May 21, 2010

Mr. Tom Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: REVISED REQUEST FOR ADDITIONAL INFORMATION REGARDING SEVERE ACCIDENT MITIGATION ALTERNATIVES FOR SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2

Dear Mr. Joyce:

The U.S. Nuclear Regulatory Commission staff has reviewed the severe accident mitigation alternatives (SAMA) analysis submitted by Public Service Enterprise Group Nuclear, LLC regarding its application for license renewal of the Salem Nuclear Generating Station, Units 1 and 2, and has identified areas where additional information is needed to complete its review. Enclosed is the staff's revised request for additional information (RAI).

The enclosure to this letter supplants the enclosure to the original RAI letter titled, "Request for Additional Information Regarding Severe Accident Mitigation Alternatives for Salem Nuclear Generating Station, Units 1 and 2," dated April 12, 2010. We request that you provide your responses to the questions in this letter's enclosure within 45 days of the date indicated in the original RAI letter. If you have any questions, please contact me at 301-415-8537 or by e-mail at charles.eccleston@nrc.gov.

Sincerely,

/RA/

Charles Eccleston, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure:
As stated

cc w/encl: See next page

May 21, 2010

Mr. Tom Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: REVISED REQUEST FOR ADDITIONAL INFORMATION REGARDING SEVERE ACCIDENT MITIGATION ALTERNATIVES FOR SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2

Dear Mr. Joyce:

The U.S. Nuclear Regulatory Commission staff has reviewed the severe accident mitigation alternatives (SAMA) analysis submitted by Public Service Enterprise Group Nuclear, LLC regarding its application for license renewal of the Salem Nuclear Generating Station, Units 1 and 2, and has identified areas where additional information is needed to complete its review. Enclosed is the staff's revised request for additional information (RAI).

The enclosure to this letter supplants the enclosure to the original RAI letter titled, "Request for Additional Information Regarding Severe Accident Mitigation Alternatives for Salem Nuclear Generating Station, Units 1 and 2," dated April 12, 2010. We request that you provide your responses to the questions in this letter's enclosure within 45 days of the date indicated in the original RAI letter. If you have any questions, please contact me at 301-415-8537 or by e-mail at charles.eccleston@nrc.gov.

Sincerely,

/RA/

Charles Eccleston, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosure:
As stated

cc w/encl: See next page

DISTRIBUTION: See next page

ADAMS Accession No.: MI101310082

OFFICE	LA:DLR	PM:DLR:RPB1	BC:DLR:RPB1	PM:DLR:RPB1
NAME	YEdmonds (IKing for)	CEccleston	BPham	CEccleston
DATE	05/21/10	05/18/10	05/21/10	05/21/10

OFFICIAL RECORD COPY

Letter to T. Joyce from C. Eccleston, dated May 21, 2010

SUBJECT: REVISED REQUEST FOR ADDITIONAL INFORMATION REGARDING SEVERE ACCIDENT MITIGATION ALTERNATIVES FOR SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2

DISTRIBUTION:

HARD COPY:
DLR RF

E-MAIL:
PUBLIC
RidsNrrDlr Resource
RidsNrrDlrRpb1 Resource
RidsNrrDlrRpb2 Resource
RdsNrrDlrRarb Resource
RidsNrrDlrRasb Resource
RidsNrrDlrRapb Resource
RidsOgcMailCenter Resource

BPham
BBrady
CEccleston
REnnis
CSanders
BHarris, OGC
ABurritt, RI
RConte, RI
MModes, RI
DTifft, RI

Salem Nuclear Generating Station,
  Units 1 and 2

cc:

Mr. Robert Braun
Senior President - Nuclear
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. John Perry
Station Vice President - Hope Creek
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Carl Fricker
Station Vice President - Salem
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. Jeffrie J. Keenan, Esquire
Manager - Licensing
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. William Mattingly
Manager – Salem Regulatory Assurance
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. Michael Gaffney
Manager - Hope Creek Regulatory
  Assurance
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Township Clerk
Lower Alloways Creek Township
Municipal Building, P.O. Box 157
Hancocks Bridge, NJ 08038

