that the seismic monitoring instrumentation specification does not satisfy the criteria of 10 CFR 50.36 for inclusion into the TS, and was not related to dominant contributors to plant risk. This conclusion is corroborated by industry group efforts in the development of the NUREG 1431 "Standard Technical Specifications - Westinghouse" (ISTS).

Relocation of the seismic instrumer tation requirements under the guidance provided in Specification GL 95-10 is consistent with the line-item improvement identified in the GL. Future changes to relocated Specifications will be controlled by the provisions of 10 CFR 50.59.

Based on the conclusions in the GL and evaluations of industry groups in the development of ISTS, relocating this Specification will not: 1) affect the accident analyses, 2) impact the safety

of the BVPS plants, or 3) reduce the margin of safety derived from this Specification. The seismic monitoring instrumentation does not satisfy the 10 CFR 50.36 criteria and need not be included in the plant technical specifications.

The seismic monitoring instrumentation performs no role in mitigating a seismic event or in achieving a safe shutdown condition after a seismic event has occurred. instrumentation is not assumed to function in the safety analysis. The seismic instrumentation is not associated with a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Seismic instrumentation does not actuate any protective equipment or play any direct role in the mitigation of an accident. The capability of the plant to withstand a seismic event or other design basis accident is determined by the initial design and construction of systems, structures, and components. This instrumentation is used to alert operators to the seismic event and to allow an evaluation of the response of plant systems to the event.

The proposed revisions to the Index pages, Table Index page (BVPS Unit No. 1 only), Specification pages and Bases pages are administrative in nature and do not affect plant safety.

Therefore, based on the above, this change is considered safe.

#### E. NO SIGNIFICANT HAZARDS EVALUATION

The no significant hazard considerations involved with the proposed amendment have been evaluated. The evaluation focusing on the three standards set forth in 10 CFR 50.92(c) are as quoted below:

The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the no significant hazards consideration standards.

> Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed amendment would relocate Technical Specification (TS) 3/4.3.3.3 titled "Seismic Instrumentation" and the associated Bases section to the Licensing Requirements Manual (LRM) (based on the guidance provided in Generic Letter (GL) 95-10, "Relocation of Selected Technical Specification Requirements Related to Instrumentation"). The proposed amendment would also revise the TS Index and Beaver Valley Power Station (BVPS) Unit No. 1 List of Tables to reflect the relocation of this TS and associated Bases. The relocated Specification will be controlled in accordance with the requirement of 10 CFR 50.59, "Controls, Tests, and Experiments." Additional administrative changes are also included to reflect that Specification Number 3/4.3.3.4 is not used.

The proposed amendment does not involve a significant increase in the probability of an accident previously evaluated because no changes are being made to any accident initiator. No analyzed accident scenario is being changed. The initiating condition and assumptions remain as previously analyzed. The failure of the seismic monitoring instrumentation to detect a seismic event is not an accident initiating event.

The seismic monitoring instrumentation performs no role in mitigating a seismic event or in achieving a safe shutdown condition after a seismic event has occurred. Seismic instrumentation is not assumed to function in the safety analysis. The seismic instrumentation is not associated with a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident (DBA) or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Seismic instrumentation does not actuate any protective equipment or play any direct role in the mitigation of an accident. The capability of the plant to withstand a seismic event or other design basis accident is determined by the initial design and construction of systems, structures, and components. This instrumentation is used to alert operators to the seismic event and evaluate the plant response.

The proposed revisions to the Index pages, Table Index page (BVPS Unit No. 1 only), Specification pages and Bases pages are administrative in nature and do not affect plant safety.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

> 2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed amendment does not involve any physical changes to the plant or the modes of plant operation defined in Appendix A of the operating license. The proposed amendment does not involve the addition or modification of plant equipment nor does it alter the design or operation of plant systems. Seismic instrumentation does not actuate any protective equipment or play any direct role in the mitigation of an accident. The capability of the plant to withstand a seismic event or other design basis accident is determined by the design and construction of systems, structures, and components. This instrumentation is used to alert operators to the seismic event and evaluate the plant response.

