Station Support Department

10CFR50.90

PECO ENERGY

PECO Energy Company
Nuclear Group Headquarters
965 Chesterbrook Boulevard
Wayne, PA 19087-5691

July 7, 1995

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: Peach Bottom Atomic Power Station, Units 2 and 3
Revision B to TSCR 93-16
Conversion to Improved Technical Specifications

References: (1) Letter from G. A. Hunger, Jr. (PECO Energy) to USNRC dated September 29, 1994

Dear Sir:

In Reference (1), PECO Energy Company submitted Technical Specifications Change Request (TSCR) 93-16, requesting changes to Appendixes A and B of the Facility Operating Licenses for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3. This TSCR proposed an overall conversion of the current PBAPS Technical Specifications (TS) to the Improved Technical Specifications (ITS), as contained in NUREG 1433, "Standard Technical Specifications, General Electric Plants, BWR/4."

Revision B to TSCR 93-16 is the result of incorporation of NRC review comments. Page insert and removal instructions have also been provided to facilitate updating TSCR 93-16 for Revision B.

200095

9507170001

XA 11/21/95

DF01

We have determined that this revision does not alter our evaluation of any of the 10CFR50.59 standards, and therefore, does not affect our conclusion that Revision B to TSCR 93-16 does not constitute an unreviewed safety question. We have determined that the proposed revision does not affect the conclusions of the No Significant Hazards Consideration and the Environmental Assessment.

If you have any questions, please contact us.

Very truly yours,

G. A. Hunger, Jr.

G. A. Hunger, Jr.,
Director - Licensing

TRL/

Affidavit, Enclosure

cc: T. T. Martin, Administrator, Region I, USNRC
W. L. Schmidt, USNRC Senior Resident Inspector, PBAPS
R. R. Janati, Commonwealth of Pennsylvania

COMMONWEALTH OF PENNSYLVANIA :

: ss.

COUNTY OF CHESTER :

W. H. Smith, III being first duly sworn, deposes and says:

That he is Vice President of PECO Energy Company; the Applicant herein; that he has read the attached Revision B to Technical Specifications Change Request No. 93-16 for changes to the Peach Bottom Facility Operating Licens s DPR-44 and DPR-56, and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

Vice President

Subscribed and sworn to
before me this 7th day
of July 1995.

Notary Public

Notarial Seal
Mary Lou Skrocki, Notary Public
Tredyffrin Twp., Chester County
My Commission Expires May 17, 1999
Member, Pennsylvania Association of Notaries

TSCR 93-16 REVISION B

Technical Specification Change Request (TSCR) 93-16 was submitted to the NRC on September 29, 1994. This TSCR proposed the overall conversion of the current Peach Bottom Atomic Power Station (PBAPS) Technical Specifications to the Improved Technical Specifications, as contained in NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4."

Revision B to TSCR 93-16 is the result of the incorporation of the resolution of NRC review comments. Replacement pages have been provided for each of the pages affected by the changes of Revision B. Page insert and removal instructions have also been provide to facilitate updating TSCR 93-16 for Revision B.

DISCUSSION/JUSTIFICATION:

The following discussions/justifications are provided for the attached Revision B changes.

1. Specification 3.1.3, Control Rod OPERABILITY, Required Action A.3, pages 3.1-8 and B3.1-16

   In the event of a stuck withdrawn control rod, one of the Required Actions (A.3) of Specification 3.1.3, Control Rod OPERABILITY, is to perform periodic tests of the control rod insertion capability of the withdrawn control rods to ensure a generic problem does not exist. The ITS Completion Time for Required Action A.3 is specified as "24 hours from discovery of THERMAL POWER greater than the low power setpoint (LPSP) of the RWM" to preclude not meeting the Completion Time if THERMAL POWER is increased above the LPSP of the RWM > 24 hours after the Condition is entered. The intent of this Required Action's Completion Time was to provide 24 hours to perform the SRs, after the capability to perform them exists (i.e., from discovery of Condition A concurrent with THERMAL POWER greater than the LPSP of the RWM) since, at power levels below the LPSP of the RWM, the notch insertions of the withdrawn control rods may not be compatible with the requirements of rod pattern control (LCO 3.1.6) and the RWM (LCO 3.3.2.1). The ITS Completion Time for Required Action A.3 allows the Required Action to not be performed if power is less than or equal to the LPSP, but restricts the time allowed to perform the required testing to no more than 24 hours after power is greater than the LPSP. Thus, if this Condition (one withdrawn control rod stuck) is entered during a startup while below the LPSP, the

1. Specification 3.1.3, Control Rod OPERABILITY, Required Action A.3, pages 3.1-8 and B3.1-16 (continued)

Required Action does not have to be performed. If power is then increased above the LPSP, the Required Action now becomes required and must be performed within 24 hours. If a subsequent power reduction places the plant below the LPSP prior to performing Required Action A.3, the 24 hour clock of Required Action A.3 still runs. If the 24 hour clock expires prior to increasing power above the LPSP, the Required Action must be considered not met within the associated Completion Time. This would require entry into Condition E, which requires a unit shutdown. This is inconsistent with the intent of the Completion Time of Required Action A.3, as discussed above, and the PBAPS Current Technical Specification (CTS) 4.3.A.2.a. Therefore, the Completion Time of Required Action A.3 has been revised to more clearly reflect the intent of this Completion Time (24 hours from discovery of Condition A, one withdrawn control rod stuck, concurrent with THERMAL POWER greater than the LPSP of the RWM), consistent with other similar requirements in the ITS.

Corresponding changes have also been made to the Bases for Required Action A.3 of Specification 3.1.3.

2. Specification 3.1.3, Control Rod OPERABILITY, Required Action B.1, pages 3.1-8 and B 3.1-17

In accordance with Specification 1.3 (Completion Times) once a Condition has been entered, subsequent components expressed in the Condition, discovered to be inoperable, will <u>not</u> result in separate entry into the Condition unless specifically stated in individual Specifications. Specification 3.1.3 has an exception (the Note to the ACTIONS) that allows completely separate re-entry into the Condition (for each control rod) and separate tracking of Completion Times are based on this re-entry. As a result, the Required Actions of the Condition continue to apply to each additional failure, with separate Completion Times based on each re-entry into the Condition. Specification 1.3 also states if situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion

2. Specification 3.1.3, Control Rod OPERABILITY, Required Action B.1, pages 3.1-8 and B 3.1-17 (continued)

Times are tracked for each Condition starting from the time of discovery of the situation that required entry into the Condition.

Required Action A.2 of Specification 3.1.3 (Control Rod OPERABILITY) requires, in the event one withdrawn control rod is stuck, the associated control rod drive (CRD) be disarmed within 2 hours. Required Action B.1 of Specification 3.1.3 requires, in the event of two or more stuck control rods, the associated CRD be disarmed within 2 hours. In accordance with Specification 1.3, if two or more withdrawn control rods are stuck, Condition A is entered separately for each withdrawn stuck control rod and the Required Actions of Condition A must be taken for each withdrawn stuck control rod. Specification 1.3 also requires Condition B to be entered concurrently for this situation and the Required Actions of Condition B taken. As a result, Required Action A.2 and Required Action B.1 (which provide the same requirements) must both be applied in the same time period for each withdrawn stuck control rod. Therefore, Required Action B.1 is deleted since the requirement to disarm the associated CRD when in Condition B is adequately addressed by Required Action A.2 and the requirements of Specification 1.3. A corresponding change to the Bases for Required Actions B.1 and B.2 of Specification 3.1.3 has also been made.

Corresponding changes have also been made to the CTS markups for Specification 3.1.3 on pages 2 of 10 and 3 of 10 (Unit 2) and on pages 7 of 10 and 8 of 10 (Unit 3), to the Discussion of Changes M_6 and L_5 for ITS 3.1.3 (pages 10 and 13), and to the 10CFR50.92 evaluations M_6 and L_5 for ITS 3.1.3 (pages 12, 13, and 38).

3. Specification 3.3.8.1, Loss of Power Instrumentation, ACTIONS, pages 3.3-61 through 3.3-63, 3.3-65, B3.3-188, and B3.3-190 through B3.3-195

In TSCR 93-16, PBAPS proposed in Specification 3.3.8.1, Loss of Power Instrumentation, that some of the Loss of Power (LOP) instrumentation Functions associated with 4 kV emergency buses (Function 3, Degraded Voltage High Setting, and Function 5, Degraded Voltage Non-LOCA) be allowed to be out of service for a period of 30 days prior to taking

3. Specification 3.3.8.1, Loss of Power Instrumentation, ACTIONS, pages 3.3-61 through 3.3-63, 3.3-65, B3.3-188, and B3.3-190 through B3.3-195 (continued)

Required Actions (placing the affected channel in trip). The NRC objected to the proposed out of service times for these Functions on the basis that, not withstanding the redundancy provided by LOP instrumentation on other 4 kV emergency buses, 30 days was an excessive period of time to expose the plant to potential degraded grid voltage conditions.

Following discussions between PECO Energy and the NRC concerning the history, design and supporting analyses for the LOP instrumentation at Peach Bottom, the NRC and PECO Energy agreed the Completion Times for the LOP Instrumentation in Specification 3.3.8.1 for the following Conditions were acceptable:

14 day Completion Time (Condition A)

1 or 2-Function 3 channels inoperable (one bus); or

1 or 2-Function 5 channels inoperable (one bus).

24 hour Completion Time (Condition B)

2-Function 3 channels inoperable (separate buses); or

2-Function 5 channels inoperable (separate buses); or

1-Function 3 channel and 1-Function 5 channel inoperable (separate buses).

1 hour Completion Time (Condition C)

1 or more channels of the other Functions (1, 2, or 4) inoperable (any combination and any number of buses); or

1-Function 3 channel and 1-Function 5 channel inoperable (one bus); or

3 or more Function 3 and Function 5 channels inoperable (any combination and any number of buses).

4. LCO 3.4.1, Recirculation Loops Operating, Note for Single Recirculation Loop Operation, pages 3.4-1 and B3.4-5 (continued)

proposed Note to LCO 3.4.1 states "Required limit modifications for single recirculation loop operation may be delayed for up to 12 hours after transition from two recirculation loop operation to single loop operation." As a result, modification of limits for single loop operation would now be done without the need to enter ACTIONS (provided the modifications to the limits can be completed within 12 hours). This change is the result of a Generic Change to the ITS NUREGs initiated by the NRC. A corresponding change to the Bases of Specification 3.4.1 has also been made.

Corresponding changes have also been made to the CTS markups for Specification 3.4.1 on page 2 of 8 (Unit 2) and on page 6 of 8 (Unit 3), to the Discussion of Change L_1 for ITS 3.4.1 (page 3), and to the 10CFR50.92 evaluation L_1 for ITS 3.4.1 (pages 20 and 21).

5. Specification 3.5.2, ECCS-Shutdown, Applicability, pages 3.5-8, B3.5-19 and B3.5-20

Specification 3.5.2, ECCS-Shutdown, requires low pressure ECCS subsystems to be OPERABLE in MODE 4 and in MODE 5 except when the spent fuel storage pool gates are removed and water level is $\geq$ 458 inches above reactor pressure vessel instrument zero. CTS 3.5.F.1 specifies low pressure ECCS subsystem requirements for the same conditions specified in Specification 3.5.2 of the PBAPS ITS with one exception. The CTS also requires low pressure ECCS subsystems to be OPERABLE when operations with a potential for draining the reactor vessel are in progress. This requirement was added to the CTS in Amendments 195 and 199 for Unit 2 and Unit 3, respectively, on September 16, 1994. However, this was after the cutoff date for changes to the PBAPS ITS submittal. As such, the Applicability of Specification 3.5.2 is now proposed to be revised to achieve consistency with the Applicability for low pressure ECCS subsystems in CTS 3.5.F.1. The Applicability of Specification 3.5.2 is proposed to require low pressure ECCS subsystems to be OPERABLE in MODE 4 and in MODE 5, except when the spent fuel storage pool gates are removed, water level is $\geq$ 458 inches above reactor pressure vessel instrument zero, and no operations with a potential for

5. Specification 3.5.2, ECCS-Shutdown, Applicability, pages 3.5-8, B3.5-19 and B3.5-20 (continued)

draining the reactor vessel are in progress. A corresponding change to the Bases for Specification 3.5.2 has also been made.