Mr. Paul Bauldauf, P.E., Asst. Director
Radiation Protection Programs
NJ Department of Environmental
  Protection and Energy, CN 415
Trenton, NJ 08625-0415

Mr. Brian Beam
Board of Public Utilities
2 Gateway Center, Tenth Floor
Newark, NJ 07102

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Salem Nuclear Generating Station
U.S. Nuclear Regulatory Commission
Drawer 0509
Hancocks Bridge, NJ 08038

Senior Resident Inspector
Hope Creek Generating Station
U.S. Nuclear Regulatory Commission
Drawer 0509
Hancocks Bridge, NJ 08038

Mr. Michael Gallagher
Vice President – License Renewal Projects
Exelon Nuclear LLC
200 Exelon Way
Kennett Square, PA 19348

Mr. Ed Eilola
Plant Manager – Salem
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. Larry Wagner
Plant Manager – Hope Creek
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

cc:

Mr. Paul Davison
Vice President – Operations Support
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Ms. Christine Neely
Director – Regulator Affairs
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. Ali Fakhar
Manager, License Renewal Salem
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. James Stavely
Manager, License Renewal Hope Creek
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Mr. Earl R. Gage
Salem County Administrator
Administration Building
94 Market Street
Salem, NJ 08079

Mr. Edward J. Keating
Environmental Manager
PSEG Nuclear LLC
One Alloway Creek Neck Road
P.O. Box 236, Mail Code N21
Hancocks Bridge, NJ 08038

Ms. Nancy L. Ranek
License Renewal Environmental Lead
Exelon Nuclear LLC
200 Exelon Way, KSA/2-E
Kennett Square, PA 19348

Mr. Gregory Sosson
Director Corporate Engineering
PSEG Nuclear LLC
One Alloway Creek Neck Road
Hancocks Bridge, NJ 08038

Revised Request for Additional Information
Regarding the Analysis of Severe Accident Mitigation Alternatives
for Salem Nuclear Generating Station (SNGS), Units 1 and 2

1. Provide the following information regarding the Level 1 Probabilistic Safety Assessment (PSA) used for the Severe Accident Mitigation Alternatives (SAMA) analysis:

   a. Section E.2.1 provides varying levels of detail describing the PSA model changes made since the IPE Level 1 model. For PRA Model Versions 2.0 and 3.0, provide additional description of the model changes that most impacted the change in core damage frequency (CDF). For PRA Model Versions 3.2, 3.2A, and 4.0, identify the model changes listed in Section E.2.1 that most impacted the change in CDF.

   b. Section E.2.1.3 explains that although early versions of the SNGS PRA modeled both Units 1 and 2, only Unit 1 was modeled starting with PRA model of record Revision 3.0 (June 2002). Explain the differences in configuration between Units 1 and 2 and how configuration and administrative changes that could potentially produce significantly different CDFs for the two units were tracked. In the response, identify any of the Unit 2 differences that would potentially show up on the Level 1 or 2 importance lists and assess SAMAs to address these differences.

   c. Section E.2.3 states that in November 2008 a PWR Owners group team performed a peer review of Revision 4.1, but that the peer review comments had not yet been received. It is our understanding that the peer review report is now available. Provide a summary of the scope of the peer review (e.g., Level 1, Level 2, internal flooding), a description of the significant review comments and their resolution, and an assessment of the potential impact of any unresolved comments on the results of the SAMA analysis. Describe any other internal and external reviews of the Level 1 (including internal flooding) and Level 2 PRA model, significant review comments and their resolution, and the impact of unresolved comments on the results of the SAMA analysis.

   d. Section E.2.2 states that the PRA model of record Revision 4.1 was used for the SAMA analysis reflects SNGS plant data and incorporation of plant modifications up through December 2006. Identify any changes to the plant (physical and procedural modifications) since December 2006 that could have a significant impact on the results of the PSA and/or the SAMA analyses. Provide a qualitative assessment of their impact on the PSA and on the results of the SAMA evaluation.

   e. Figures E.2-1 and E.2-2 provide the contribution to CDF by Level 1 initiator. Provide a table showing the actual numerical values for the CDF contribution for each initiator that sums to the total internal events CDF (4.77×10^{-5}/yr).

   f. Provide the numerical value for the CDF contribution from SBO and identify the initiators that contribute to station blackout (SBO).