Therefore, operation of the facility in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

The proposed amendment does not involve revisions to any safety limits or safety system setting that would adversely impact plant safety. The proposed amendment does not affect the ability of systems, structures or components important to ensure the safe shutdown of the facility, or the mitigation and control of accident conditions within the facility. In addition, the proposed amendment does not affect the ability of safety systems to ensure that the facility can be maintained in a shutdown or refueling condition for extended periods of time, or the availability of sufficient instrumentation and control capability for monitoring and maintaining the unit status.

The proposed revisions to the Index pages, Table Index page (BVPS Unit No. 1 only), Specification pages and Bases pages are administrative in nature and do not affect plant safety.

Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the considerations expressed above, it is concluded that the activities associated with this license amendment request satisfy the requirements of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

#### G. ENVIRONMENTAL CONSIDERATION

This license amendment request changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. It has been determined that this license amendment request involves no significant increase in the amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. This license amendment request may change requirements with respect to installation or use of a facility component located within the restricted area or change an inspection or surveillance requirement; however, the category of this licensing action does not individually or cumulatively have a significant effect on the human environment. Accordingly, this license amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this license amendment request.

#### H. UFSAR CHANGES

Draft UFSAR changes are provided in Attachment C.

#### I. LRM CHANGES

Draft LRM changes are provided in Attachment D.

#### ATTACHMENT C-1

Beaver Valley Power Station, Unit No. 1 License Amendment Request No. 268

Applicable Draft UFSAR Changes

#### APPENDIX 15A

#### LICENSE REQUIREMENTS MANUAL

Changes to the technical specifications may result in relocating various technical specification items to the Licensing Requirements Manual. This maintains control of the items and allows changing these requirements in accordance with the provisions of 10 CFR 50.59 without the need to process a license amendment request. Items relocated from the Unit 1 Technical Specifications include:

- 1. The Core Operating Limits Report (COLR) [TS Amendment 154]
- 2. Containment penetrations table (containment isolation valves) [TS Amendment 185]
- 3. Tables of response time limits for the reactor trip system (RTS) and the engineered safety features actuation system (ESFAS) [TS Amendment 210]
- 4. Meteorological Monitoring Instrumentation [TS Amendment 220]
- 5. Seismic Monitoring Instrumentation [TS Amendment XXX]

#### ATTACHMENT C-2

Beaver Valley Power Station, Unit No. 2 License Amendment Request No. 143

Applicable Draft UFSAR Changes

one or more of the specified frequencies, a visual indicator is immediately activated. Thus the operator has notification when the 1/2 SSE design response spectra have been exceeded.

3.7B.4.4 Comparison of Measured and Predicted Responses

In the event of an earthquake, the control room operator, having been informed as discussed in Section 3.7B.4.3, shall determine if the peak acceleration or the response spectra experienced at the foundation of the containment structure have exceeded the specified 1/2 SSE values.

Recorded time-history responses from the triaxial time-history accelerograph and response spectrum recorders will be processed by the response spectrum analyzer thus allowing comparison of actual building response to design response spectra.

The digitized time-history from the free-field triaxial sensor (switchyard) shall be used as the input ground motion for a dynamic analysis of the containment structure. Amplified response spectra (ARS) shall then be generated at the floor elevations of the sensors in the containment structure for comparison and correlation with the measured response spectra.

The structural responses and ARS calculated previously shall be compared with the original design and analysis parameters.

3.7B.4.5 In-Service Surveillance of Seismic Instrumentation

The in-service surveillance of the seismic monitoring instrumentation will be performed as described in the BVPS-2 Technical Specifications. (Licensing Requirements Monnal)

3.7N SEISMIC DESIGN

In addition to the steady state loads imposed on the system under normal operating conditions, the design of equipment and equipment supports requires that consideration also be given to abnormal loadin, conditions such as earthquakes. Seismic loadings are considered for earthquakes of two magnitudes: safe shutdown earthquake (SSE) and operating basis earthquake (OBE). The SSE is defined as the maximum vibratory ground motion at the plant site that can reasonably be predicted from geologic and seismic evidence. The OBE is that earthquake which, considering the local geology and seismology, can be reasonably expected to occur during the plant life.