Corresponding changes have also been made to CTS markup for Specification 3.5.2 on page 1 of 4 (Unit 2) and on page 3 of 4 (Unit 3).

6. SR 3.6.1.2.2, Primary Containment Air Lock Interlock Test, Note, pages 3.6-7 and B3.6-12

SR 3.6.1.2.2 requires periodic testing of the primary containment air lock interlock mechanism to ensure the interlock will function as designed to prevent simultaneous opening of both the inner and outer doors of the air lock. The Note to SR 3.6.1.2.2, in TSCR 93-16, states that the surveillance is only required to be performed upon entry or exit through the primary containment air lock when the primary containment is de-inerted. This Note was modified from the Note in Revision 0 to NUREG-1433 and NUREG-1434 (the BWR/4 and the BWR/6 ITS NUREGs, respectively) by a NRC/Industry Generic Change. The original Note in Revision 0 to NUREG-1433 stated that the surveillance is only required to be performed upon entry <u>into</u> primary containment when the primary containment is de-inerted. The Generic Change to the Note for SR 3.6.1.2.2 was approved for the BWR/6 ITS NUREG since the BWR/6 design has two primary containment air locks (entry through one air lock and exit through the other air lock is possible). It was not approved for the BWR/4 ITS NUREG since the BWR/4 design has only one air lock (once the primary containment is entered through the one air lock the only way to exit the primary containment is through the same air lock) and the change was determined to be unnecessary. As a result, the Note to SR 3.6.1.2.2 in the PBAPS ITS will be revised, consistent with NUREG-1433, to state the surveillance is only required to be performed upon entry <u>into</u> primary containment when the primary containment is de-inerted. A corresponding change has also been made to the associated Bases.

Corresponding changes have also been made to the CTS markups for Specification 3.6.1.2 on page 6 of 20 (Unit 2) and on page 16 of 20 (Unit 3).

7. SR 3.8.4.3; Visual Inspection of Battery Cells, Cell Plates and Racks, page 3.8-29

SR 3.8.4.3 requires a verification be performed once per 12 months that battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration. The Bases for SR 3.8.4.3 in NUREG-1433 and the PBAPS ITS state that this SR "provides an indication of physical damage or abnormal deterioration that could potentially degrade battery performance". As a result, it is interpreted that physical damage or abnormal deterioration has to be of a type that could potentially degrade battery performance before the SR would fail to be met. The presence of physical damage or deterioration does not necessarily represent a failure of SR 3.8.4.3, provided an evaluation determines that the physical damage or deterioration does not affect the OPERABILITY of the battery (its ability to perform its design function). Therefore, for consistency with the Bases for SR 3.8.4.3 in NUREG-1433 and the PBAPS ITS, SR 3.8.4.3 is proposed to be revised to read "Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could potentially degrade battery performance."

A corresponding change has also been to the Discussion of Change M_2 for ITS 3.8.4 (page 23) and to the 10CFR50.92 evaluation M_2 for ITS 3.8.4 (page 15).

8. Specification 5.5.4, Radioactive Effluent Controls Program, pages 5.0-9 and 5.0-10

During the development of the PBAPS ITS, the detail in NUREG-1433 regarding the limitations on the functional capability of the liquid and gaseous effluent treatment systems was not incorporated since the limitations were not consistent with the CTS limitations on the use of these effluent treatment systems. NUREG-1433 Specification 5.7.2.7.g stated, "Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2% of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I." Doses from both liquid and gaseous effluent are required to be projected by NUREG-1433 Specification 5.7.2.7.g. However, CTS 3.8.C,

8. Specification 5.5.4, Radioactive Effluent Controls Program, pages 5.0-9 and 5.0-10 (continued)

Gaseous Effluents, does not require dose contributions from gaseous radioactive effluent to be projected to ensure the appropriate portions of the systems are used to reduce releases. Therefore, the PBAPS ITS Specification 5.5.4.f (which is equivalent to NUREG-1433 Specification 5.7.2.7.g) was developed to only require that the Radioactive Effluent Controls Program include limitations on the functional capability and use of the liquid and gaseous effluent treatment systems and that these limitations be specified in the Offsite Dose Calculation Manual (ODCM).

Upon further review in response to NRC comments on PBAPS ITS 5.5.4.f, it was decided to revise proposed Specification 5.5.4.f to explicitly reflect the Applicability requirements of the CTS for liquid and gaseous effluent treatment systems and to reflect the ITS NUREG requirements to the extent possible without impacting the CTS requirements. The proposed wording is as follows:

> "Limitations on the functional capability and use of the liquid effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when projected doses averaged over one month would exceed 0.12 mrem to the total body or 0.4 mrem to any organ (combined total from the two reactors at the site)."
>
> "Limitations to ensure gaseous effluents shall be processed, prior to release, through the appropriate gaseous effluent treatment systems as described in the ODCM."

9. Specification 5.5.6, Inservice Testing Program, page 5.0-11

Specification 5.5.6 of the PBAPS ITS states the following:

"This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components including applicable supports.

a. The provisions of SR 3.0.2 are applicable to the Frequencies for performing inservice testing activities;

b. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

c. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any TS."

NRC/Industry Generic Change BWOG-09, C.17, Revision 2, provided a listing of testing frequencies for the Inservice Testing Program. However, this generic change, although now approved and reflected in Revision 1 of the ITS NUREGs, was not approved at the time of the PBAPS submittal. Therefore, incorporation of the generic change in accordance with BWOG-09, C.17, Revision 2 was not performed. PBAPS Specification 5.5.6, Inservice Testing Program, is now proposed to be revised to reflect the requirements of Specification 5.5.7, Inservice Testing Program, of Revision 1 to NUREG-1433. One plant-specific deviation from the Inservice Testing Program frequencies in Specification 5.5.7.b of Revision 1 to NUREG-1433 will be made consistent with the PBAPS CTS. The deviation is to the Frequency of "Biennially or every 2 years." In Revision 1 to NUREG-1433, this Frequency is defined as "At least once per 731 days." The PBAPS CTS 1.0 in the definition of Surveillance Frequency specifies "24 months" as being "At least once per

9. Specification 5.5.6, Inservice Testing Program, page 5.0-11 (continued)

732 days." As such, the PBAPS ITS Specification 5.5.6 Frequency of "Biennially or every 2 years" is proposed to be specified as "At least once per 732 days." The added wording will be as follows:

"The program shall include the following:

a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda are as follows:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 732 days"

10. Specification 5.5.9, Diesel Fuel Oil Testing Program
B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, SR 3.8.3.3, pages 5.0-14, 5.0-15, B3.8-53, B3.8-54 and B3.8-56

The requirements of the Diesel Fuel Oil Testing Program in Specification 5.5.9 were developed using the phrase "in accordance with procedures based on applicable ASTM Standards." This was done to provide the capability for justified variances between the ASTM Standards and the implementing procedures. The problem with the wording in NUREG-1433, "in accordance with applicable ASTM Standards," is that it invokes all the requirements of the documents referenced by the ASTM Standards and requires verbatim compliance. The documents referenced by the ASTM Standards,

10. Specification 5.5.9, Diesel Fuel Oil Testing Program
B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, SR 3.8.3.3, pages 5.0-14, 5.0-15, B3.8-53, B3.8-54 and B3.8-56 (continued)

as well as the ASTM Standards, do not address issues related to verbatim compliance very well. As a result, while other approaches to meeting requirements should be acceptable (such as using new glassware for determining kinematic viscosity versus using glassware that has been cleaned in chromic acid), they are not acceptable since the ASTM Standards and the associated referenced documents do not include these approaches. However, the proposed wording, "in accordance with procedures based on applicable ASTM Standards," was not acceptable to the NRC. Following discussions between the NRC and PECO Energy regarding verbatim compliance with ASTM Standards, agreement was reached on the method to address the concern. Per the agreement, a letter to the NRC has been submitted identifying the PBAPS exceptions to the applicable ASTM Standards regarding diesel fuel oil testing to clarify what "in accordance with applicable ASTM Standards" means. The wording in Specification 5.5.9 regarding "procedures based on applicable ASTM Standards" has been revised to reflect the wording of NUREG-1433 (in accordance with applicable ASTM Standards). Specification 5.5.9.c, which specifies requirements for total particulate concentration, has also been revised to include a specific reference to the applicable ASTM Standard (in accordance with ASTM D2276, Method A). The Bases for SR 3.8.3.3 have also been revised to reference, for each ASTM Standard for which an exception was identified, the letter to the NRC identifying and justifying each of the PBAPS exceptions to the applicable ASTM Standards regarding diesel fuel oil testing.

CTS 4.9.A.1.2.d.1.d) utilizes the ASTM D4176-82 clear and bright test to provide a qualitative assessment of the acceptability of new diesel fuel oil with regard to water and sediment content. The ASTM clear and bright test is a visual check for evidence of water and particulate contamination performed after drawing a fuel oil sample for field testing. The visual check is accomplished by swirling the sample so a vortex is formed. Sediment and water will accumulate on the bottom of the container directly beneath the vortex and very fine suspended solids or water will render the product hazy. The ASTM clear and bright test should only be used for fuel oil meeting the color requirements of ASTM D4176-82 (ASTM color of 5 or less).

10. Specification 5.5.9, Diesel Fuel Oil Testing Program
B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, SR 3.8.3.3, pages 5.0-14, 5.0-15, B3.8-53, B3.8-54 and B3.8-56 (continued)

ASTM D4176-82 does not recommend the clear and bright test be performed on fuels darker than ASTM 5 since the presence of free water or particulates could be obscured. The intentional addition of dyes to fuel oil by suppliers (such as to identify sulfur content) makes the fuel oil darker than ASTM 5 and results in the need to use another method for determining water and sediment content of the fuel oil. To address the method for determining the presence of water and sediment in new diesel fuel oil that has been dyed, the requirements of Specification 5.5.9 (Diesel Fuel Oil Testing Program) and the Bases for SR 3.8.3.3 are proposed to be revised to allow the use of the ASTM D975-81 water and sediment by centrifuge test in lieu of the ASTM D4176-82 clear and bright test. The Bases for SR 3.8.3.3 will also be revised to reflect the use of the ASTM water and sediment by centrifuge test when dyes have intentionally been added to new fuel oil.