2. Provide the following information relative to the Level 2 analysis:

   a. Section E.2.2.2.1 states that starting with model of record Revision 3.0 (i.e. 2002) only LERF was calculated. Table E.3-7 shows non-LERF Release Categories (e.g. LATE-CHR-NOAFW) produce significant dose consequences. Describe how the frequencies for the non-LERF Release Categories were estimated in support of the SAMA analysis.

   b. Page E-27 states that the Salem Level 2 model was essentially abandoned and then recreated and used in PRA Model Version 4.1 for the SAMA analysis. Section E.2.2.2.1 states that starting with Revision 3 of the PRA model only LERF was calculated. Clarify the Level 2 model development history, including when (after which PRA version) the Level 2 model was abandoned, and in which PRA version the Level 2 model was recreated.

   c. Section E.2.2.3 states that Containment Event Tree (CET) top events represent questions that are answered based on previous work for Salem Level 2, recent accident progression research, and similar analyses for other nuclear plants. It is apparent, however, from later discussion that fault tree modeling was also used as a basis (e.g. fault tree YCI-GCI1100 was used to address "Containment Isolation" top event). It is not clear what the basis for the branch probabilities was for top events RCS Depressurization and Containment Heat Removal. Clarify the basis for addressing the branch point probabilities for these top events.

   d. Section E.2.2.4 provides the rationale for and describes the process of identifying appropriate parameters to bin Plant Damage States (PDSs). However, the third paragraph of Section E.2.2.4.1 states that "This permits the somewhat artificial boundary between the Level 1 event trees and the containment event trees (i.e. the PDS) to be eliminated from this analysis." Clarify the meaning of "artificial" and "eliminated" and how PDSs are considered in the SAMA analysis.

   e. Identify the version of MAAP used in the SAMA analysis.

   f. Section E.2.2.7.1 states that for the LATE release categories the "most likely initiators and sequences" were chosen to represent the category, while for the LERF release categories both the likelihood and the consequences were considered in selecting representative sequences. Justify why the consequences were not also considered in identifying the representative sequence for LATE releases since, as indicated in Table E.3-7, LATE-CHR-NOAFW accounts for more than 50 percent of the Dose-Risk and more than 30 percent of the offsite economic cost risk (OECR). In addition, clarify what is meant by "most likely initiators and sequences" and provide an example of how this is applied for release category LERF-CFE.

   g. Page 3-4 reports that the licensed thermal power for SNGS Unit 1 is 3,459 MWt, which equates to a net electrical output of 1,195 MWe when operating at 100 percent power. Page E-59 states that the current licensed power is 3468 MWt, but that the core inventory is based on a thermal power level of 3632 MWt (5 percent above the licensed power level). Provide the rationale for using 3632 MWt in determining the core inventory used in the SAMA analysis.

3. Provide the following information with regard to the treatment and inclusion of external events in the SAMA analysis:

   a. Section E.5.1.5.1.3 identifies that PSEG has replaced CO_2 fire suppression systems with water sprinkler systems in several areas at Salem since the IPEEE. For each of the dominant fire areas, explain what additional measures, if any, have already been taken (since the IPEEE) to reduce fire risk. Include in the response specific improvements to fire detection systems, enhancements to fire suppression capabilities, changes that would improve cable separation, and improvements to processes/procedures for monitoring and controlling the quantity of combustible materials in critical areas.

   b. Section E.5.1.5 presents a table that summarizes the status of three potential plant improvements based on the results of the IPEEE processes. The IPEEE SER identifies five additional potential plant improvements as follows: (1) a procedural change to ensure long term alternate ventilation for the Auxiliary Building, (2) the replacement of identified low ruggedness relays with higher seismic capacity relays, (3) a procedural change to enhance cooling in the switchgear and control areas in the event of a fire, (4) improved hold downs for the hydrogen tanks to protect against tornadoes, and (5) modifications to the plant circulating water intake structure to protect against detritus (blockage). (Section 5.1.6.4 seems to indicate that Item (4) has been implemented and Section E.5.1.6.7 seems to indicate that Item (5) has been implemented.) Confirm that all of these items have been implemented. If not, provide an evaluation of a SAMA that addresses those improvements that have not been implemented.

   c. Section E.4.6.2 mentions the interim SNGS fire model (SCIENTECH 2003) that was used to provide insights for three fire areas in which fire suppression systems were changed since the IPEEE. Provide the background/history of the development of this model and a brief description of the model. Clarify in the response whether the model is an evolution of the IPEEE model or a completely new model, whether the model was integrated with the Level 1 model or is a stand-alone model, to what PRA standards the model was developed, and why the model has not been implemented at Salem.

   d. A liquefied natural gas terminal has been approved for construction in Logan Township, NJ. Discuss the status of this facility and the potential impact of the transportation of LNG to this facility on SNGS during the license renewal period.

4. Provide the following information concerning the MACCS2 analyses:

   a. Section E.3.2 states that SECPOP2000 census data from 1990 to 2000 were used to determine the population growth factor, and that the population growth was averaged over each ring and applied uniformly to all sectors within each ring. Using an average growth over a ring mixes growth rates from significantly different regions. For example; portions of Kent County, Delaware, Chester County, Pennsylvania, and Cumberland County New Jersey will lie on similar rings. Between years 2000 and 2003, they had population growths of 6.1%, 5.5% and 2.0%, respectively (http://www.epodunk.com/top10/countyPop/coPop8.html, http://www.epodunk.com/top10/countyPop/coPop39.html, and http://www.epodunk.com/top10/countyPop/coPop31.html). Provide an assessment of the potential impact on PDR and OECR if a wind-direction weighted growth estimate for each sector were used.

b. Section E.3.2 does not discuss transient population. Clarify whether transient population was considered in the analysis. If a transient population was not considered, provide a justification/rationale for not including it.

c. Section E.7.3.4 describes a population sensitivity case in which the 2040 population was uniformly increased by 30 percent in all sectors of the 5-mile radius. Section E.3.2 states that SECPOP2000 census data from 1990 to 2000 were used to determine the 10 year population growth factor. It is unclear if the 30 percent sensitivity case bounds the population growth rate if updated population growth estimates are used (see RAI 4a). Provide an assessment of the impact on PDR and OECR using currently available population growth estimates for the surrounding counties and states.

d. Section 3.1.2 identifies the allowable fuel burnup and enrichment for SNGS. Confirm that this is consistent with the core inventory used in the SAMA analysis.

5. Provide the following with regard to the SAMA identification and screening process:

a. It appears that the SAMA identification process eliminated many potential SAMAs by using the generic list of SAMAs in NEI 05-01 only to identify types of changes to address items identified through the importance list review (rather than starting with the generic list and eliminating SAMAs using the screening criteria). Justify that the Phase I SAMA identification and screening process produced a comprehensive sufficiently complete set of SAMAs for consideration, given that 17 of the 27 Phase 1 SAMAs were ultimately determined to be potentially cost-beneficial.

b. Section E.5.1.1 explains that PSEG used a review threshold RRW of 1.01 for the Level 1 and 2 importance list reviews, which corresponds to a single unit averted cost-risk of about $164,000. This section also explains that the assumed cost of procedural changes in the SAMA analysis was $50,000 to $100,000 for the site and that the offsite economic cost-risk reduction corresponding to $50,000 would be 1.003. The section also acknowledges that performing a risk reduction worth (RRW) review to the level of 1.003 would likely generate additional unique SAMAs, some of which could be cost beneficial. Provide a review of basic events down to an RRW of 1.003 and an evaluation of any new SAMAs that arise from this review.