For the OBE loading condition, the nuclear steam supply system (NSSS) is designed to be capable of continued safe operation. The design for the SSE is intended to assure:

#### APPENDIX 16A

#### LICENSING REQUIREMENTS MANUAL

Changes to the technical specifications may result in relocating various technical specification items to the Licensing Requirements Manual. This maintains control of the items and allows changing these requirements in accordance with the provisions of 10 CFR 50.59 without the need to process a license amendment request. Items relocated from the Unit 2 Technical Specifications include:

- 1. The Core Operating Limits Report (COLR) [TS Amendment 31]
- Containment penetrations table (containment [TS Amendment 66] isolation valves)
- 3. Tables of response time limits for the [TS Amendment 88] reactor trip system (RTS) and the engineered safety features actuation system (ESFAS)
- 4. Meteorological Monitoring Instrumentation [TS Amendment 97]
- 5. Seismic Monitoring Instrumentation [TS Amendment XXX]

#### ATTACHMENT D-1

Beaver Valley Power Station, Unit No. 1 License Amendment Request No. 268

Applicable Draft LRM Changes

BUPS -1 Licensing Requirements Monuel INSTRUMENTATIO MONITORING SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

LICENSING REQUIRE MENT

LR 3.4) The seismic monitoring instrumentation shown in Table 3-3 shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- With the number of OPERABLE seismic monitoring instruments less than required by Table 2-3-7, restore the inoperable a. instrument(s) to OPERABLE status within 30 days.
- With one or more seismic monitoring instruments inoperable b. for more than 30 days, prepare and submit a Special Report in accordance with 10 CFR 50.4 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS (LICENSING REQUIREMENT SURVEILLANCES

Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4-3-4. (3.4-2

A seismic event greater than or equal to 0.01g shall be reported to the Commission within 1 hour. Each of the above seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 30 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground A Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

3.4.2 LRS

3.4.1

DEAVER VALLEY - UNIT

Amendment No.

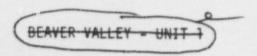
# BUPS - 1 LICENSING REQUIREMENTS MANUAL

# TABLE 3.37 (3.4-1)

## SEISMIC MONITORING INSTRUMENTATION

| INSTRUMENTS AND SENSOR LOCATIONS                                  | MEASUREMENT<br>RANGE | MINIMUM<br>INSTRUMENTS<br>OPERABLE |
|---|----------------------|------------------------------------|
| 1. Triaxial Time-History Accelographs                             |                      |                                    |
| a. Containment Foundation   | <u>+</u> 1 g         | 1*                                 |
| <ul> <li>b. Charging Floor - Containment<br/>Structure</li> </ul> | <u>+</u> 1 g         | 1*                                 |
| c. Auxiliary Building   | <u>+</u> 1 g         | . 1*                               |
| 2. Triaxial Peak Accelographs                                     |                      |                                    |
| a. Top of Recirculation Spray<br>Cooler                           | <u>+</u> 1 g         | 1                                  |
| b. Recirculation Spray Pump                                       | <u>+</u> 1 g         | 1                                  |
| c. RHR Heat Exchanger   | <u>+</u> 1 g         | 1                                  |
| d. Primary Plant CCW H.X.   | <u>+</u> 1 g         | 1                                  |
| 3. Triaxial Seismic Switches                                      |                      |                                    |
| a. Containment Foundation   | NA                   | 1*                                 |
| 4. Triaxial Response-Spectrum Recorders                           |                      |                                    |
| a. Containment Foundation   | 0 - 1.2 g            | 1*                                 |
| b. Top Floor of Auxiliary Building                                | 0 - 1.2 g            | 1                                  |
| c. N.W. Corner of Control Room                                    | 0 - 1.2 g            | 1                                  |

<sup>\*</sup>With reactor control room indication



3.4-2

TABLE 4-3-4 (3.4-2)

# SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| INSTRUMENTS AND SENSOR LOCATIONS             | CHANNEL | CHANNEL CALIBRATION | CHANNEL<br>FUNCTIONAL<br>TEST |
|--|---------|---------------------|-------------------------------|
| 1. Triaxial Time-History Accelographs        |         |                     |                               |
| a. Containment Foundation                    | M*      | R                   | SA                            |
| b. Charging Floor - Containment<br>Structure | M*      | R                   | SA                            |
| c. Auxiliary Building                        | M*      | R                   | SA                            |
| 2. Triaxial Peak Accelographs                |         |                     |                               |
| a. Top of Recirculation Spray<br>Cooler      | NA      | R                   | NA                            |
| b. Recirculation Spray Pump                  | NA      | R                   | NA                            |
| c. RHR Heat Exchanger                        | NA      | R                   | NA                            |
| d. Primary Heat CCW H.X.                     | NA      | R                   | NA                            |
| 3. Triaxial Seismic Switches                 |         |                     |                               |
| a. Containment Foundation                    | NA      | NA                  | R                             |
| 4. Triaxial Response-Spectrum Recorders      |         |                     |                               |
| a. Containment Foundation                    | NA      | R                   | NA                            |
| b. Top Floor of Auxiliary Building           | NA      | R                   | NA                            |
| c. N.W. Corner of Control Room               | NA      | R                   | NA                            |

\*Except seismic trigger

BUPS-1 LICENSING REQUIREMENTS MANUAL

BEAVER VALLEY - UNIT 1

3.4-3

# BUP5 -1

# LICENSING REQUIREMENTS MANUAL BASES

B 3.4 SEISMIC INSTRUMENTATION (MONITOR ING)

The OPERABILITY of the seismic vinstrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes."

#### ATTACHMENT D-2

Beaver Valley Power Station, Unit No. 2 License Amendment Request No. 143

Applicable Draft LRM Changes

NPF-73 INSTRUMENTATION BUPS - 2 LICENSING REQUIREMENTS Manual

MONITORING

3.4)

SEISMIC INSTRUMENTATION

LICENSING REQUIREMENT

3.4-1

LIMITING CONDITION FOR OPERATION

LR 3.4 3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- a. With the number of OPERABLE seismic monitoring instruments less than required by Table 3.3-7, restore the inoperable instrument(s) to OPERABLE status within 30 days.
- b. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report in accordance with 10 CFR 50.4 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

o. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

LICENTING REQUIREMENT SURVEILLANCES

24.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3.4.

74.3.3.3.2 A seismic event greater than or equal to 0.01g shall be reported to the Commission within 1 hour. Each of the above seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 30 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted in accordance with 10 CFR 50.4 within 30 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

LRS 3.4.2

BEAVER VALLEY - UNIT 2

(3,4-1)

Amendment No.

# BUPS - 2 LICENSING REQUIREMENTS MANUAL

# SEISMIC MONITORING INSTRUMENTATION

| INS | STRUMENTS AND SENSOR L                                       | 00/27000                         | MEA | SUREMENT | MINIMUM<br>INSTRUMENTS<br>OPERABLE |  |
|-----|--|----------------------------------|-----|----------|------------------------------------|--|
| 1.  | TRIAXIAL TIME-HISTOR   | Y ACCELEROGRAPHS (1)             | (2) | (4)      |                                    |  |
|     | a. Containment Mat   |                                  | ± 1 |          | 1                                  |  |
|     | b. Containment Oper<br>el. 767'-10"                          | ating Floor                      | ± 1 | g        | 1                                  |  |
|     | c. Switchyard  | 1                                | t 1 | g        | 1                                  |  |
|     | d. Containment Build<br>Generator Suppor<br>No. 1 el. 718'6" |                                  | ± 1 | g        | 1                                  |  |
|     | e. Aux. Building - Mat, el 710'6"                            | at center of ±                   | t 1 | g        | 1                                  |  |
|     | f. Aux. Building - 480 volt MCC (MCC el. 755'6"              |                                  | t 1 | g        | 1                                  |  |
| 2.  | TRIAXIAL PEAK ACCELEROGRAPHS                                 |                                  |     |          |                                    |  |
|     | a. Containment Buld<br>RHS heat exchange<br>el. 715'-6"      |                                  | 2   | g        | 1                                  |  |
|     | b. Containment Build<br>SI Pipe (2SIS-000<br>el 741'-5"      | ding - Six Inch ±<br>6-269-1(A)) | 2   | g        | 1                                  |  |
|     | c. Aux. Building - Fel. 755'-6"                              | 4CC-2-E03 ±                      | : 5 | g        | 1                                  |  |
| 3.  | TRIAXIAL SEISMIC SWITCH (3)                                  |                                  |     |          |                                    |  |
|     | a. Containment mat   | N                                | I/A |          | 1                                  |  |
| ١.  | RESPONSE SPECTRUM ANA  | ALYZER                           |     |          |                                    |  |
|     | a. Control Room  |                                  | I/A |          | 1                                  |  |