This change provides an alternate test for verifying the acceptability of new fuel oil with regard to water and sediment content. Excessive water and sediment in diesel fuel oil could have an immediate detrimental impact on diesel engine combustion and as a result diesel generator OPERABILITY. The ASTM D975-81 water and sediment by centrifuge test provides a quantitative assessment of water and sediment content. The use of the ASTM water and sediment by centrifuge test ensures that excessive water and sediment content, in new diesel fuel oil that has been dyed, will be detected (and not obscured by the presence of the dye) prior to addition to the storage tanks. The sensitivity of the ASTM water and sediment by centrifuge test for water and sediment is not affected by the presence of dyes in the fuel oil. For fuel oil with dyes, the sensitivity for detection of water and sediment of the ASTM water and sediment by centrifuge test is better than that provided by the ASTM clear and bright test. The ASTM water and sediment by centrifuge test is also the same test performed to quantitatively determine water and sediment content within 31 days following sampling and addition (after the new fuel has been added to the storage tank) in accordance with Specification 5.5.9.b and the Bases for SR 3.8.3.3. Regulatory Guide 1.137, Fuel Oil Systems for Standby Diesel Generators, also identifies that the water

10. Specification 5.5.9, Diesel Fuel Oil Testing Program
B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, SR 3.8.3.3, pages 5.0-14, 5.0-15, B3.8-53, B3.8-54 and B3.8-56 (continued)

and sediment by centrifuge test provides an acceptable method for ensuring the initial and continuing quality of diesel fuel oil with respect to water and sediment content. Therefore, this alternate test provides adequate assurance, prior to storage tank addition, that the water and sediment content of the new dyed fuel oil will maintain diesel generator OPERABILITY. This change is considered to be more restrictive since the ASTM water and sediment by centrifuge test provides a quantitative assessment of water and sediment content rather than the qualitative assessment of water and sediment content provided by the ASTM clear and bright test. In addition, the ASTM water and sediment by centrifuge test takes more time to perform and is more difficult to perform than the ASTM clear and bright test. However, as previously discussed, this change is necessary to assure the presence of dyes in fuel oil will not affect the capability to detect water and sediment in the fuel oil.

Corresponding changes have also been made to CTS markup for Specification 5.0 on pages 41 of 86, 42 of 86, and 43 of 86 (Unit 2) and on pages 84 of 86, 85 of 86, and 86 of 86 (Unit 3), to the Discussion of Changes for ITS 5.0 (the addition of M_{13} on pages 6 and 7), and to the 10CFR50.92 evaluations for ITS 5.0 (the addition of M_{13} on pages 7, 8, and 9).

11. Specification 5.7, High Radiation Areas, pages 5.0-23 through 5.0-26

Specification 5.7, High Radiation Areas, of the PBAPS ITS submittal was developed from the NRC draft Generic Letter on Technical Specification changes for implementation of the new 10CFR20 requirements. In resolving Industry comments on the draft Generic Letter, the NRC made changes to the requirements for Specification 5.7. However, these changes were not available prior to the submittal of the PBAPS ITS submittal. As a result of the NRC review of the PBAPS submittal, the changes to Specification 5.7 were identified to PECO Energy. PBAPS has evaluated the changes and proposes to revise Specification 5.7 to more closely reflect the NRC approved requirements for Specification 5.7.

11. Specification 5.7, High Radiation Areas, pages 5.0-23 through 5.0-26 (continued)

The specific changes being proposed are as follows:

a. For High Radiation Areas with dose rates not exceeding 1.0 rem/hour, Specification 5.7.1.a states "Each accessible entryway to such an area shall be barricaded and conspicuously posted as a high radiation area." Specification 5.7.1.a also states "Such barricades may be breached during periods of entry or exit." For clarification of what "breached during periods of entry or exit" means, the second sentence of Specification 5.7.1.a is proposed to be revised to read "Such barricades may be opened as necessary to permit entry or exit of personnel or equipment."

b. For High Radiation Areas with dose rates not exceeding 1.0 rem/hour, Specification 5.7.1.d provides monitoring requirements and states "Each individual entering such an area shall possess..." Specification 5.7.1.d is proposed to be revised to read "Each individual or group entering such an area shall possess..." This change is consistent with CTS 6.13.1.a which provides monitoring requirements for High Radiation Areas greater than 100 mrem/hr but less than 1000 mrem/hr and states "Any individual or group of individuals permitted to enter such areas shall be provided with..."

c. For High Radiation Areas with dose rates not exceeding 1.0 rem/hour, Specification 5.7.1.e states "Entry into such areas shall be made only after dose rates in the area have been established and entry personnel are knowledgeable of them." Specification 5.7.1.e is proposed to be revised to state "Except for individuals qualified in radiation protection procedures, entry into such areas shall be made only after dose rates in the area have been established and entry personnel are knowledgeable of them." This revision allows for entry into a High Radiation Area by individuals qualified in radiation protection procedures prior to establishing dose rates in the area. This allowance was added in recognition of the fact that, generally, to establish dose rates in an area it is necessary for individuals to enter the area to measure the dose rates.

11. Specification 5.7, High Radiation Areas, pages 5.0-23 through 5.0-26 (continued)

d. For High Radiation Areas with dose rates greater than 1.0 rem/hour but less than 500 rads/hour, Specification 5.7.2.d provides monitoring requirements and states "Each individual entering such an area shall possess..." Specification 5.7.2.d is proposed to be revised to state "Each individual <u>(whether alone or in a group)</u> entering such an area shall possess..." This revision is proposed for clarification and to help distinguish between the requirements of Specification 5.7.1.d (which provides requirements for High Radiation Areas with dose rates not exceeding 1.0 rem/hour) and the requirements of Specification 5.7.2.d (which provides requirements for High Radiation Areas with dose rates greater than 1.0 rem/hour but less than 500 rads/hour).

e. For High Radiation Areas with dose rates greater than 1.0 rem/hour but less than 500 rads/hour, Specification 5.7.2.d.4 has been added to allow the use a radiation monitoring and indicating device when the monitoring options of Specification 5.7.2.d.2 or Specification 5.7.2.d.3 are impractical or are inconsistent with the ALARA principle. (Specification 5.7.2.d.2 allows the use a radiation monitoring device that continuously transmits dose rate or cumulative dose information to a remote receiver monitored by radiation protection personnel with the means to communicate with and control every individual in the area. Specification 5.7.2.d.3 allows the use a direct-reading dosimeter and surveillance and control of personnel in the area either directly or by use of a closed circuit television with a means to communicate with each individual in the area.) Specification 5.7.2.d and the added Specification 5.7.2.d.4 state "Each individual (whether alone or in a group) entering such an area shall possess:" and "<u>A radiation monitoring and indicating device in those cases where the options of Specifications 5.7.2.d.2 or 5.7.2.d.3 are impractical or are inconsistent with the "As Low As is Reasonably Achievable" principle.</u>"

11. Specification 5.7, High Radiation Areas, pages 5.0-23 through 5.0-26 (continued)

f. For High Radiation Areas with dose rates greater than 1.0 rem/hour but less than 500 rads/hour, Specification 5.7.2.e states "Entry into such areas shall be made only after dose rates in the area have been established and entry personnel are knowledgeable of them." Specification 5.7.2.e is proposed to be revised to state "Except for individuals qualified in radiation protection procedures, entry into such areas shall be made only after dose rates in the area have been established and entry personnel are knowledgeable of them." This revision allows for entry into a High Radiation Area by individuals qualified in radiation protection procedures prior to establishing dose rates in the area. This allowance was added in recognition of the fact that, generally, to establish dose rates in an area it is necessary for individuals to enter the area to measure the dose rates.

Corresponding changes have been made to the CTS markup for Specification 5.0 on pages 27 of 86, 27a of 86, 27b of 86, 27c of 86, and 27d of 86 (Unit 2) and on pages 70 of 86, 70a of 86, 70b of 86, 70c of 86, and 70d of 86 (Unit 3).

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35

The basis of the current RPS response time test requirement (from UFSAR Section 7.2.3.9) is to confirm the system electrical characteristics regarding response time are maintained consistent with the original design. The current RPS response time requirements apply to all RPS functions that have calibration requirements, even those that are not credited in the safety analysis as providing a scram. Additionally, the current RPS response time test acceptance criterion for the RPS functions is $\leq$ 50 milliseconds. Typical BWR RPS response time acceptance criteria from the safety analysis for the various RPS functions range from 0.06 seconds to 1.05 seconds. Therefore, it is concluded the existing PBAPS RPS response time requirements verify design requirements, not analysis assumptions.

The NRC evaluation of BWR Owners Group Licensing Topical Report NEDO-32291, "Systems Analyses for Elimination of

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35 (continued)

Selected Response Time Testing Requirements," forwarded to the BWR Owners Group in a letter dated December 28, 1994, from B.A.Boger (NRC) to R.A.Pinelli (BWR Owners Group) states the following with regard to the intent of the response time tests in Technical Specifications:

> "The intent of these tests is to ensure that changes in response time of instrumentation beyond the limits assumed in safety analyses are detected, and combined with instrument calibration, to ensure that the instrument is operating correctly. The response time tests do not demonstrate that the instrument response time design value is met, but rather that the specified performance requirements of the TSs are satisfied."

The response time performance requirements specified in the Standard Technical Specifications (STS) are the limits assumed in the safety analyses. Since the RPS response time requirements specified in the current PBAPS Technical Specifications are design values, these requirements do not meet the intent of the STS response time testing requirements. Since the existing RPS response time requirements do not verify safety analysis assumptions and do not meet the intent of the STS response time testing requirements, TSCR 93-16 (the PBAPS ITS submittal) proposed to relocate the RPS response time testing requirements of the current Technical Specifications.

However, the NRC disagreed that the current PBAPS RPS response time testing requirements demonstrate only design requirements since the PBAPS 50 millisecond design value acceptance criterion is not significantly different than typical BWR analysis assumptions for RPS response times and no other testing is performed to verify safety analysis assumptions relative to RPS response times are met. Therefore, in response to the NRC request to revise TSCR 93-16 to include the current PBAPS RPS response time testing requirements, the following change to TSCR 93-16 is proposed.

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35 (continued)

The following discussion/justifications are provided for the attached change which adds the existing RPS response time testing requirements into the PBAPS ITS.

Section 1.1, Definitions, is proposed to be revised to include the definition of RPS RESPONSE TIME consistent with the requirements in current Technical Specification (CTS) 4.1.A.

Specification 3.3.1.1, Reactor Protection System Instrumentation, is proposed to be revised to include SR 3.3.1.1.18, which requires verification that the RPS RESPONSE TIMES are within limits once per 24 months, consistent with the requirements in CTS 4.1.A. In addition, Table 3.3.1.1-1 is proposed to be revised to include SR 3.3.1.1.18 for each of the required RPS trip functions.

In Technical Specification Change Request (TSCR) 90-03 (transmitted by letter from G.A.Hunger (PECO Energy) to USNRC Document Control Desk dated September 26, 1994), the Surveillance Requirement for RPS response time testing was moved from CTS Table 4.1.2, Note 4, to CTS 4.1.A so that the RPS response time Surveillance Requirement would be located symmetrically to the corresponding CTS LCO requirement for RPS response times. TSCR 90-03 described this change as an administrative change because there were supposed to be no technical changes (either actual or interpretational) to the Technical Specifications. TSCR 90-03 was subsequently approved in Amendment Numbers 203 and 206 for PBAPS Units 2 and 3, respectively.

Prior to the issuance of the amendments associated with TSCR 90-03, Note 4 of CTS Table 4.1.2 stated the response time is not a part of the routine instrument channel test but will be checked once per operating cycle. Note 4 of CTS Table 4.1.2 applied to only those RPS trip functions listed in CTS Table 4.1.2. The list

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35 (continued)

of RPS trip functions in CTS Table 4.1.2 includes all RPS trip functions of CTS 3.1 and 4.1, Reactor Protection System, except the following:

Mode Switch in Shutdown,

Manual Scram,

RPS Channel Test Switch,

IRM Inoperative,

APRM Inoperative, and

APRM Downscale.

In moving the response time requirement of Note 4 of CTS Table 4.1.2 to CTS 4.1.A, an error was made. CTS 4.1.A was erroneously revised to state:

"The RPS response time test for each reactor trip function shall be demonstrated to be within limits once per operating cycle."

Since this change was described in TSCR 90-03 as an administrative change, no new response time requirements should have been imposed. However, as presently written CTS 4.1.A requires RPS response time testing to be performed on each RPS trip function which not only includes the RPS trip functions listed in CTS Table 4.1.2, but also includes the Mode Switch in Shutdown, Manual Scram, RPS Channel Test Switch, IRM Inoperative, APRM Inoperative, and APRM Downscale Functions. Prior to the issuance of the amendments associated with TSCR 90-03, RPS response time testing was not required for these additional RPS trip functions by the PBAPS Technical Specifications. To correct this error, CTS 4.1.A should state:

"The RPS response time test for each reactor trip function in Table 4.1.2 shall be demonstrated to be within limits once per operating cycle."

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35 (continued)

Therefore, the RPS response time requirements will be added to the PBAPS ITS consistent with the correct version of CTS 4.1.A, above. Since the proposed change is correcting an error made during the processing of a Technical Specification change, there is no impact on safety. In addition, the affected RPS trip functions for which response time testing requirements were erroneously imposed are not assumed in the mitigation of design basis accidents or transient analyses.

RPS response time Surveillance Requirements for each of the RPS trip functions in CTS Table 4.1.2 have been explicitly applied to the corresponding Functions in PBAPS ITS Table 3.3.1.1-1, except for the LPRM Signal Function and the Turbine First Stage Pressure Permissive Function. The response time test requirements are not explicitly listed for the LPRM Signal Function in PBAPS ITS Table 3.3.1.1-1 since the LPRMs are considered to be part of the APRM channel as described in the Bases for ITS 3.3.1.1. Therefore, the CTS response time test requirements for LPRMs are adequately addressed by the proposed response time testing requirements for the associated APRM Functions in PBAPS ITS Table 3.3.1.1-1. The response time test requirements are also not explicitly listed for the Turbine First Stage Pressure Permissive Function in PBAPS ITS Table 3.3.1.1-1 since the Turbine First Stage Pressure Permissive Function is an interlock associated with the Turbine Stop Valve - Closure Function channels and Turbine Control Valve Fast Closure, Trip Oil Pressure - Low Function channels as described in the Bases for ITS 3.3.1.1. Therefore, the CTS response time test requirements for the Turbine First Stage Pressure Permissive are adequately addressed by the proposed response time testing requirements for the associated Turbine Stop Valve - Closure Function and Turbine Control Valve Fast Closure, Trip Oil Pressure - Low Function in PBAPS ITS Table 3.3.1.1-1. As a result, all RPS response time requirements of CTS Table 4.1.2 are considered to be addressed, either explicitly or implicitly, by the proposed revision to PBAPS ITS 3.3.1.1 and PBAPS ITS Table 3.3.1.1-1.

12. Specification 3.3.1.1, Reactor Protection System, Addition of RPS Response Time Testing Requirements, pages 1.1-5, 3.3-6, 3.3-7, 3.3-8, B3.3-34, and B3.3-35 (continued)

The specific design value (50 milliseconds) for the RPS response time acceptance criterion is proposed to be relocated to the PBAPS UFSAR consistent with NRC Generic Letter 93-08. This is considered to be acceptable since the requirements of SR 3.3.1.1.18 are adequate to ensure the affected RPS functions are tested to ensure response times are maintained within required limits. SR 3.3.1.1.18 of Specification 3.3.1.1 requires RPS response times to be verified within limits once per 24 months. If the requirements of SR 3.3.1.1.18 are not satisfied, SR 3.0.1 requires the affected channels of the RPS to be declared inoperable and the ACTIONS of Specification 3.3.1.1 entered. In addition, placing the RPS response time acceptance criterion in the UFSAR provides assurance that it will be maintained. The 10CFR50.59 control process for the UFSAR ensures that the requirement is appropriately maintained. As a result, the requirements proposed to be relocated are not required to be included in the Technical Specifications to ensure required RPS response time testing is performed and RPS response times are maintained within required limits.

In incorporating the RPS response time requirements from the CTS into the PBAPS ITS, no technical changes have been made to the RPS response time requirements. A corresponding change has also been made to the associated Bases.

Corresponding changes have also been made to the CTS markups for Chapter 1.0 on page 12a of 74 (Unit 2) and page 49a of 74 (Unit 3) and for Specification 3.3.1.1 on page 8 of 38 (Unit 2) and on page 27 of 38 (Unit 3). A new Discussion of Change has been provided (A_{11} for ITS 3.3.1.1 (on pages 4, 5, and 6)) and Discussion of Change R_3 for ITS 3.3.1.1 (on page 9) has been revised. Corresponding changes to the 10CFR50.92 evaluations for ITS 3.3.1.1 have also been made (A_{11} for ITS 3.3.1.1 (on pages 4, 5, and 6) and R_3 for ITS 3.3.1.1 (on page 43)).

13. Deletion of the Pressure and Temperature Limits Report, pages 1.1-5, 3.3-24, 3.3-25, 3.4-21 through 3.4-27, 5.0-21, B3.3-72, B3.3-73, B3.4-43 through B3.3-45, and B3.4-48 through B3.4-51

In order to implement the Pressure and Temperature Limits Report (PTLR) concept and relocate pressure and temperature limits from the Technical Specifications, an NRC approved methodology for the development of the pressure and temperature limits is required. During the development of the PBAPS ITS, it was recognized that the methodology documents being referenced for the PTLR concept were not approved by the NRC even though the documents had been used to support obtaining NRC approval for revision to the pressure and temperature limit curves in the current Technical Specifications. As a result, the PBAPS ITS submittal cover letter (dated September 29, 1994) identified approval of these methodology documents as an open issue needing resolution to support NRC approval of the PBAPS ITS.

On April 7, 1995, the NRC requested additional information be provided regarding the PBAPS PTLR and the associated methodology documents. This information was provided to the NRC on May 12, 1995. A subsequent meeting was held with the NRC on May 22, 1995, to discuss the responses. At that meeting, the NRC stated that, to support approval of the PTLR for the PBAPS ITS, they needed a methodology document that contained the PBAPS pressure and temperature limit methodology and addressed all of the items from the NRC additional information request dated April 7, 1995. This methodology document must be submitted to the NRC on the PBAPS docket for review and approval. Approval of this methodology document must be obtained prior to issuance of the NRC Safety Evaluation Report for the PBAPS ITS. Rather than pursue approval of a pressure and temperature limit methodology as part of ITS, deletion of the PTLR and inclusion of the pressure and temperature limits (from the current Technical Specifications) in the PBAPS ITS is requested.

The following discussions/justifications are provided for the change which deletes the PTLR.

Section 1.1, Definitions, is proposed to be revised to delete the definition of the PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) since it will not be used.

13. Deletion of the Pressure and Temperature Limits Report, pages 1.1-5, 3.3-24, 3.3-25, 3.4-21 through 3.4-27, 5.0-21, B3.3-72, B3.3-73, B3.4-43 through B3.3-45, and B3.4-48 through B3.4-51 (continued)

Specification 3.4.9, RCS Pressure and Temperature (P/T) Limits, is proposed to be revised to delete all reference to the PTLR. The P/T limits from the current Technical Specification 3.6.A, Thermal and Pressurization Limitations, and the associated Figures (Figures 3.6.1, 3.6.2, and 3.6.3) will be used in place of the references to these limits in the PTLR. In the incorporation of the P/T limits from the current Technical Specifications into the PBAPS ITS, no changes have been made to the P/T limits. Corresponding changes to the Bases of Specification 3.4.9 have also been made.

Specification 5.6.6, Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) is proposed to be deleted since it will not be used. As a result of the deletion of Specification 5.6.6, PTLR, proposed Specification 5.6.7, Post Accident Monitoring (PAM) Instrumentation Report has been renumbered to be Specification 5.6.6. Corresponding reference changes have been made to proposed Specification 3.3.3.1, Post Accident Monitoring (PAM) Instrumentation, and the associated Bases.

Corresponding changes have also been made to the CTS markups for Chapter 1.0 on page 14 of 74 (Unit 2) and page 51 of 74 (Unit 3), for Specification 3.3.3.1 on page 4 of 20 (Unit 2) and on page 14 of 20 (Unit 3), for Specification 3.4.9 on page 1 of 10 through page 5 of 10 (Unit 2) and on page 6 of 10 through page 10 of 10 (Unit 3), and for Chapter 5.0 on pages 19 of 86 and 23 of 86 (Unit 2) and on pages 62 of 86 and 66 of 86 (Unit 3). The Discussion of Changes for A_{16} for ITS 1.0 (on page 4), L_1 for ITS 3.3.3.1 (on page 33), R_1 for ITS 3.4.9 (on page 23), and M_7 for ITS 5.0 (on page 5) have been revised. The 10CFR50.92 evaluations for A_{16} for ITS 1.0 (on page 4), L_1 for ITS 3.3.3.1 (on page 98), R_1 for ITS 3.4.9 (on page 17), and M_7 for ITS 5.0 (on page 6) have also been revised.

14. B 3.8.1, Bases for AC Sources-Operating, Definition of Offsite Source, pages B3.8-4 and B3.8-5

The OPERABILITY of the AC electrical power sources includes maintaining the onsite or offsite AC sources OPERABLE during accident conditions in the event of:

An assumed loss of all offsite power or all onsite AC power; and

A worst case single failure.

As a result, if one offsite circuit is supplying or capable of supplying (due to autotransfer capability) at least three 4 kV emergency buses of the subject unit and the other offsite circuit is supplying or is capable of supplying at least three 4 kV emergency buses of the subject unit and the three buses being powered or are capable of being powered by the two offsite circuits are not all the same, then under accident conditions with an assumed loss of all onsite power and the worst case single failure, offsite power would still be maintained to three buses of the subject unit (only three of the four buses of the subject unit are required to mitigate the design basis accident).

After further discussions with the NRC, it was decided a clarification regarding the definition of an offsite circuit would be of benefit. This clarification would identify that if at least one of the two offsite circuits does not provide power to all four 4 kV emergency buses of the subject unit, then the three buses of the subject unit that each offsite circuit powers or is capable of powering can not all be the same. As a result, the Bases of Specification 3.8.1, AC Sources-Operating (in the LCO section) is proposed to be revised to state that an OPERABLE qualified Unit 2(3) offsite circuit consists of the incoming breaker and disconnect to the startup and emergency auxiliary transformer, the respective circuit path to the emergency auxiliary transformer, and the circuit path to at least three Unit 2(3) 4 kV emergency buses including feeder breakers to the three Unit 2(3) 4 kV emergency buses. If at least one of the two circuits does not provide power or is not capable of providing power to all four Unit 2(3) 4 kV emergency buses, then the Unit 2(3) 4 kV emergency buses that each circuit powers or is capable of powering can not all be the same (i.e., two feeder breakers on one Unit 2(3) 4kV emergency bus can not be inoperable).

15. B 3.8.1, Bases for AC Sources - Operating; SR 3.8.1.7, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20; pages B3.8-18, B3.8-19, B3.8-27, B3.8-28, B3.8-31, B3.8-32, and B3.8-36

The 184 day Surveillance Requirement for diesel generator (DG) fast starts and for the other DG Surveillance Requirements that require no-load fast starts are performed while not connected to a load. Currently when DG voltage and frequency are established within the specified limits, the time response is checked to ensure the 10 second acceptance criteria is satisfied. The voltage and frequency upper limits currently specified are unnecessarily conservative for an unloaded DG. These limits are the recovery criteria for step loading. Under actual loss of offsite power conditions, the DG would connect to a 4 kV emergency bus and the voltage and frequency would experience an immediate drop as load was picked up. This load would limit the overshoot of voltage and frequency experienced by the unloaded DG. In the unloaded DG case, the voltage and frequency would continue to rise until the voltage regulator and governor made a correction. The voltage and frequency would then converge upon the established limits. In the unloaded DG case, the recovery would take longer than in the case of a loaded DG, however this longer recovery period is not necessarily indicative of the DG response to an actual loss of offsite power condition. Requiring an upper limit may have resulted in a failed Surveillance under the no-load test condition that would otherwise have been acceptable if the DG had been operating under conditions which more closely approximated the design basis requirements (step loading). As a result, the PBAPS ITS no-load fast start Surveillance Requirements (SR 3.8.1.7, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20) were submitted in TSCR 93-16 without the requirement to verify that the upper limits for voltage and frequency are satisfied within the 10 second acceptance criteria. Instead, the PBAPS ITS no-load fast start Surveillance Requirements require the upper limits for voltage and frequency to be satisfied after the DG has reached steady state conditions.

Since the time of the PBAPS ITS submittal, an NRC/Industry Generic Change has been submitted to address the issue described above. As a result of the NRC review of the PBAPS ITS, it has been identified that this Generic Change contains additional Bases information that should be included in the PBAPS Bases for Specification 3.8.1.

15. B 3.8.1, Bases for AC Sources - Operating; SR 3.8.1.7, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20; pages B3.8-18, B3.8-19, B3.8-27, B3.8-28, B3.8-31, B3.8-32, and B3.8-36 (continued)

Therefore, the Bases for SR 3.8.1.7, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20 are proposed to be revised to include the following wording:

> "The minimum voltage and frequency stated in the SR are those necessary to ensure the DG can accept DBA loading while maintaining acceptable voltage and frequency levels. Stable operation at the nominal voltage and frequency values is also essential to establishing DG OPERABILITY, but a time constraint is not imposed. This is because a typical DG will experience a period of voltage and frequency oscillations prior to reaching steady state operation if these oscillations are not damped out by load application. This period may extend beyond the 10 second acceptance criteria and could be a cause for failing the SR. In lieu of a time constraint in the SR, PBAPS will monitor and trend the actual time to reach steady state operation as a means of ensuring there is no voltage regulator or governor degradation which could cause a DG to become inoperable."

16. B 3.8.1, Bases for AC Sources - Operating, DG Load Tests, pages B3.8-20 and B3.8-30

As a result of NRC review, it was decided that the Bases should include a discussion of why testing the DGs at values that do not bound the DG maximum post accident loads is acceptable. This discussion is considered to be necessary to clarify the PBAPS licensing basis approved by the NRC in Amendments 173 and 176 for Unit 2 and Unit 3, respectively. As such the Bases for SR 3.8.1.3 and SR 3.8.1.14 proposed to be revised to state the following:

> "This Surveillance verifies, indirectly, that the DGs are capable of synchronizing and accepting loads equivalent to post accident loads. The DGs are tested at a load approximately equivalent to their continuous duty rating, even though the post accident loads exceed the continuous rating. This is acceptable because regular surveillance testing at post accident loads is injurious to the DG, and imprudent because the same

16. B 3.8.1, Bases for AC Sources - Operating, DG Load Tests, pages B3.8-20 and B3.8-30 (continued)

level of assurance in the ability of the DG to provide post accident loads can be developed by monitoring engine parameters during surveillance testing. The values of the testing parameters can then be qualitatively compared to expected values at post accident engine loads. In making this comparision it is necessary to consider the engine parameters as interrelated indicators of remaining DG capacity, rather than independent indicators. The important engine parameters to be considered in making this comparision include, fuel rack position, scavenging air pressure, exhaust temperature and pressure, engine output, jacket water temperature, and lube oil temperature. With the DG operating at or near continuous rating and the observed values of the above parameters less than expected post accident values, a qualitative extrapolation which shows the DG is capable of accepting post accident loads can be made without requiring deterimental testing."

17. B 3.8.2, Bases for AC Sources-Shutdown; B 3.8.5, Bases for DC Sources-Shutdown; and B 3.8.8, Distribution Systems-Shutdown; pages B3.8-43, B3.8-73, and B3.8-95

The Actions of Specifications 3.8.2 (AC Sources-Shutdown), 3.8.5 (DC Sources-Shutdown), and 3.8.8 (Distribution Systems-Shutdown) were modified in TSCR 93-16 by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in Mode 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in Mode 1, 2, or 3, the fuel movement is independent of reactor operations. In either case, inability to suspend movement of irradiated fuel assemblies would not be sufficient reason to require a reactor shutdown. Therefore, the Note has been added consistent with other places where the Note appears in the ITS (e.g., ITS 3.6.4.3, Standby Gas Treatment System). The Note applies to more than one of the Required Actions, thus it has been placed at the beginning of the Actions Table. Corresponding changes to the Bases were also made.

Based on discussions between the NRC and PECO Energy, a further clarification that LCO 3.0.3 is not applicable while in MODE 4 or 5 has been provided in the affected Bases.

18. B 3.8.4, Bases for DC Sources-Operating, SR 3.8.4.6, page B3.8-66

SR 3.8.4.6 is a test of the capability of the battery chargers. NUREG-1433 included a restriction on the Modes in which this Surveillance could be performed. However, the PBAPS design includes a spare 100% charger for each 125 VDC battery. As a result, individual battery chargers can be tested without compromising compliance with the LCO and the Mode restriction was not included in the PBAPS ITS. The Frequency discussion in the Bases for SR 3.8.4.6 makes reference to the Mode restriction and is proposed to be revised to be more appropriate given the deletion of the Mode restriction in the Technical Specifications.

19. Discussion of Change M_3 for ITS 3.2.1, 3.2.2, and 3.2.3; pages 2, 4, and 7

Discussion of Change M_3 for ITS 3.2.1, 3.2.2, and 3.2.3 has been deleted and a new Discussion of Change (L_2) justifying the changes as less restrictive has been provided on pages 2, 4, 5, and 7. The associated 10CFR50.92 evaluation has also been revised. Corresponding changes have also been made to the CTS markups for Specification 3.2.1 on page 1 of 2 (Unit 2) and on page 2 of 2 (Unit 3), for Specification 3.2.2 on page 1 of 6 (Unit 2) and on page 4 of 6 (Unit 3), and for Specification 3.2.3 on page 2 of 4 (Unit 2) and on page 4 of 4 (Unit 3). A change to the 10CFR50.92 evaluation for M_3 for ITS 3.2.1, 3.2.2, and 3.2.3 (page 3) has also been made and a new 10CFR50.92 evaluation has been provided (L_2 for ITS 3.2.1, 3.2.2, and 3.2.3 on pages 9, 10, and 11).

20. Discussion of Change M_1 for ITS 3.4.2, page 5

Discussion of Change M_1 for ITS 3.4.2 has been deleted and a new Discussion of Change (L_4) justifying this change as less restrictive has been provided on page 9. The associated 10CFR50.92 evaluation has also been revised. Corresponding changes have also been made to the CTS markups for Specification 3.4.2 on page 1 of 2 (Unit 2) and on page 2 of 2 (Unit 3). A change to the 10CFR50.92 evaluation for M_1 for ITS 3.4.2 (page 8) has also been made and a new 10CFR50.92 evaluation has been provided (L_4 for ITS 3.4.2 on pages 33 and 34).

21. Discussion of Change R_5 for ITS 3.5.1, page 8

Discussion of Change R_5 for ITS 3.5.1 has been revised to delete reference to the Safety Function Determination Program since it is not the appropriate reference. The associated 10CFR50.92 evaluation (R_5 for ITS 3.5.1 on page 15) has also been revised.

22. Discussion of Change R_4 for ITS 3.5.3, page 18

Discussion of Change R_4 for ITS 3.5.3 has been revised to delete reference to the Safety Function Determination Program since it is not the appropriate reference. The associated 10CFR50.92 evaluation (R_4 for ITS 3.5.3 on page 16) has also been revised.

23. Discussion of Change L_4 for ITS 3.6.1.3, page 15

Discussion of Change L_4 for ITS 3.6.1.3 has been deleted since it will not be pursued prior to ITS implementation. The associated 10CFR50.92 evaluation (L_4 for ITS 3.6.1.3 on pages 54 and 55) has also been deleted. Corresponding changes have also been made to the CTS markups for Specification 3.6.1.3 on page 3 of 22 (Unit 2) and on page 14 of 22 (Unit 3).

24. Discussion of Change L_1 for ITS 3.6.2.3, page 33

Discussion of Change L_1 for ITS 3.6.2.3 has been deleted since it will not be pursued prior to ITS implementation. The associated 10CFR50.92 evaluation (L_1 for ITS 3.6.2.3 on pages 80 and 81) has also been deleted. Corresponding changes have also been made to the CTS markups for Specification 3.6.2.3 on page 1 of 6 (Unit 2) and on page 4 of 6 (Unit 3).

25. Discussion of Change L_1 for ITS 3.6.2.4, page 35

Discussion of Change L_1 for ITS 3.6.2.4 has been deleted since it will not be pursued prior to ITS implementation. The associated 10CFR50.92 evaluation (L_1 for ITS 3.6.2.4 on pages 80 and 81) has also been deleted. Corresponding changes have also been made to the CTS markups for Specification 3.6.2.4 on page 1 of 6 (Unit 2) and on page 4 of 6 (Unit 3).

26. Discussion of Change R_1 for ITS 3.8.6, page 31

Discussion of Change R_1 for ITS 3.8.6 has been revised to delete reference to the tolerance of measurement instruments. The requirement specifying battery cell voltage measurements be performed "to nearest 0.1 volt" is not necessary to ensure the OPERABILITY of the batteries. Table 3.8.6-1 specifies acceptance criteria for cell voltage of $\geq$ 2.13 volts for Category A and B limits and > 2.07 volts for Category C limits. As a result, if the acceptance criteria of Table 3.8.6-1 are satisfied, the relocated requirement (to nearest 0.1 volt) will be satisfied. This represents a more restrictive change since, to satisfy the cell voltage requirements of Table 3.8.6-1, measurements must be performed to the nearest 0.01 volt. This item has been reclassified as a more restrictive change (M_5 on page 31). The associated 10CFR50.92 evaluation (R_1 for ITS 3.8.6 on page 25) has also been revised and a new 10CFR50.92 evaluation (M_5 for ITS 3.8.6 on page 18) has been provided. Corresponding changes have also been made to the CTS markups for Specification 3.8.6 on page 2 of 8 (Unit 2) and on page 6 of 8 (Unit 3).

27. CTS Markup for Chapter 5.0, page 37 of 86 (Unit 2)

The Unit 2 markup of CTS SR 4.7.B.2.d should have been annotated as A_{11} consistent with the Unit 3 markup. The Unit 2 markup page has been revised to reflect this annotation.

28. Discussion of Changes to NUREG-1433, Section 3.6-Containment Systems Technical Specifications and Bases

Discussion of Changes P_{19} and P_{23} discuss words in NUREG-1433 added or modified by BWR-15, C4. However, BWR-15, C4 was not approved. Therefore, the Discussion of Changes (Section 3.6, pages 5 and 6, and Bases Section 3.6, pages 1 and 3) and NUREG markup pages (3.6-8, 3.6-10, B 3.6-18 through B 3.6-21 and B 3.6-24)have been revised to delete all reference to BWR-15, C4. Since BWR-15, C4 was not incorporated into the PBAPS ITS (plant specific exceptions were taken), no changes are required to the PBAPS ITS.

29. Technical Specifications - Editorial Changes / Typographical Errors

Minor changes are proposed to the following Technical Specifications for consistency, clarity, or to correct typographical errors.

Table 3.3.5.1-1 (page 2 of 5), Function 2.c-Allowable Value, page 3.3-40

Specification 3.4.1, ACTIONS, page 3.4-2 (Unit 3 only)

Specification 3.8.1, LCO 3.8.1.b and LCO 3.8.1.d, page 3.8-1 (Unit 3 only)

Specification 3.8.1, ACTIONS, page 3.8-5

Specification 3.8.1, SR 3.8.1.9 NOTES, page 3.8-9 (Unit 3 only)

Specification 3.8.1, SR 3.8.1.21, page 3.8-18 (Unit 2 only)

Specification 3.8.2, LCO 3.8.2.c, page 3.8-19 (Unit 3 only)

Specification 3.8.2, ACTIONS, page 3.8-20 (Unit 2 only)

Specification 3.8.4, SR 3.8.4.7, page 3.8-30 (Unit 3 only)

Specification 3.8.7, LCO 3.8.7.a, page 3.8-40 (Unit 3 only)

30. Bases - Editorial Changes / Typographical Errors

Minor changes are proposed to the following Technical Specifications Bases for consistency, clarity, or to correct typographical errors.

B 2.1.1, Bases for Safety Limit 2.1.1, Background Section, page B 2.0-2 (Unit 3 only)

B 2.1.1, Bases for Safety Limit 2.1.1, Applicable Safety Analyses Section, page B 2.0-4 (Unit 2 only)

B 2.1.1, Bases for Safety Limit 2.1.1, Safety Limits Section, page B 2.0-5 (Unit 3 only)

B 3.1.3, Bases for Control Rod OPERABILITY, Actions Section, page B 3.1-16 (Unit 3 only)

B 3.1.8, Bases for Scram Discharge Volume Vent and Drain Valves, Background Section, page B 3.1-48 (Unit 3 only)

B 3.2.2, Bases for MCPR, Applicable Safety Analyses Section, page B 3.2-7 (Unit 3 only)

B 3.2.3, Bases for LHGR, Applicable Safety Analyses Section, page B 3.2-12 (Unit 3 only)

B 3.4.1, Bases for Recirculation Loops Operating, Applicable Safety Analyses Section, page B 3.4-3 (Unit 3 only)

B 3.4.1, Bases for Recirculation Loops Operating, LCO Section, page B 3.4-5 (Unit 2 only)

B 3.4.3, Bases for SRVs and SVs, Surveillance Requirements Section, page B 3.4-18 (Unit 3 only)

B 3.4.9, Bases for RCS P/T Limits, Actions Section, page B 3.4-48 (Unit 3 only)

B 3.5.1, Bases for ECCS-Operating, Background Section, page B 3.5-2 (Unit 2 only)

B 3.5.1, Bases for ECCS-Operating, Background Section, page B 3.5-3 (Unit 3 only)

B 3.5.1, Bases for ECCS-Operating, LCO Section, page B 3.5-5 (Unit 3 only)

30. Bases - Editorial Changes / Typographical Errors (continued)

B 3.5.1, Bases for ECCS-Operating, Actions Section, page B 3.5-7 (Unit 2 only)

B 3.6.1.2, Bases for Primary Containment Air Lock, References Section, page B 3.6-13 (Unit 2 only)

B 3.8.1, Bases for AC Sources-Operating, Background Section, page B 3.8-1 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, pages B 3.8-6 and B 3.8-7 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, page B 3.8-8 (Unit 2 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, page B 3.8-12 (Unit 2 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, page B 3.8-12 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, page B 3.8-13 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Actions Section, page B 3.8-15 (Unit 2 only)

B 3.8.1, Bases for AC Sources-Operating, Surveillance Requirements Section, page B 3.8-17 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Surveillance Requirements Section, page B 3.8-22 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Surveillance Requirements Section, page B 3.8-24 (Unit 3 only)

B 3.8.1, Bases for AC Sources-Operating, Surveillance Requirements Section, page B 3.8-26 (Unit 3 only)

B 3.8.2, Bases for AC Sources-Shutdown, LCO Section, page B 3.8-40 (Unit 3 only)

B 3.8.2, Bases for AC Sources-Shutdown, LCO Section, page B 3.8-42 (Unit 2 only)

30. Bases - Editorial Changes / Typographical Errors (continued)

B 3.8.2, Bases for AC Sources-Shutdown, Actions Section, page B 3.8-43 (Unit 2 only)

B 3.8.2, Bases for AC Sources-Shutdown, Actions Section, page B 3.8-43 (Unit 3 only)

B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, Background Section, page B 3.8-47 (Unit 2 only)

B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, Actions Section, page B 3.8-49 (Unit 2 only)

B 3.8.3, Bases for Diesel Fuel Oil, Lube Oil, and Starting Air, Actions Section, page B 3.8-52 (Unit 3 only)

B 3.8.4, Bases for DC Sources-Operating, Background Section, page B 3.8-57 (Unit 3 only)

B 3.8.4, Bases for DC Sources-Operating, Surveillance Requirements Section, page B 3.8-64 (Unit 2 only)

B 3.8.4, Bases for DC Sources-Operating, Surveillance Requirements Section, page B 3.8-66 (Unit 3 only)

B 3.8.4, Bases for DC Sources-Operating, Surveillance Requirements Section, page B 3.8-67 (Unit 3 only)

B 3.8.4, Bases for DC Sources-Operating, Surveillance Requirements Section, page B 3.8-68 (Unit 2 only)

B 3.8.5, Bases for DC Sources-Shutdown, Surveillance Requirements Section, page B 3.8-74 (Unit 3 only)

B 3.8.7, Bases for Distribution Systems-Operating, Background Section, page B 3.8-82 (Unit 3 only)

B 3.8.7, Bases for Distribution Systems-Operating, LCO Section, page B 3.8-84

B 3.8.7, Bases for Distribution Systems-Operating, LCO Section, page B 3.8-85

B 3.8.7, Bases for Distribution Systems-Operating, Actions Section, page B 3.8-85 (Unit 3 only)

30. Bases - Editorial Changes / Typographical Errors (continued)

B 3.8.7, Bases for Distribution Systems-Operating, Actions Section, page B 3.8-89 (Unit 2 only)

B 3.8.7, Bases for Distribution Systems-Operating, Surveillance Requirements Section, page B 3.8-90 (Unit 2 only)

B 3.8.8, Bases for Distribution Systems-Shutdown, Actions Section, page B 3.8-96 (Unit 2 only)

B 3.9.6, Bases for RPV Water Level, Applicable Safety Analyses Section, page B 3.9-18 (Unit 3 only)

B 3.10.7, Bases for Control Rod Testing-Operating, Applicability Section, page B 3.10-28 (Unit 2 only)

31. CTS Markups - Editorial Changes / Typographical Errors

Minor changes are proposed to the following CTS Markups to correct editorial or typographical errors.

CTS Markup for ITS 3.3.6.1, HPCI Steam Line Low Pressure, Trip Level Setting annotation, page 14 of 46 (Unit 2) and page 37 of 46 (Unit 3)

INSERT AND REMOVAL INSTRUCTIONS

The following instructions are provided for use in updating the PBAPS ITS submittal (TSCR 93-16) to reflect the changed pages of Revision B. To facilitate the update process, the instructions have been divided by PBAPS ITS submittal volume number.

VOLUME 1 APPLICATION OF SCREENING CRITERIA

REMOVE PAGE(s)	INSERT PAGE(s)
----	----

VOLUME 2 UNIT 2 TECHNICAL SPECIFICATIONS

REMOVE PAGE(s)	INSERT PAGE(s)
i thru iii	i thru iii
1.1-5	1.1-5
1.1-6	1.1-6
3.1-8	3.1-8
3.3-6 thru 3.3-9	3.3-6 thru 3.3-9
3.3-24	3.3-24
3.3-25	3.3-25
3.3-40	3.3-40
3.3-61 thru 3.3-67	3.3-61 thru 3.3-68
3.4-1	3.4-1
3.4-21 thru 3.4-25	3.4-21 thru 3.4-28
3.5-8	3.5-8
3.6-7	3.6-7
3.8-5	3.8-5
3.8-18	3.8-18
3.8-20	3.8-20
3.8-29	3.8-29
5.0-9 thru 5.0-25	5.0-9 thru 5.0-25

VOLUME 3 UNIT 3 TECHNICAL SPECIFICATIONS

REMOVE PAGE(s)	INSERT PAGE(s)
i thru iii	i thru iii
1.1-5	1.1-5
1.1-6	1.1-6
3.1-8	3.1-8
3.3-6 thru 3.3-9	3.3-6 thru 3.3-9

VOLUME 3 UNIT 3 TECHNICAL SPECIFICATIONS (Cont'd)

3.3-24	3.3-24
3.3-25	3.3-25
3.3-40	3.3-40
3.3-61 thru 3.3-67	3.3-61 thru 3.3-68
3.4-1	3.4-1
3.4-2	3.4-2
3.4-21 thru 3.4-25	3.4-21 thru 3.4-28
3.5-8	3.5-8
3.6-7	3.6-7
3.8-1	3.8-1
3.8-5	3.8-5
3.8-9	3.8-9
3.8-19	3.8-19
3.8-29	3.8-29
3.8-30	3.8-30
3.8-40	3.8-40
5.0-9 thru 5.0-25	5.0-9 thru 5.0-25

VOLUME 4 UNIT 2 TECHNICAL SPECIFICATIONS BASES (2.0 - 3.3)

REMOVE PAGE(s)	REMOVE PAGE(s)
i thru iii	i thru iii
B 2.0-4	B 2.0-4
B 3.1-16 thru B 3.1-21	B 3.1-16 thru B 3.1-21
B 3.3-34	B 3.3-34
B 3.3-35	B 3.3-35
B 3.3-72	B 3.3-72
B 3.3-73	B 3.3-73
B 3.3-188	B 3.3-188
B 3.3-190 thru B3.3-202	B 3.3-190 thru B 3.3-204

VOLUME 5 UNIT 2 TECHNICAL SPECIFICATIONS BASES (3.4 - 3.10)

REMOVE PAGE(s)	INSERT PAGE(s)
i thru iii	i thru iii
B 3.4-5 thru B 3.4-52	B 34-5 thru B 3.4-53
B 3.5-2	B 3.5-2
B 3.5-7	B 3.5-7
B 3.5-19	B 3.5-19
B 3.5-20	B 3.5-20
B 3.6-12	B 3.6-12
B 3.6-13	B 3.6-13
B 3.8-4 thru B 3.8-8	B 3.8-4 thru B 3.8-8
B 3.8-12	B 3.8-12

VOLUME 5 UNIT 2 TECHNICAL SPECIFICATIONS BASES (3.4 - 3.10) (Cont'd)

B 3.8-15	B 3.8-15
B 3.8-18 thru B 3.8-93	B 3.8-18 thru B 3.8-96
B 3.10-28	B 3.10-28

VOLUME 6 UNIT 3 TECHNICAL SPECIFICATIONS BASES (2.0 - 3.3)

REMOVE PAGE(s)	INSERT PAGE(s)
i thru iii	i thru iii
B 2.0-2	B 2.0-2
B 2.0-5	B 2.0-5
B 3.1-16 thru B 3.1-21	B 3.1-16 thru B 3.1-21
B 3.1-48	B 3.1-48
B 3.2-7	B 3.2-7
B 3.2-12	B 3.2-12
B 3.3-34	B 3.3-34
B 3.3-35	B 3.3-35
B 3.3-72	B 3.3-72
B 3.3-73	B 3.3-73
B 3.3-188	B 3.3-188
B 3.3-190 thru B 3.3-202	B 3.3-190 thru B 3.3-204

VOLUME 7 UNIT 3 TECHNICAL SPECIFICATIONS BASES (3.4 - 3.10)

REMOVE PAGE(s)	INSERT PAGE(s)
i thru iii	i thru iii
B 3.4-3	B 3.4-3
B 3.4-5 thru B 3.4-52	B 3.4-5 thru B 3.4-53
B 3.5-3	B 3.5-3
B 3.5-5	B 3.5-5
B 3.5-19	B 3.5-19
B 3.5-20	B 3.5-20
B 3.6-12	B 3.6-12
B 3.8-1	B 3.8-1
B 3.8-4 thru B 3.8-7	B 3.8-4 thru B 3.8-7
B 3.8-12	B 3.8-12
B 3.8-13	B 3.8-13
B 3.8-17	B 3.8-17
B 3.8-18 thru B 3.8-93	B 3.8-18 thru B 3.8-96
B 3.9-18	B 3.9-18

VOLUME 8 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (1.0 - 3.3.5.2)

REMOVE PAGE(s)	INSERT PAGE(s)
----	Spec 1.0 Markup page 12a of 74 (behind page 12 of 74)
Spec 1.0 Markup page 14 of 74	Spec 1.0 Makeup page 14 of 74
----	Spec 1.0 Markup page 49a of 74
Spec 1.0 Markup page 51 of 74	Spec 1.0 Markup page 51 of 74
ITS 1.0 Discussion of Change (DOC) page 4	ITS 1.0 Discussion of Change (DOC) page 4
Spec 3.1.3 Markup pages 2 of 10 and 3 of 10	Spec 3.1.3 Markup pages 2 of 10 and 3 of 10
Spec 3.1.3 Markup page 7 of 10 and 8 of 10	Spec 3.1.3 Markup page 7 of 10 and 8 of 10
ITS 3.1.3 DOC page 10	ITS 3.1.3 DOC page 10
ITS 3.1.3 DOC page 13	ITS 3.1.3 DOC Page 13
Spec 3.2.1 Markup pages 1 of 2 and 2 of 2	Spec 3.2.1 Markup pages 1 of 2 and 2 of 2
ITS 3.2.1 DOC pages 1 and 2	ITS 3.2.1 DOC pages 1 and 2
Spec 3.2.2 Markup page 1 of 6	Spec 3.2.2 Markup page 1 of 6
Spec 3.2.2 Markup page 4 of 6	Spec 3.2.2 Markup page 4 of 6
ITS 3.2.2 DOC pages 3 and 4	ITS 3.2.2 DOC pages 3, 4, and 5
Spec 3.2.3 Markup page 2 of 4	Spec 3.2.3 Markup page 2 of 4
Spec 3.2.3 Markup page 4 of 4	Spec 3.2.3 Markup page 4 of 4

VOLUME 8 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (1.0 - 3.3.5.2) (Cont'd)

ITS 3.2.3 DOC page 5 and 6	ITS 3.2.3 DOC page 6 and 7
ITS 3.2 DOC page 7	ITS 3.2 DOC page 8
Spec 3.3.1.1 Markup page 8 of 38	Spec 3.3.1.1 Markup page 8 of 38
Spec 3.3.1.1 Markup page 27 of 38	Spec 3.3.1.1 Markup page 27 of 38
ITS 3.3.1.1 DOC pages 4 thru 13	ITS 3.3.1.1 DOC pages 4 thru 15
ITS 3.3.1.2 DOC pages 14 thru 19	ITS 3.3.1.2 Doc pages 16 thru 21
ITS 3.3.2.1 DOC pages 20 thru 26	ITS 3.3.2.1 DOC pages 22 thru 28
ITS 3.3.2.2 DOC page 27	ITS 3.3.2.2 DOC page 29
Spec 3.3.1.1 Markup page 4 of 20	Spec 3.3.1.1 Markup page 4 of 20
Spec 3.3.1.1 Markup page 14 of 20	Spec 3.3.1.1 Markup page 14 of 20
ITS 3.3.3.1 DOC pages 28 thru 32	ITS 3.3.3.1 DOC pages 30 thru 34
ITS 3.3.3.2 DOC pages 33 and 34	ITS 3.3.3.2 DOC pages 35 and 36
ITS 3.3.4.1 DOC pages 35 thru 39	ITS 3.3.4.1 DOC pages 37 thru 41
ITS 3.3.5.1 DOC pages 40 thru 48	ITS 3.3.5.1 DOC pages 42 thru 50
ITS 3.3.5.2 DOC pages 49 thru 52	ITS 3.3.5.2 DOC pages 51 thru 54

VOLUME 9 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (3.3.6.1 - 3.6)

REMOVE PAGE(s)	INSERT PAGE(s)
Spec 3.3.6.1 Markup page 14 of 46	Spec 3.3.6.1 Markup page 14 of 46
Spec 3.3.6.1 Markup page 37 of 46	Spec 3.3.6.1 Markup page 37 of 46
ITS 3.3.6.1 DOC pages 53 thru 63	ITS 3.3.6.1 DOC pages 55 thru 65
ITS 3.3.6.2 DOC pages 64 thru 69	ITS 3.3.6.2 DOC pages 66 thru 71
ITS 3.3.7.1 DOC pages 70 thru 74	ITS 3.3.7.1 DOC pages 72 thru 76
Spec 3.3.8.1 Markup pages 1 of 12	Spec 3.3.8.1 Markup pages 1 of 12
Spec 3.3.8.1 Markup pages 5 of 12	Spec 3.3.8.1 Markup pages 5 of 12
Spec 3.3.8.1 Markup pages 7 of 12	Spec 3.3.8.1 Markup pages 7 of 12
Spec 3.3.8.1 Markup page 11 of 12	Spec 3.3.8.1 Markup page 11 of 12
ITS 3.3.8.1 DOC pages 75 thru 79	ITS 3.3.8.1 DOC pages 77 thru 82
ITS 3.3.8.2 DOC pages 80 thru 82	ITS 3.3.8.2 pages 83 thru 85
CTS 3/4.15 DOC page 83	CTS 3/4.15 DOC page 86
ITS 3.3 DOC page 84	ITS 3.3 DOC page 87
Spec 3.4.1 Markup page 2 of 8	Spec 3.4.1 Markup page 2 of 8
Spec 3.4.1 Markup page 6 of 8	Spec 3.4.1 Markup page 6 of 8
ITS 3.4.1 DOC page 3	ITS 3.4.1 DOC pages 3 and 4
Spec 3.4.2 Markup page 1 of 2	Spec 3.4.2 Markup page 1 of 2

VOLUME 9 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (3.3.6.1 - 3.6) (Cont'd)

Spec 3.4.2 Mark up page 2 of 2	Spec 3.4.2 Markup page 2 of 2
ITS 3.4.2 DOC pages 4 thru 8	ITS 3.4.2 DOC pages 5 thru 9
ITS 3.4.3 DOC pages 9 thru 11	ITS 3.4.3 DOC pages 10 thru 12
ITS 3.4.4 DOC pages 12 and 13	ITS 3.4.4 DOC pages 13 and 14
ITS 3.4.5 DOC pages 14 thru 16	ITS 3.4.5 DOC pages 15 thru 17
ITS 3.4.6 DOC pages 17 thru 19	ITS 3.4.6 DOC pages 18 thru 20
ITS 3.4.7 and ITS 3.4.8 DOC page 20 (behind Insert New Specification 3.4.7 page 8 of 8)	ITS 3.4.7 and ITS 3.4.8 DOC page 21 (behind Insert New Specification 3.4.7, page 8 of 8)
ITS 3.4.7 and ITS 3.4.8 DOC page 20 (behind Insert New Specification 3.4.8, page 6 of 6)	ITS 3.4.7 and ITS 3.4.8 DOC page 21 (behind Insert New Specification 3.4.8, page 6 of 6)
Spec 3.4.9 Markup pages 1 of 10 thru 10 of 10	Spec 3.4.9 Markup pages 1 of 10 thru 10 of 10
ITS 3.4.9 DOC pages 21 thru 23	ITS 3.4.9 DOC pages 22 thru 24
ITS 3.4.10 DOC page 24	ITS 3.4.10 DOC page 25
CTS 3.6.B.2 DOC page 25	CTS 3.6.B.2 DOC page 26
CTS 3.6.G DOC page 26	CTS 3.6.G DOC page 27
ITS 3.4 DOC page 27	ITS 3.4 DOC page 28
ITS 3.5.1 DOC page 8	ITS 3.5.1 DOC page 8
Spec 3.5.2 Markup page 1 of 4	Spec 3.5.2 Markup page 1 of 4
Spec 3.5.2 Markup page 3 of 4	Spec 3.5.2 Markup page 3 of 4

VOLUME 9 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (3.3.6.1 - 3.6) (Cont'd)

ITS 3.5.3 DOC page 18	ITS 3.5.3 DOC page 18
Spec 3.6.1.2 Markup page 6 of 20	Spec 3.6.1.2 Markup page 6 of 20
Spec 3.6.1.2 Markup page 16 of 20	Spec 3.6.1.2 markup page 16 of 20
Spec 3.6.1.3 Markup page 3 of 22	Spec 3.6.1.3 Markup page 3 of 22
Spec 3.6.1.3 Markup page 14 of 22	Spec 3.6.1.3 Markup page 14 of 22
ITS 3.6.1.3 DOC pages 15 and 16	ITS 3.6.1.3 DOC pages 15 and 16
Spec 3.6.2.3 Markup page 1 of 6	Spec 3.6.2.3 Mark up page 1 of 6
Spec 3.6.2.3 Markup page 4 of 6	Spec 3.6.2.3 Markup page 4 of 6
ITS 3.6.2.3 DOC page 33	ITS 3.6.2.3 DOC page 33
Spec 3.6.2.4 Markup page 1 of 6	Spec 3.6.2.4 Markup page 1 of 6
Spec 3.6.2.4 Markup page 4 of 6	Spec 3.6.2.4 Markup page 4 of 6
ITS 3.6.2.4 DOC page 35	ITS 3.6.2.4 DOC page 35

VOLUME 10 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (3.7 - APPENDIX B)

REMOVE PAGE(s)	INSERT PAGE(s)
ITS 3.8.4 DOC page 23	ITS 3.8.4 DOC page 23
Spec 3.8.6 Markup page 2 of 8	Spec 3.8.6 Markup page 2 of 8
Spec 3.8.6 Markup page 6 of 8	Spec 3.8.6 Markup page 6 of 8

VOLUME 10 CURRENT TECHNICAL SPECIFICATIONS COMPARISON DOCUMENT (3.7 - APPENDIX B) (Cont'd)

ITS 3.8.6 DOC pages 31, 32 and 33	ITS 3.8.6 DOC pages 31, 32 and 33
Spec 5.0 Markup page 19 of 86	Spec 5.0 Markup page 19 of 86
Spec 5.0 Markup page 23 of 86	Spec 5.0 Markup page 23 of 86
Spec 5.0 Markup page 27 of 86	Spec 5.0 Markup page 27 of 86 thru 27d of 86
Spec 5.0 Markup page 37 of 86	Spec 5.0 Markup page 37 of 86
Spec 5.0 Markup page 41 of 86	Spec 5.0 Markup page 41 of 86
Spec 5.0 Markup page 42 of 86	Spec 5.0 Markup page 42 of 86
Spec 5.0 Markup page 43 of 86	Spec 5.0 Markup page 43 of 86
Spec 5.0 Markup page 62 of 86	Spec 5.0 Markup page 62 of 86
Spec 5.0 Markup page 66 of 86	Spec 5.0 Markup page 66 of 86
Spec 5.0 Markup page 70 of 86	Spec 5.0 Markup page 70 of 86 thru 70d of 86
Spec 5.0 Markup page 84 of 86	Spec 5.0 Markup page 84 of 86
Spec 5.0 Markup page 85 of 86	Spec 5.0 Markup page 85 of 86
Spec 5.0 Markup page 86 of 86	Spec 5.0 Markup page 86 of 86
ITS 5.0 DOC pages 5 thru 19	ITS 5.0 DOC pages 5 thru 21

VOLUME 11 NO SIGNIFICANT HAZARDS CONSIDERATION (1.0 - 3.5)

REMOVE PAGE(s)	INSERT PAGE(s)
No. Significant Hazards Considerations (NSHCs)	No. Significant Hazards Considerations (NSHCs)
Chapter 1.0 page 4	Chapter 1.0 page 4
NSHCs Section 3.1 pages 12 and 13	NSHCs Section 3.1 pages 12 and 13
NSHCs Section 3.1 page 38	NSHCs Section 3.1 page 38
NSHCs Section 3.2 pages 3 thru 10	NSHCs Section 3.2 pages 3 thru 12
NSHCs Section 3.3 pages 1 thru 147	NSHCs Section 3.3 pages 1 thru 150
NSHCs Section 3.4 pages 8 thru 49	NSHCs Section 3.4 pages 8 thru 50
NSHCs Section 3.5 page 15	NSHCs Section 3.5 page 15
NSHCs Section 3.5 page 16	NSHCs Section 3.5 page 16

VOLUME 12 NO SIGNIFICANT HAZARDS CONSIDERATION (3.6 - APPENDIX B)

REMOVE PAGE(s)	INSERT PAGE(s)
NSHCs Section 3.6 pages 54 and 55	NSHCs Section 3.6 pages 54 and 55
NSHCs Section 3.6 pages 80 and 81	NSHCs Section 3.6 pages 80 and 81
NSHCs Section 3.8 page 15	NSHCs Section 3.8 page 15
NSHCs Section 3.8 pages 17 thru 21	NSHCs Section 3.8 pages 17 thru 21
NSHCs Section 3.8 page 25	NSHCs Section 3.8 page 25
NSHCs Chapter 5.0 page 5 thru 34	NSHCs Chapter 5.0 page 5 thru 36

VOLUME 13 DEVIATIONS FROM NUREG-1433 (TECHNICAL SPECIFICATIONS)

REMOVE PAGE(s)	INSERT PAGE(s)
Markup 1.1-6	Markup 1.1-6
Markup 1.1-7	Markup 1.1-7
Chapter 1.0 DOC page 5	Chapter 1.0 DOC page 5
Markup 3.1-8	Markup 3.1-8
Section 3.1 DOC pages 4 and 5	Section 3.1 DOC pages 4, 5, and 6
Markup 3.3-5 thru 3.3-8	Markup 3.3-5 thru 3.3-8
Insert Functions 10 and 11 (behind Markup 3.3-8)	Insert Functions 10 and 11 (behind Markup 3.3-8)
Markup 3.3 - 22	Markup 3.3 - 22
Markup 3.3 - 23	Markup 3.3 - 23
Markup 3.3 - 74	Markup 3.3 - 74
Insert ACTIONS A, B and C (1 page) (behind Markup 3.3 - 74)	Insert ACTIONS A, B and C (2 pages)(behind Markup 3.3 - 74)
Markup 3.3-76	Markup 3.3-76
Insert Function 3, 4, & 5 (behind Markup 3.3 - 76)	Insert Function 3, 4, & 5 (behind Markup 3.3 - 76)
Section 3.3 DOC pages 10 thru 13	Section 3.3 DOC pages 10 thru 14
Markup 3.4-1	Markup 3.4-1
Markup 3.4-24 thru 3.4-27	Markup 3.4-24 thru 3.4-27
-----	Section 3.4 DOC page 7
Markup 3.5-7	Markup 3.5-7

VOLUME 13 DEVIATIONS FROM NUREG-1433 (TECHNICAL SPECIFICATIONS) (Cont'd)

Section 3.5 DOC page 4	Section 3.5 DOC page 4
Markup 3.6-7	Markup 3.6-7
Markup 3.6-8	Markup 3.6-8
Markup 3.6-10	Markup 3.6-10
Section 3.6 DOC pages 5 and 6	Section 3.6 DOC pages 5 and 6
Markup 3.8-1	Markup 3.8-1
Insert LCO 3.8.1 (behind Markup 3.8-1)	Insert LCO 3.8.1 (behind Markup 3.8-1)
Insert LCO 3.8.2 (behind Markup 3.8-18)	Insert LCO 3.8.2 (behind Markup 3.8-18)
Markup 3.8 - 25	Markup 3.8 - 25
Insert LCO 3.8.7 (behind Markup 3.8-38)	Insert LCO 3.8.7 (behind Markup 3.8-38)
Section 3.8 DOC page 13	Section 3.8 DOC page 13
Markup 5.0 -22	Markup 5.0 - 22
----	Insert 5.5.4.f and 5.5.4.g (behind Markup 5.0 - 22)
Insert 5.5.4.g (behind Markup 5.0-22)	Insert 5.5.4.h (behind Markup 5.5.4.f 5.5.4.g)
Markup 5.0 - 24	Markup 5.0 - 24
Markup 5.0 - 25	Markup 5.0 - 25
Markup 5.0 - 29	Markup 5.0 - 29
Markup 5.0 - 36	Markup 5.0 - 36
Insert 5.6.5 (behind Markup 50-36 and Insert TR)	Insert 5.6.5 (behind Markup 50-36 and Insert TR)

VOLUME 13 DEVIATIONS FROM NUREG-1433 (TECHNICAL SPECIFICATIONS) (Cont'd)

Insert 5.7.1 & 5.7.2 (pages 1 of 4 thru thru 4 of 4) (behind Markup 50-41)	Insert 5.7.1 & 5.7.2 (pages 1 of 4 thru 4 of 4) (behind Markup 50-41)
Chapter 5.0 DOC page 4	Chapter 5.0 DOC page 4
Chapter 5.0 DOC page 6	Chapter 5.0 DOC pages 6, 7 and 8

VOLUME 14 DEVIATIONS FROM NUREG-1433 (BASES 2.0 - 3.3)

REMOVE PAGE(s)	INSERT PAGE(s)
Markup B 3.1-16	Markup B 3.1-16
Insert A.3 (behind Markup B 3.1-16)	Insert A.3 (behind Markup B 3.1-16)
Markup B 3.1-17	Markup B 3.1-17
Markup B 3.1-45	Markup B 3.1-45
Markup B 3.3 - 32	Markup B 3.3 - 32
----	Insert SR 3.3.1.1.18 Bases (behind Markup B 3.3-32)
Markup B 3.3-68	Markup B 3.3-68
Markup B 3.3-70	Markup B 3.3-70
Markup B 3.3-221	Markup B 3.3-221
Markup B 3.3-222	Markup B 33 -222
----	Insert A.1 and B.1 (pages 1 of 6 thru 6 of 6) (behind Markup B 3.3-222 and Insert B 3.3-222)
----	Insert C.1 (pages 1 of 2 and 2 of 2) (behind Markup B 3.3-222, Insert B 3.3-222 and Insert A.1 and B.1 (page 6 of 6))

VOLUME 14 DEVIATIONS FROM NUREG-1433 (BASES 2.0 - 3.3) (Cont'd)

Markup B 3.3-223 Bases Section 3.3 DOC page 5	Markup B 3.3-223 Bases Section 3.3 DOC page 5

VOLUME 15 DEVIATIONS FROM NUREG-1433 (BASES 3.4 - 3.10)

REMOVE PAGE(s)	INSERT PAGE(s)
Markup B 3.4-3	Markup B 3.4-3
----	Insert LCO Bases for 3.4.1 (behind Markup B 3.4-3)
Markup B 3.4-46 thru B 3.4-48	Markup B 3.4-46 thru B 3.4-48
Markup B 3.4-51 thru B 3.4 - 53	Markup B 3.4-51 thru B 3.4 - 53
Insert SR (behind Markup B3.4-53)	Insert SR (behind Markup B 3.4-53)
Markup B 3.5-2	Markup B 3.5-2
Markup B 3.5-7	Markup B 3.5-7
Markup B 3.5-18	Markup B 3.5-18
Markup B 3.5-19	Markup B 3.5-19
Markup B 3.6-12	Markup B 3.6-12
Markup B 3.6-13	Markup B 3.6-13
Markup B 3.6-18 thru B 3.6-20	Markup B 3.6-18 thru B 3.6-20
Markup B 3.6-21	Markup B 3.6-21
Markup B 3.6 - 24	Markup B 3.6 - 24
Bases Section 3.6 DOC page 1	Bases Section 3.6 DOC page 1

VOLUME 15 DEVIATIONS FROM NUREG-1433 (BASES 3.4 - 3.10) (Cont'd)

Bases Section 3.6 DOC page 3	Bases Section 3.6 DOC page 3
Insert B 3.8 - 4 #1 (behind Markup B 3.8-4)	Insert B 3.8 - 4 #1 (behind Markup B 3.8-4)
Insert B 3.8-10 #2 (behind Markup B 3.8 - 10 and Insert B 3.8 - 10 #1)	Insert B 3.8-10 #2 (behind Markup B 3.8 - 10 and Insert B 3.8 - 10 #1)
Markup B 3.8-12	Markup B 3.8-12
Markup B 3.8-16	Markup B 3.8-16
----	Insert WSTS - 5 (behind Markup B 3.8-16)
Markup B 3.8-17	Markup B 3.8-17
----	Insert DG load (behind Markup B 3.8-17)
Markup B 3.8 - 24	Markup B 3.8 - 24
----	Insert WSTS - 5 (behind Markup B 3.8 - 24)
Markup B 3.8 - 27	Markup B 3.8-27
----	Insert DG load (behind Markup B 3.8-27)
Markup B 3.8-28	Markup B 3.8-28
----	Insert WSTS - 5 (behind Markup B 3.8-28)
Markup B 3.8-32	Markup B 3.8 - 32
----	Insert WSTS - 5 (behind Markup B 3.8 - 32)
Insert ACTIONS (behind Markup B 3.8 - 38)	Insert ACTIONS (behind Markup B 3.8 - 38)
Insert 3.8.3 Actions (behind Markup B 3.8 - 43)	Insert 3.8.3 Actions (behind Markup B 3.8 - 43)

VOLUME 15 DEVIATIONS FROM NUREG-1433 (BASES 3.4 - 3.10) (Cont'd)

Markup B 3.8 - 46	Markup B 3.8 - 46
Markup B 3.8 - 47	Markup B 3.8 - 47
Markup B 3.8 - 49	Markup B 3.8 - 49
Markup B 3.8 - 56	Markup B 3.8 - 56
Insert ACTIONS (behind Markup B 3.8-60 and Insert B 3.8-60)	Insert ACTIONS (behind Markup B 3.8-60 and Insert B 3.8-60)
Insert B 3.8 - 61 (behind Markup B 3.8 - 61)	Insert B 3.8 - 61 (behind Markup B 3.8 - 61)
Markup B 3.8 - 78 <for Unit 2 only>	Markup B 38 - 78 <for Unit 2 only>
Markup B 3.8 - 78 <for Unit 3 only>	Markup B 3.8 - 78 <for Unit 3 only>
Insert LCO (behind Markup B 3.8 - 79)	Insert LCO (behind Markup B 3.8 - 79)
Insert LCO - 2 (behind Markup B 3.8 - 79, Insert LCO and LCO -1)	Insert LCO - 2 (behind Markup B 3.8 - 79, Insert LCO and LCO - 1)
Insert A.1 & B.1 (page 2 of 2) (behind Markup B 3.8 - 80 and Insert A.1 & B.1 (page 1 of 2))	Insert A.1 & B.1 (page 2 of 2) (behind Markup B 3.8 - 80 and Insert A.1 & B.1 (page 1 of 2))
Markup B 3.8 - 82	Markup B 3.8 - 82
Insert ACTIONS (behind Markup B 3.8 - 90)	Insert ACTIONS (behind Markup B 3.8 - 90)
Bases Section 3.8 DOC page 3	Bases Section 3.8 DOC page 3
Bases Section 3.8 DOC page 5	Bases Section 3.8 DOC pages 5, 6, and 7