c. Table E.5-1 describes SAMA 8, installing a high pressure pump powered with portable diesel generator, as a way to reduce the risk associated with Event AFS-MDP-FS-DF04: "Dependent failure of 3 AFW Pumps (Steam binding)." The table indicates that the contribution from this particular failure could potentially be reduced by operating with the "AF11/21" valves closed but that a more comprehensive enhancement would be a portable diesel driven pump (i.e. SAMA 8). Section E.6.8.3 presents an estimated unit cost for SAMA 8 of $2.5M and concludes that SAMA 8 is not cost beneficial. The cost of operating with the "AF11/21" valves would appear to be much lower than $2.5M. Provide a cost-benefit evaluation of a SAMA to operate with the AF11/21 valves closed as a lower cost alternative to SAMA 8.

d. Table E.5-1 identifies several events beginning with the symbol "%" as either initiators or flags for initiators, and proposes SAMAs for both kinds of events. Clarify why SAMAs were proposed for "flags for initiators." If the initiator flags are meant to be surrogates for the actual initiator clarify why a value of 1.0 is the appropriate probability on which to base the importance analysis.

e. Table E.5-1 identifies two events that are split fractions (i.e. RCS-SLOCA-SPLIT: "Split fraction for seal LOCA after cooling" with a probability of 1.0, and MFI-UNAVIALABLE: "Split fraction for MFW unavailable" with a probability of 0.3). Describe the significance of the SAMAs proposed for these events.

f. PSEG's review of Phase 2 SAMAs from prior SAMA submittals appears to have overlooked additional potentially cost-beneficial SAMAs identified during the NRC staff's review of the referenced plants, for example, Point Beach SAMA 169, "provide portable generators to be hooked up to turbine driven AFW after battery depletion," and use of a gagging device to remotely close a stuck open safety valve on a ruptured steam generator at Prairie Island. For these and any other additional cost-beneficial SAMAs, provide an assessment of their applicability to SNGS, and a cost-benefit evaluation for any SAMA determined to be applicable.

g. SAMA 20, which involves installing a "fire safe" system to provide makeup to the RCS and steam generators, would reduce the risk associated with fire area 1FA-AB-84A: 460V Switchgear Rooms at a cost of $13M. SAMA 23, which involves providing separation between power divisions by installing barriers or wrap, would reduce the risk associated with fire area, 1FA-AB-64A: 4160 Switchgear Room at a far lower cost of $975K. Provide an evaluation of a SAMA to install improved fire barriers to provide separation between the three divisions as a lower cost alternative to SAMA 20.

h. SAMA 8, which involves providing an engine driven, high pressure makeup pump for the steam generators, would reduce the risk associated with fire area 1FA-AB-84B: Reactor Plant Aux Equip Area at a cost of $2.5M. Provide an evaluation of a SAMA to install improved fire barriers to provide separation between the AFW pumps.

i. Table E.5-3 describes the source of SAMA 24 as the "SNGS IPEEE (Fire)." However, neither Section E.5.1.5 nor E.5.1.6 identify this SAMA from the review of the plant changes identified in the SNGS IPEEE or from the review of the SNGS IPEEE fire model, respectively. While the source of this SAMA appears to be the review of fire area 12FA-SW-90A/90B: Service Water Intake, SAMA 24 is assumed to only provide benefits in internal events. Clarify the source for SAMA 24 and the PRA model changes made to evaluate this SAMA.

6. Provide the following with regard to the Phase II cost-benefit evaluations:

a. Section E.6 introduction states that plant personnel developed SNGS specific costs to implement each of the SAMAs. Provide a description of: the process PSEG used to develop the SAMA implementation costs, the level of detail used to develop the cost estimates (i.e., general cost categories), and how the calculations are documented.

b. For certain Phase I SAMAs listed in Table E.5-3, the information provided does not sufficiently describe the associated modifications and what is included in the cost estimate. Provide a more detailed description of both the modification and the cost estimate for SAMAs 3, 5, 8, 13, 20, and 23.

c. SAMAs 1 and 17 are similar in that each involves opening doors to provide ventilation and using portable fans to enhance natural circulation if required. However, the estimated implementation costs are significantly difference ($475K and $200K, respectively). Provide an explanation of the reasons for the differences in the cost estimates for these SAMAs.

d. SAMAs 21and 22 are similar in that each involves installing fire barriers to prevent the propagation of a fire between cabinets. SAMA 21 modifies 48 cabinets at a cost of $3.23M while SAMA 22 modifies 3 consoles at a cost of $1.6M, which is only about half the cost of SAMA 21. Provide an explanation for this apparent discrepancy.

e. SAMAs 10 and 11, which appear to only involve procedure modifications, are each estimated to have an implementation cost of $100K (per unit). Section E.5.1.1 states that the minimum expected implementation cost is assumed to be a procedure change at $50K to $100K for the site. Justify the implementation cost estimates of $100K for SAMAs 10 and 11, and confirm that the cost estimates are for a single unit.

f. The benefit and net value calculations for SAMAs 1, 5, and 8 are not consistent with the methodology described. For example, the “SAMA 1 Non-Fire Averted Cost-Risk” on page E-117 includes the full external event multiplier of 2 as described in Section 4.6.3 (which includes fire CDF). A calculation for “fire averted cost-risk” is then added to the previous calculation (apparently double counting the fire risk). Furthermore, while the “SAMA 1 Net Value” table on page E-119 shows a cost of implementation of $475K, the “Net Value” calculated assumes an implementation cost of only $100K. Clarify these discrepancies and provide revised analyses if necessary.

g. The tables on pages E-121, E-125, E-150, E-151, and E-190 for SAMAs 2, 4, 18, 19, and 5A (providing the change in CDF, PDR, and OECR by release category) are inconsistent with the SAMA quantification results and appear to be incorrect. Provide corrected tables, and any other corrections if necessary.

h. The cost of implementation of SAMA 3, as shown in Table E.5-3, is $525K. However, the SAMA analysis in Section E.6.3 uses an implementation cost of $4.175M. Clarify which is correct and provide a revised analysis if necessary.

i. For SAMA 5, the likelihood of offsite power nonrecovery was changed to 0.01 for grid and site/switchyard-related causes and to 0.03 for weather-related causes. Provide the baseline probabilities for these nonrecovery events.

j. Clarify the PRA model changes made for SAMA 17. Provide the initial and revised probability values used for failure of the EDG control room HVAC fans.

k. Page 3-4 reports that the licensed thermal power for SNGS Unit 1 is 3,459 MWt, which equates to a net electrical output of 1,195 MWe when operating at 100 percent power. Page E-67 states that a power level of 1115 MWe was used to calculate long-term replacement power costs for the SAMA analysis, which is non-conservative with respect to the licensed power level. Clarify this discrepancy.

7. PSEG's cost-benefit analysis showed that 12 of the SAMA candidates (SAMAs 1, 2, 4, 5A, 6, 9, 10, 11, 12, 14, 17, and 24) were potentially cost-beneficial in the baseline analysis and that an additional five SAMAs (SAMAs 3, 5, 7, 8, and 27) were potentially cost-beneficial based on the results of the sensitivity analysis. Address the following relative to these potentially cost-beneficial SAMAs:

   a. PSEG states on page E-194 that all 17 of these potentially cost-beneficial SAMAs will be considered for implementation using the existing Salem action-tracking and design change processes. Page 4-46 states that these potentially cost-beneficial SAMAs will be considered for implementation through the established Salem Plant Health Committee processes. Describe these two processes and how they are used to evaluate potentially cost-beneficial SAMAs.

   b. In view of the significant number of potentially cost-beneficial SAMAs, it is likely that several of these SAMAs address the same risk contributors. As such, implementation of an optimal subset of these SAMAs could achieve a large portion of the total risk reduction at a fraction of the cost, and render the remaining SAMAs no longer cost-beneficial. In this regard: identify those SAMAs that PSEG considers highest priority for implementation, provide a revised cost-benefit analysis assuming these high priority SAMAs are implemented, and identify those SAMAs that would no longer be cost-beneficial given implementation of the high-priority SAMAs. Also, provide any specific plans/commitments regarding implementation of the high priority SAMAs.