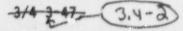
(1) Units a, b, c are wired to accelerograph recorders in the Control Room. Units d, e, and f are self contained units

(2) Each accelerograph trigger setpoint is set at 0.01g.

(3) Triaxial seismic switch setpoints:
horizontal sensor: A0.049g

vertical sensor: \*0.037g
 (4) Triaxial time-history accelerograph - Units a and c are input directly to the response spectrum analyzer in the Control Room.

BEAVER VALLEY - UNIT 2



# BUPS-2 LICENSING REQUIREMENTS MANUAL

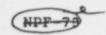


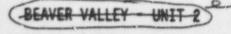
TABLE 4.3 4 3.4-2

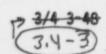
# SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

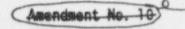
| INS | TRU | MENTS AND SENSOR LOCATIONS  | CHANNEL | CHANNEL<br>CALIBRATION | CHANNEL<br>FUNCTIONAL<br>TEST |   |  |  |
|-----|-----|---|---------|------------------------|-------------------------------|---|--|--|
| 1.  | TR  | TAXIAL TIME-HISTORY ACCELEROGRAPHS  |         |                        |                               |   |  |  |
|     | a.  | Containment Mat. el.<br>692'-11"  | M*      | REE                    | SA                            | 1 |  |  |
|     | b.  | Containment Operating floor el. 767'-10"                                      | M*      | REX                    | SA                            | 1 |  |  |
|     | c.  | Switchyard  | M*      | R                      | SA                            |   |  |  |
|     | d.  | Containment Building - Steam<br>Generator Support Cubicle<br>No. 1 el. 718'6" | N/A     | READE                  | N/A                           | 1 |  |  |
|     | e.  | Aux. Building - at center of Mat, el 710'6"                                   | N/A     | R                      | N/A                           |   |  |  |
|     | f.  | Aux. Building - at base of 480 volt MCC (MCC-2-E03), el. 755'6"               | N/A     | R .                    | N/A                           |   |  |  |
| 2.  | TRI | TRIAXIAL PEAK ACCELEROGRAPHS  |         |                        |                               |   |  |  |
|     | a.  | Containment Building -<br>RHS heat exchanger (2RHS-E21A)<br>el. 715'-6"       | N/A     | REX                    | N/A                           | 1 |  |  |
|     | b.  | Containment Building -Six inch<br>SI pipe (2SIS-006-269-1(A))<br>el. 741'-5"  | N/A     | Rex                    | N/A                           | 1 |  |  |
|     | c.  | Aux. Building - MCC-2E03<br>el 755'-6"  | N/A     | R                      | N/A                           |   |  |  |
| 3.  | TRI | AXIAL SEISMIC SWITCHES  |         |                        |                               |   |  |  |
|     | a.  | Containment mat   | N/A     | N/A                    | REDE                          | 1 |  |  |
| 4.  | RES | RESPONSE SPECTRUM ANALYZER  |         |                        |                               |   |  |  |
|     | a.  | Control Room  | N/A     | R                      | N/A                           |   |  |  |

\*Except seismic trigger

\*\*The specified surveillance interval during the first fuel cycle may be extended to coincide with completion of the first refueling outage.







# BUPS - 2 LICENSING REQUIREMENTS MANUAL BAJES

B 3.4 SEISMIC INSTRUMENTATION (monitoring)

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility and is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes."