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10 CFR 50.90

October 6, 2003

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Peach Bottom Atomic Power Station, Units 2 & 3  
Facility Operating License Nos. DPR-44 and DPR-56  
NRC Docket Nos. 50-277 and 50-278

**Subject:** Supplement to the Request for License Amendments Related to Application of Alternative Source Term, dated July 14, 2003

**References:** (1) Letter from M. P. Gallagher (Exelon Generation Company, LLC) to US NRC, dated July 14, 2003

(2) Technical Specification Task Force (TSTF) Traveler, TSTF-51, "Revise Containment Requirements During Handling of Irradiated Fuel and Core Alterations," Revision 2

This letter is being sent to supplement the License Amendment Request (LAR) to support application of an alternative source term (AST) methodology (Reference 1) at Peach Bottom Atomic Power Station (PBAPS), Units 2 & 3. This LAR proposed certain TS and TS Bases changes for PBAPS Units 2 & 3 as part of implementing an AST methodology.

The TS & Bases changes, proposed by this LAR, are consistent with Technical Specification Task Force Traveler (TSTF)-51, Revision 2 (Reference 2). TSTF-51, Revision 2, was approved by the NRC on November 1, 1999. TSTF-51 changes the TS operability requirements for certain engineered safety features such that they are not required after sufficient radioactive decay has occurred to ensure that offsite doses remain within limits.

In response to a comment from an NRC technical reviewer, the following changes to the PBAPS AST LAR (Reference 1) are proposed:

- 1) Units 2 & 3 TS Bases pages 3.7-17, 3.8-22, 3.8-38, and 3.8-70 will add the definition of "recently irradiated fuel" (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).
- 2) The PBAPS Units 2 & 3 TS Bases Markup Inserts will be revised.

These additional TS Bases changes are consistent with TSTF-51, Revision 2 (Reference 2).

ADD  
AD17

Supplement to the Request for License Amendments  
Related to Application of Alternative Source Term, dated July 14, 2003  
October 6, 2003  
Page 2

Attachment 1 to this supplemental letter provides the revised TS Bases markups and TS Bases Markup Inserts pages.

Attachment 2 to this supplemental letter provides the camera-ready TS Bases pages.

There is no impact to the No Significant Hazards Consideration submitted in the Reference 1 letter.

There are no additional commitments contained within this letter.

If you have any questions or require additional information, please contact me at (610) 765- 5664.

I declare under penalty of perjury that the foregoing is true and correct.

Respectfully,

Executed on 10/06/03

  
Michael P. Gallagher  
Director, Licensing and Regulatory Affairs

Attachments: 1. Revised TS Bases Markups and TS Bases Markup Inserts pages  
2. Camera-ready TS Bases pages

cc: H. J. Miller, Administrator, Region I, USNRC  
C. Smith, USNRC Senior Resident Inspector, PBAPS  
G. Wunder, Senior Project Manager, USNRC (by FedEx)  
R. R. Janati - Commonwealth of Pennsylvania

**ATTACHMENT 1**

**PEACH BOTTOM ATOMIC POWER STATION  
UNITS 2 AND 3**

**Docket Nos. 50-277  
50-278**

**License Nos. DPR-44  
DPR-56**

**Supplement to License Amendment Request for  
"PBAPS Alternative Source Term Implementation",  
dated July 14, 2003**

**Markup of Technical Specification Bases Pages**

***(For information only)***

**UNITS 2 & 3**

**B 3.7-17**

**B 3.8-22**

**B 3.8-38**

**B 3.8-70**

## PBAPS Units 2 and 3 Technical Specification Bases Markup Inserts

### INSERT A {pg. B 3.6-29}

Total leakage through all four main steam lines must be  $\leq 250$  scfh, and  $\leq 100$  scfh for any one steam line, when tested at  $\geq 25$  psig. The analysis in Reference 1 is based on treatment of MSIV leakage as secondary containment bypass leakage, independent of the primary to secondary containment leakage analyzed at  $L_a$ . The Frequency is in accordance with the Primary Containment Leakage Rate Testing Program.

### INSERT B {pg. B 3.1-39}

The SLC System is also used to maintain suppression pool pH at or above 7 following a loss of coolant accident (LOCA) involving significant fission product releases. Maintaining suppression pool pH levels at or above 7 following an accident ensures that iodine will be retained in the suppression pool water.

### INSERT C {pg. B 3.1-41}

In MODES 1, 2, and 3, the SLC System must be OPERABLE to ensure that offsite doses remain within 10 CFR 50.67 (Ref. 3) limits following a LOCA involving significant fission product releases. The SLC System is designed to maintain suppression pool pH at or above 7 following a LOCA to ensure that iodine will be retained in the suppression pool water.

### INSERT D {pg. B 3.3-156}

. Both channels are also required to be OPERABLE in MODES 1, 2, and 3, since the SLC System is also designed to maintain suppression pool pH above 7 following a LOCA to ensure that iodine will be retained in the suppression pool water. These

### INSERT E {pg. B 3.6-73}

The function of the secondary containment is to receive fission products that may leak from primary containment or from systems in secondary containment following a Design Basis Accident (DBA) and, in conjunction with the Standby Gas Treatment System (SGT) and closure of certain valves whose lines penetrate the secondary containment, to provide for elevated release through the Main Stack.

### INSERT F {pg. B 3.6-76}

The SGT System exhausts the secondary containment atmosphere to the environment through the elevated release point provided by the Main Stack.

To ensure that this exhaust pathway is used, SR 3.6.4.1.3

INSERT G {pg. B 3.6-85}

The primary function of the SGT System is to ensure that radioactive materials that leak from primary containment into the secondary containment following a Design Basis Accident (DBA) are discharged through the elevated release provided by the Main Stack.

INSERT H {pg. B 3.6-85}

These filters are not credited in any DBA analysis.

INSERT I {pg. B 3.6-86}

The design basis for the SGT System is to mitigate the consequences of a loss of coolant accident by providing a controlled, elevated release path. The SGT system also provides this function for OPDRVs. For all events where required, the SGT System automatically initiates to reduce, via an elevated release, the consequences of radioactive material released to the environment.

The HEPA filter and charcoal adsorber provided in the SGT System are not credited for any DBA analysis.

INSERT J {pg. B 3.6-90}

The only credited safety function of the SGT System is to provide a secondary containment vacuum sufficient to assure that discharges from the secondary containment will be through the Main Stack. The VFTP test 5.5.7.d. provides verification that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is acceptable. SR 3.6.4.1.3 and SR 3.6.4.1.4 provide assurance that sufficient vacuum in the secondary containment is established with the time period as used in the DBA LOCA analysis.

INSERT K {pg. B 3.7-16}

Additionally, the MCREV System is designed to maintain the control room environment for a 30-day occupancy after a DBA without exceeding 5 rem TEDE.

INSERT L {pg. B 3.7-16}

The MCREV System is credited as operating following a loss of coolant accident. The MCREV System is not credited in the analysis of the fuel handling accident, the main steam line break, or the control rod drop accident,

INSERT M {pg B 3.6-74}

Secondary containment is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT N {pg B 3.6-87}

The SGT System is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT P {pg B 3.6-79}

SCIVs are only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT Q {pg B 3.8-40}

involving recently irradiated fuel. AC electrical power is only required to mitigate fuel handling accidents involving recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours)

INSERT R {PG B 3.8-42, 43, 72, 73, 74, 94, and 95}

involving recently irradiated fuel

INSERT S {pg B 3.8-94}

AC and DC electrical power are only required to mitigate fuel handling accidents involving recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT T {pg B 3.8-74}

DC electrical power is only required to mitigate fuel handling accidents involving recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT U {pg B 3.6-75, 3.6-82, 3.6-88, 3.6-89, 3.7-18, 3.7-19}

, since the movement of recently irradiated fuel can only be performed in MODES 4 and 5.

INSERT V {pg B 3.8-44, 74}

The Required Actions are modified by a Note indicating that LCO 3.0.3 does not apply since the movement of recently irradiated fuel can only be performed in MODES 4 and 5.

INSERT W {pg B 3.3-174}

The Functions are only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT X {pg B 3.3-182}

The MCREV System is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT Y {pg B 3.1-40}

The sodium pentaborate solution in the SLC System is also used, post-LOCA, to maintain ECCS fluid pH above 7. The system parameters used in the calculation are the Boron-10 minimum mass of 162.7 lbm, and an upper bound Boron-10 enrichment of 65%.

INSERT Z {pg B 3.7-17}

The MCREV System is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

INSERT AA {pg B 3.8-22, 3.8-38, 3.8-70}

(i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

BASES

LCO  
(continued)

- b. HEPA filter and charcoal adsorbers are not excessively restricting flow and are capable of performing their filtration functions; and
- c. Ductwork, valves, and dampers are OPERABLE, and air flow can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, and ductwork. Temporary seals may be used to maintain the boundary. In addition, an access door may be opened provided the ability to pressurize the control room is maintained and the capability exists to close the affected door in an expeditious manner.

APPLICABILITY

LOCA

In MODES 1, 2, and 3, the MCREV System must be OPERABLE to control operator exposure during and following a ~~(DBA)~~ since the ~~(DBA)~~ could lead to a fission product release.

LOCA

In MODES 4 and 5, the probability and consequences of a ~~(DBA)~~ are reduced because of the pressure and temperature limitations in these MODES. Therefore, maintaining the MCREV System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

- a. During operations with potential for draining the reactor vessel (OPDRVs);

and

~~b. During CORE ALTERATIONS; and~~

recently

b.

7.

During movement of irradiated fuel assemblies in the secondary containment.

ACTIONS

A.1

INSERT Z

With one MCREV subsystem inoperable, the inoperable MCREV subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE MCREV subsystem is adequate to maintain control room temperature and to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could

(continued)



BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.3 (continued)

Note 1 modifies this Surveillance to indicate that diesel engine runs for this Surveillance may include gradual loading, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

Note 2 modifies this Surveillance by stating that momentary transients because of changing bus loads do not invalidate this test. Similarly, momentary power factor transients above the limit do not invalidate the test.

Note 3 indicates that this Surveillance should be conducted on only one DG at a time in order to avoid common cause failures that might result from offsite circuit or grid perturbations.

Note 4 stipulates a prerequisite requirement for performance of this SR. A successful DG start must precede this test to credit satisfactory performance.

To minimize testing of the DGs, Note 5 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units, with the DG synchronized to the 4 kV emergency bus of Unit 2 for one periodic test and synchronized to the 4 kV emergency bus of Unit 3 during the next periodic test. This is allowed since the main purpose of the Surveillance, to ensure DG OPERABILITY, is still being verified on the proper frequency, and each unit's breaker control circuitry, which is only being tested every second test (due to the staggering of the tests), historically have a very low failure rate. Note 5 modifies the specified frequency for each unit's breaker control circuitry to be 62 days. If the DG fails one of these Surveillances, the DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit. In addition, if the test is scheduled to be performed on Unit 3, and the Unit 3 TS allowance that provides an exception to performing the test is used (i.e., when Unit 3 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 3 SR 3.8.2.1 provides an exception to performing this test) or if it is not preferable to perform the test on a unit due to operational concerns (however time is not to exceed 62 days plus grace), then the test shall be performed synchronized to the Unit 2 4 kV emergency bus.

recently

(continued)

BASES

**SURVEILLANCE  
REQUIREMENTS**

SR 3.8.1.20 (continued)

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 8). This SR is modified by two Notes. The reason for Note 1 is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations. To minimize testing of the DGs, Note 2 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units. This is allowed since the main purpose of the Surveillance can be met by performing the test on either unit. If a DG fails one of these Surveillances, a DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit.

SR 3.8.1.21

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.1.1 through SR 3.8.1.20) are applied only to the Unit 2 AC sources. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 3 AC sources are governed by the applicable Unit 3 Technical Specifications. Performance of the applicable Unit 3 Surveillances will satisfy Unit 3 requirements, as well as satisfying this Unit 2 Surveillance Requirement. Six exceptions are noted to the Unit 3 SRs of LCO 3.8.1. SR 3.8.1.8 is excepted when only one Unit 3 offsite circuit is required by the Unit 2 Specification, since there is not a second circuit to transfer to. SR 3.8.1.12, SR 3.8.1.13, SR 3.8.1.17, SR 3.8.1.18 (ECCS load block requirements only), and SR 3.8.1.19 are excepted since these SRs test the Unit 3 ECCS initiation signal, which is not needed for the AC sources to be OPERABLE on Unit 2.

The Frequency required by the applicable Unit 3 SR also governs performance of that SR for Unit 2.

As Noted, if Unit 3 is in MODE 4 or 5, or moving <sup>recently</sup> irradiated fuel assemblies in the secondary containment, the Note to Unit 3 SR 3.8.2.1 is applicable. This ensures that a Unit 2 SR will not require a Unit 3 SR to be performed, when the

(continued)

INSERT AA

BASES

**SURVEILLANCE  
REQUIREMENTS**

**SR 3.8.4.8 (continued)**

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would remove a required DC electrical power subsystem from service, perturb the electrical distribution system, and challenge safety systems. Credit may be taken for unplanned events that satisfy the Surveillance. The DC batteries of the other unit are exempted from this restriction since they are required to be OPERABLE by both units and the Surveillance cannot be performed in the manner required by the Note without resulting in a dual unit shutdown.

**SR 3.8.4.9**

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.4.1 through SR 3.8.4.8) are applied only to the Unit 2 DC electrical power subsystems. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 3 DC electrical power subsystems are governed by the Unit 3 Technical Specifications. Performance of the applicable Unit 3 Surveillances will satisfy Unit 3 requirements, as well as satisfying this Unit 2 Surveillance Requirement.

The Frequency required by the applicable Unit 3 SR also governs performance of that SR for Unit 2. As Noted, if Unit 3 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 3 SR 3.8.5.1 is applicable. This ensures that a Unit 2 SR will not require a Unit 3 SR to be performed, when the Unit 3 Technical Specifications exempts performance of a Unit 3 SR. (However, as stated in the Unit 3 SR 3.8.5.1 Note, while performance of the SR is exempted, the SR still must be met.)

**REFERENCES**

1. UFSAR, Chapter 14.
2. "Proposed IEEE Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations," June 1969.
3. IEEE Standard 485, 1983.

**INSERT AA**

(continued)

# BASES

LCO  
(continued)

- b. HEPA filter and charcoal adsorbers are not excessively restricting flow and are capable of performing their filtration functions; and
- c. Ductwork, valves, and dampers are OPERABLE, and air flow can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, and ductwork. Temporary seals may be used to maintain the boundary. In addition, an access door may be opened provided the ability to pressurize the control room is maintained and the capability exists to close the affected door in an expeditious manner.

## APPLICABILITY

In MODES 1, 2, and 3, the MCREV System must be OPERABLE to control operator exposure during and following a DBA, since the DBA could lead to a fission product release.

Loca

Loca

In MODES 4 and 5, the probability and consequences of a DBA are reduced because of the pressure and temperature limitations in these MODES. Therefore, maintaining the MCREV System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

- a. During operations with potential for draining the reactor vessel (OPDRVs);

AND

~~b. During CORE ALTERATIONS; and~~

b.

During movement of irradiated fuel assemblies in the secondary containment.

RECENTLY

## ACTIONS

A.1

INSERT Z

With one MCREV subsystem inoperable, the inoperable MCREV subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE MCREV subsystem is adequate to maintain control room temperature and to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could

(continued)

BASES

**SURVEILLANCE  
REQUIREMENTS**

SR 3.8.1.3 (continued)

Note 1 modifies this Surveillance to indicate that diesel engine runs for this Surveillance may include gradual loading, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

Note 2 modifies this Surveillance by stating that momentary transients because of changing bus loads do not invalidate this test. Similarly, momentary power factor transients above the limit do not invalidate the test.

Note 3 indicates that this Surveillance should be conducted on only one DG at a time in order to avoid common cause failures that might result from offsite circuit or grid perturbations.

Note 4 stipulates a prerequisite requirement for performance of this SR. A successful DG start must precede this test to credit satisfactory performance.

To minimize testing of the DGs, Note 5 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units, with the DG synchronized to the 4 kV emergency bus of Unit 3 for one periodic test and synchronized to the 4 kV emergency bus of Unit 2 during the next periodic test. This is allowed since the main purpose of the Surveillance, to ensure DG OPERABILITY, is still being verified on the proper frequency, and each unit's breaker control circuitry, which is only being tested every second test (due to the staggering of the tests), historically have a very low failure rate. Note 5 modifies the specified frequency for each unit's breaker control circuitry to be 62 days. If the DG fails one of these Surveillances, the DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit. In addition, if the test is scheduled to be performed on Unit 2, and the Unit 2 TS allowance that provides an exception to performing the test is used (i.e., when Unit 2 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 2 SR 3.8.2.1 provides an exception to performing this test) or if it is not preferable to perform the test on a unit due to operational concerns (however time is not to exceed 62 days plus grace), then the test shall be performed synchronized to the Unit 3 4 kV emergency bus.

RECENTLY

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.20 (continued)

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 8). This SR is modified by two Notes. The reason for Note 1 is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations. To minimize testing of the DGs, Note 2 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units. This is allowed since the main purpose of the Surveillance can be met by performing the test on either unit. If a DG fails one of these Surveillances, a DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit.

SR 3.8.1.21

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.1.1 through SR 3.8.1.20) are applied only to the Unit 3 AC sources. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 2 AC sources are governed by the applicable Unit 2 Technical Specifications. Performance of the applicable Unit 2 Surveillances will satisfy Unit 2 requirements, as well as satisfying this Unit 3 Surveillance Requirement. Six exceptions are noted to the Unit 2 SRs of LCO 3.8.1. SR 3.8.1.8 is excepted when only one Unit 2 offsite circuit is required by the Unit 3 Specification, since there is not a second circuit to transfer to. SR 3.8.1.12, SR 3.8.1.13, SR 3.8.1.17, SR 3.8.1.18 (ECCS load block requirements only), and SR 3.8.1.19 are excepted since these SRs test the Unit 2 ECCS initiation signal, which is not needed for the AC sources to be OPERABLE on Unit 3.

The Frequency required by the applicable Unit 2 SR also governs performance of that SR for Unit 3.

As Noted, if Unit 2 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 2 SR 3.8.2.1 is applicable. This ensures that a Unit 3 SR will not require a Unit 2 SR to be performed, when the

(continued)

BASES

**SURVEILLANCE  
REQUIREMENTS**

**SR 3.8.4.8 (continued)**

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would remove a required DC electrical power subsystem from service, perturb the electrical distribution system, and challenge safety systems. Credit may be taken for unplanned events that satisfy the Surveillance. The DC batteries of the other unit are exempted from this restriction since they are required to be OPERABLE by both units and the Surveillance cannot be performed in the manner required by the Note without resulting in a dual unit shutdown.

**SR 3.8.4.9**

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.4.1 through SR 3.8.4.8) are applied only to the Unit 3 DC electrical power subsystems. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 2 DC electrical power subsystems are governed by the Unit 2 Technical Specifications. Performance of the applicable Unit 2 Surveillances will satisfy Unit 2 requirements, as well as satisfying this Unit 3 Surveillance Requirement.

The Frequency required by the applicable Unit 2 SR also governs performance of that SR for Unit 3. As Noted, if Unit 2 is in MODE 4 or 5, or moving irradiated fuel assemblies in the secondary containment, the Note to Unit 2 SR 3.8.5.1 is applicable. This ensures that a Unit 3 SR will not require a Unit 2 SR to be performed, when the Unit 2 Technical Specifications exempts performance of a Unit 2 SR. (However, as stated in the Unit 2 SR 3.8.5.1 Note, while performance of the SR is exempted, the SR still must be met.)

**REFERENCES**

1. UFSAR, Chapter 14.
2. "Proposed IEEE Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations," June 1969.
3. IEEE Standard 485, 1983.

RECENTLY  
INSERT AA

(continued)

**ATTACHMENT 2**

**PEACH BOTTOM ATOMIC POWER STATION  
UNITS 2 AND 3**

**Docket Nos. 50-277  
50-278**

**License Nos. DPR-44  
DPR-56**

**Supplement to License Amendment Request for  
"PBAPS Alternative Source Term Implementation",  
dated July 14, 2003**

**Camera-ready Technical Specification Bases Pages**

***(For information only)***

**UNITS 2 & 3**

**B 3.7-17**

**B 3.8-22**

**B 3.8-38**

**B 3.8-70**



## BASES

### LCO (continued)

- b. HEPA filter and charcoal adsorbers are not excessively restricting flow and are capable of performing their filtration functions; and
- c. Ductwork, valves, and dampers are OPERABLE, and air flow can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, and ductwork. Temporary seals may be used to maintain the boundary. In addition, an access door may be opened provided the ability to pressurize the control room is maintained and the capability exists to close the affected door in an expeditious manner.

### APPLICABILITY

In MODES 1, 2, and 3, the MCREV System must be OPERABLE to control operator exposure during and following a LOCA, since the LOCA could lead to a fission product release.

In MODES 4 and 5, the probability and consequences of a LOCA are reduced because of the pressure and temperature limitations in these MODES. Therefore, maintaining the MCREV System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

- a. During operations with potential for draining the reactor vessel (OPDRVs); and
- b. During movement of recently irradiated fuel assemblies in the secondary containment. The MCREV System is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

### ACTIONS

#### A.1

With one MCREV subsystem inoperable, the inoperable MCREV subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE MCREV subsystem is adequate to maintain control room temperature and to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.3 (continued)

Note 1 modifies this Surveillance to indicate that diesel engine runs for this Surveillance may include gradual loading, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

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Note 3 indicates that this Surveillance should be conducted on only one DG at a time in order to avoid common cause failures that might result from offsite circuit or grid perturbations.

Note 4 stipulates a prerequisite requirement for performance of this SR. A successful DG start must precede this test to credit satisfactory performance.

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(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.20 (continued)

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 8). This SR is modified by two Notes. The reason for Note 1 is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations. To minimize testing of the DGs, Note 2 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units. This is allowed since the main purpose of the Surveillance can be met by performing the test on either unit. If a DG fails one of these Surveillances, a DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit.

SR 3.8.1.21

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.1.1 through SR 3.8.1.20) are applied only to the Unit 2 AC sources. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 3 AC sources are governed by the applicable Unit 3 Technical Specifications. Performance of the applicable Unit 3 Surveillances will satisfy Unit 3 requirements, as well as satisfying this Unit 2 Surveillance Requirement. Six exceptions are noted to the Unit 3 SRs of LCO 3.8.1. SR 3.8.1.8 is excepted when only one Unit 3 offsite circuit is required by the Unit 2 Specification, since there is not a second circuit to transfer to. SR 3.8.1.12, SR 3.8.1.13, SR 3.8.1.17, SR 3.8.1.18 (ECCS load block requirements only), and SR 3.8.1.19 are excepted since these SRs test the Unit 3 ECCS initiation signal, which is not needed for the AC sources to be OPERABLE on Unit 2.

The Frequency required by the applicable Unit 3 SR also governs performance of that SR for Unit 2.

As Noted, if Unit 3 is in MODE 4 or 5, or moving recently irradiated fuel assemblies in the secondary containment (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours), the Note to Unit 3 SR 3.8.2.1 is applicable. This ensures that a Unit 2 SR will not require a Unit 3 SR to be performed, when the

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.4.8 (continued)

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would remove a required DC electrical power subsystem from service, perturb the electrical distribution system, and challenge safety systems. Credit may be taken for unplanned events that satisfy the Surveillance. The DC batteries of the other unit are exempted from this restriction since they are required to be OPERABLE by both units and the Surveillance cannot be performed in the manner required by the Note without resulting in a dual unit shutdown.

SR 3.8.4.9

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.4.1 through SR 3.8.4.8) are applied only to the Unit 2 DC electrical power subsystems. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 3 DC electrical power subsystems are governed by the Unit 3 Technical Specifications. Performance of the applicable Unit 3 Surveillances will satisfy Unit 3 requirements, as well as satisfying this Unit 2 Surveillance Requirement.

The Frequency required by the applicable Unit 3 SR also governs performance of that SR for Unit 2. As Noted, if Unit 3 is in MODE 4 or 5, or moving recently irradiated fuel assemblies in the secondary containment (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours), the Note to Unit 3 SR 3.8.5.1 is applicable. This ensures that a Unit 2 SR will not require a Unit 3 SR to be performed, when the Unit 3 Technical Specifications exempts performance of a Unit 3 SR. (However, as stated in the Unit 3 SR 3.8.5.1 Note, while performance of the SR is exempted, the SR still must be met.)

REFERENCES

1. UFSAR, Chapter 14.
2. "Proposed IEEE Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations," June 1969.
3. IEEE Standard 485, 1983.

(continued)

## BASES

### LCO (continued)

- b. HEPA filter and charcoal adsorbers are not excessively restricting flow and are capable of performing their filtration functions; and
- c. Ductwork, valves, and dampers are OPERABLE, and air flow can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, and ductwork. Temporary seals may be used to maintain the boundary. In addition, an access door may be opened provided the ability to pressurize the control room is maintained and the capability exists to close the affected door in an expeditious manner.

### APPLICABILITY

In MODES 1, 2, and 3, the MCREV System must be OPERABLE to control operator exposure during and following a LOCA, since the LOCA could lead to a fission product release.

In MODES 4 and 5, the probability and consequences of a LOCA are reduced because of the pressure and temperature limitations in these MODES. Therefore, maintaining the MCREV System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

- a. During operations with potential for draining the reactor vessel (OPDRVs); and
- b. During movement of recently irradiated fuel assemblies in the secondary containment. The MCREV System is only required to be OPERABLE during handling of recently irradiated fuel (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours).

### ACTIONS

#### A.1

With one MCREV subsystem inoperable, the inoperable MCREV subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE MCREV subsystem is adequate to maintain control room temperature and to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.3 (continued)

Note 1 modifies this Surveillance to indicate that diesel engine runs for this Surveillance may include gradual loading, as recommended by the manufacturer, so that mechanical stress and wear on the diesel engine are minimized.

Note 2 modifies this Surveillance by stating that momentary transients because of changing bus loads do not invalidate this test. Similarly, momentary power factor transients above the limit do not invalidate the test.

Note 3 indicates that this Surveillance should be conducted on only one DG at a time in order to avoid common cause failures that might result from offsite circuit or grid perturbations.

Note 4 stipulates a prerequisite requirement for performance of this SR. A successful DG start must precede this test to credit satisfactory performance.

To minimize testing of the DGs, Note 5 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units, with the DG synchronized to the 4 kV emergency bus of Unit 3 for one periodic test and synchronized to the 4 kV emergency bus of Unit 2 during the next periodic test. This is allowed since the main purpose of the Surveillance, to ensure DG OPERABILITY, is still being verified on the proper frequency, and each unit's breaker control circuitry, which is only being tested every second test (due to the staggering of the tests), historically have a very low failure rate. Note 5 modifies the specified frequency for each unit's breaker control circuitry to be 62 days. If the DG fails one of these Surveillances, the DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit. In addition, if the test is scheduled to be performed on Unit 2, and the Unit 2 TS allowance that provides an exception to performing the test is used (i.e., when Unit 2 is in MODE 4 or 5, or moving recently irradiated fuel assemblies in the secondary containment (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours), the Note to Unit 2 SR 3.8.2.1 provides an exception to performing this test) or if it is not preferable to perform the test on a unit due to operational concerns (however time is not to exceed 62 days plus grace), then the test shall be performed synchronized to the Unit 3 4 kV emergency bus.

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.1.20 (continued)

The 10 year Frequency is consistent with the recommendations of Regulatory Guide 1.108 (Ref. 8). This SR is modified by two Notes. The reason for Note 1 is to minimize wear on the DG during testing. For the purpose of this testing, the DGs must be started from standby conditions, that is, with the engine coolant and oil continuously circulated and temperature maintained consistent with manufacturer recommendations. To minimize testing of the DGs, Note 2 allows a single test (instead of two tests, one for each unit) to satisfy the requirements for both units. This is allowed since the main purpose of the Surveillance can be met by performing the test on either unit. If a DG fails one of these Surveillances, a DG should be considered inoperable on both units, unless the cause of the failure can be directly related to only one unit.

SR 3.8.1.21

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.1.1 through SR 3.8.1.20) are applied only to the Unit 3 AC sources. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 2 AC sources are governed by the applicable Unit 2 Technical Specifications. Performance of the applicable Unit 2 Surveillances will satisfy Unit 2 requirements, as well as satisfying this Unit 3 Surveillance Requirement. Six exceptions are noted to the Unit 2 SRs of LCO 3.8.1. SR 3.8.1.8 is excepted when only one Unit 2 offsite circuit is required by the Unit 3 Specification, since there is not a second circuit to transfer to. SR 3.8.1.12, SR 3.8.1.13, SR 3.8.1.17, SR 3.8.1.18 (ECCS load block requirements only), and SR 3.8.1.19 are excepted since these SRs test the Unit 2 ECCS initiation signal, which is not needed for the AC sources to be OPERABLE on Unit 3.

The Frequency required by the applicable Unit 2 SR also governs performance of that SR for Unit 3.

As Noted, if Unit 2 is in MODE 4 or 5, or moving recently irradiated fuel assemblies in the secondary containment (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours), the Note to Unit 2 SR 3.8.2.1 is applicable. This ensures that a Unit 3 SR will not require a Unit 2 SR to be performed, when the

(continued)

BASES

SURVEILLANCE  
REQUIREMENTS

SR 3.8.4.8 (continued)

This SR is modified by a Note. The reason for the Note is that performing the Surveillance would remove a required DC electrical power subsystem from service, perturb the electrical distribution system, and challenge safety systems. Credit may be taken for unplanned events that satisfy the Surveillance. The DC batteries of the other unit are exempted from this restriction since they are required to be OPERABLE by both units and the Surveillance cannot be performed in the manner required by the Note without resulting in a dual unit shutdown.

SR 3.8.4.9

With the exception of this Surveillance, all other Surveillances of this Specification (SR 3.8.4.1 through SR 3.8.4.8) are applied only to the Unit 3 DC electrical power subsystems. This Surveillance is provided to direct that the appropriate Surveillances for the required Unit 2 DC electrical power subsystems are governed by the Unit 2 Technical Specifications. Performance of the applicable Unit 2 Surveillances will satisfy Unit 2 requirements, as well as satisfying this Unit 3 Surveillance Requirement.

The Frequency required by the applicable Unit 2 SR also governs performance of that SR for Unit 3. As Noted, if Unit 2 is in MODE 4 or 5, or moving recently irradiated fuel assemblies in the secondary containment (i.e., fuel that has occupied part of a critical reactor core within the previous 24 hours), the Note to Unit 2 SR 3.8.5.1 is applicable. This ensures that a Unit 3 SR will not require a Unit 2 SR to be performed, when the Unit 2 Technical Specifications exempts performance of a Unit 2 SR. (However, as stated in the Unit 2 SR 3.8.5.1 Note, while performance of the SR is exempted, the SR still must be met.)

REFERENCES

1. UFSAR, Chapter 14.
2. "Proposed IEEE Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations," June 1969.
3. IEEE Standard 485, 1983.

(continued)



# Xerox Document Centre 332/340 ST

## Scan to File Confirmation Report

# XEROX

### Job Information

Device Name: IP56  
Date: 10/06/03  
Time: 15:02:05

### Template Information

Name: @default.xst  
Description: Xerox  
Owner:

### Scan Settings

#### Status

Pages Scanned: 3  
Results: Completed

#### Basic

Original Type: Auto  
Auto Exposure: Off  
Lighten/Darken: Normal  
Sides Imaged: One Sided  
Resolution: 300 x 300

#### Image Size

Original Size: Auto Detect  
Stored Size: Same as Original

#### Reduce/Enlarge

Aspect Ratio: Normal

#### Edge/Border Erase

Erase: Border: 0.00"

### Fax Settings

#### Status

Results: Fax Service Not Requested

#### Time

Immediate/Delayed:

#### Destination

Phone Number(s):

### File Settings

#### Status

Pages Filed: 1  
Results: Completed

#### Login

Protocol: FTP over TCP/IP  
Server/Host: 159.214.4.56  
NDS Tree:  
NDS Context:  
Login Name: xerox

#### Destination

Volume:  
Path:  
Folder: 06150205

#### Attributes

Policy: New Auto Generate

### Copy Settings

Local Copies: 0

# Xerox Document Centre 332/340 ST

## Scan to File Confirmation Report

# XEROX

### Job Information

Device Name: IP56  
Date: 10/06/03  
Time: 15:06:46

### Template Information

Name: @default.xst  
Description: Xerox  
Owner:

### Scan Settings

#### Status

Pages Scanned: 25  
Results: Completed

#### Basic

Original Type: Auto  
Auto Exposure: Off  
Lighten/Darken: Normal  
Sides Imaged: One Sided  
Resolution: 300 x 300

#### Image Size

Original Size: Auto Detect  
Stored Size: Same as Original

#### Reduce/Enlarge

Aspect Ratio: Normal

#### Edge/Border Erase

Erase: Border: 0.00"

### Fax Settings

#### Status

Results: Fax Service Not Requested

#### Time

Immediate/Delayed:

#### Destination

Phone Number(s):

### File Settings

#### Status

Pages Filed: 1  
Results: Completed

#### Login

Protocol: FTP over TCP/IP  
Server/Host: 159.214.4.36  
NDS Tree:  
NDS Context:  
Login Name: xerox

#### Destination

Volume:  
Path:  
Folder: 06150646

#### Attributes

Policy: New Auto Generate

### Copy Settings

Local Copies: 0