

DED

December 27, 1995

Mr. D. M. Smith
Senior Vice President-Nuclear
PECO Energy
Nuclear Group Headquarters
Correspondence Control Desk
P. O. Box 195
Wayne, Pennsylvania 19087-0195

SUBJECT: MANAGEMENT MEETING REGARDING OPERATOR EXAMINATION RESULTS

Dear Mr. Smith:

This letter documents the December 14, 1995, open meeting held in the Region I office to review PECO Energy's conclusions regarding the weak performance of the operator license candidates during an August 1995 operator license examination at Peach Bottom. PECO Energy management was lead by Garrett Edwards, Peach Bottom plant manager, and Region I management was lead by James Wiggins, Director, DRS, and myself. A copy of the handout distributed at the meeting by PECO Energy is enclosed.

At the meeting, PECO Energy management reviewed their conclusions regarding the areas of candidate training and preparation which had caused and contributed to the generally weak performance of the operator candidates, including the unrecognized need for some senior reactor operator (SRO) candidates to have additional plant familiarization, the weak understanding of system details including protection and control logic, the need to upgrade the cognitive level of written questions, and the infrequent evaluation of the candidates' ability to prioritize mitigating actions during simulator scenarios. In addition, your staff stated that your guidance for examination validation and pre-administration review will be revised to promote prompt escalation of any unresolved examination concerns to PECO Energy management. We encourage you to pursue your proposed corrective actions vigorously, and we support the resolution of all facility concerns on any examination prior to its administration, including involvement of regional management.

Several meeting topics merit reemphasis, regarding the difficulty of some simulator scenarios and the NRC expectations for probabilistic safety assessment (PSA) understanding. In the meeting your staff stated that they had concluded that the difficulty of some exam scenarios had exceeded the guidelines established by the Operator Licensing Examiner Standards (NUREG-1021). While we believe the scenarios were challenging, we do not currently concur with this conclusion. At the meeting PECO Energy agreed to provide the basis for the conclusion to enable Region I to further evaluate this.

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Mr. D. M. Smith

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Secondly, your staff requested clarification of NRC expectations for operators' understanding of PSA. On the examinations PSA was not included in any explicit manner nor do we expect future examinations to address PSA in general or the results of your individual plant examination (IPE) in particular. Nonetheless, we believe that PSA enables a focused safety approach that is worthwhile and merits some understanding by licensed operators. Accordingly, our examiner had informally queried three SRO candidates, and we reported the apparent lack of understanding on dominant accident sequences and operator errors. Your staff stated that operators have been trained on various aspects of PSA but were not familiar with these specifics. We regret any mischaracterizations of PSA understanding due to the specific focus on dominant accident sequences and operator errors, but we remain interested in these areas and may informally ask future license candidates such questions outside of the examination.

We appreciate your staff's frank discussions on your lessons learned from the examination, and we believe the meeting was useful in enabling both NRC and PECO Energy personnel to better understand the examination results. No regulatory decisions or actions were requested or made during the meeting.

Sincerely,

Original Signed By:

Glenn W. Meyer, Chief
Operator Licensing and
Human Performance Branch
Division of Reactor Safety

Docket Nos. 50-277
50-278

Enclosure: PECO Energy handout

cc w/encl:

G. A. Hunger, Jr., Chairman, Nuclear Review Board and Director, Licensing
G. Rainey, Vice President, Peach Bottom Atomic Power Station
D. B. Fetters, Vice President, Nuclear Station Support
J. Cotton, Director, Nuclear Engineering Division
J. Stankiewicz, Director of Training
D. McClellan, Manager, Operations Training
C. D. Schaefer, External Operations - Delmarva Power & Light Co.
G. Edwards, Plant Manager, Peach Bottom Atomic Power Station
A. J. Wasong, Manager, Experience Assessment
J. W. Durham, Sr., Senior Vice President and General Counsel
P. MacFarland Goelz, Manager, Joint Generation, Atlantic Electric
B. W. Gorman, Manager, External Affairs
R. McLean, Power Plant Siting, Nuclear Evaluations
D. Poulsen, Secretary of Harford County Council
R. Ochs, Maryland Safe Energy Coalition
J. H. Walter, Chief Engineer, Public Service Commission of Maryland
L. Jacobson, Peach Bottom Alliance
Commonwealth of Pennsylvania
State of Maryland
TMI - Alert (TMIA)

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Distribution w/encl:
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 J. Stolz, PDI-2, NRR
 Inspection Program Branch, NRR (IPAS)

OLB concurrence not needed per 12/21 Mendota call.
[Signature]

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OFFICE	RI/DRS	RI/DRP	/			
NAME	GMEYER <i>[Signature]</i>	WPASCIAK <i>ws</i>				
DATE	12/26/95 <i>[Signature]</i>	12/26/95	12/ /95	12/ /95	12/ /95	

OFFICIAL RECORD COPY

NRC PRESENTATION
1995 LOT EXAM SUMMARY

Opening Remarks

- LEARNING OPPORTUNITY
- SHARE OBSERVATIONS AND OUR LEARNING
- SEEK CLARITY

1995 LOT JPM EXAM

ISSUES:

- *LOGIC KNOWLEDGE*
- *LOCATION OF EQUIPMENT*
- *PANEL UNFAMILIARITY*
- *PSA*

CAUSES:

- *LOGIC*
Candidates did not meet expectations in the area of logic knowledge.
- *PANEL FAMILIARITY/LOCATION*
Background of 2 candidates should have triggered supplemental training in this area.
- *PSA*
Training focused on use of PSA in making event and work planning judgements.
Did not cover specific dominate accident sequences.

JPM CORRECTIVE ACTIONS:

1. Improve training and evaluation of logic knowledge.
2. Evaluate candidates plant experience. Determine if supplemental training is required.
3. Evaluate if the Dominate Accident Sequences are required knowledges.
4. Evaluate classroom & on-shift training for appropriate location/familiarity training.

1995 WRITTEN EXAM

ISSUES:

- **VALIDATION PROCESS**
- **COGNITIVE LEVEL OF QUESTIONS**
- **ADMINISTRATIVE QUESTIONS**
- **FORMAT OF QUESTIONS**
- **ENTRY POINT OF UPGRADE CANDIDATES**

CAUSES:

- **VALIDATION PROCESS CRITERIA AND MANAGEMENT INVOLVEMENT NEED FORMALIZED.**
- **ADMINISTRATIVE QUESTIONS**
Candidates did not meet expectations
- **FORMAT OF QUESTIONS**
- **ENTRY POINT FOR UPGRADE CANDIDATES**
- **UPGRADE TRAINING PROGRAM TO RAISE COGNITIVE CHALLENGE OF PECO QUESTIONS**

CORRECTIVE ACTIONS:

1. Improve validation process used during NRC LOT exams.
2. Review the distribution of higher order questions and increase as necessary.
3. Review philosophy of having upgrade candidates enter 3 months into the program.

1995 SIMULATOR EXAM

ISSUES:

- *MONITORING CRITICAL PARAMETERS*
- *MANAGING, PLANNING, PRIORITIZATION DURING SCENARIO*
- *TIMING OF BRIEFS*
- *VALIDATION PROCESS*
- *SCENARIO DIFFICULTY*
- *3 MAN CREW*
- *PANEL MANIPULATIONS*

CAUSES:

- *SIMULATOR TRAINING DID NOT PROPERLY TRAIN CANDIDATES TO MONITOR CRITICAL PARAMETERS, MANAGE EVENTS AND TIME BRIEFS.*
- *VALIDATION PROCESS*
 - Exam team did not take full advantage of validation process by elevating issues to higher levels of management.
- *SCENARIO DIFFICULTY*
 - PECO does not believe scenario met ES-604 standards. Although it did provide an evaluation of SRO prioritization ability.
- *3 MAN CREW*
 - Reduces the time for recognition, diagnostics and oversight that could be provided normally by the STA or SM.
- *PANEL MANIPULATIONS*
 - 1 Candidate background and plant familiarity reduced his effectiveness in manipulating controls.

CORRECTIVE ACTIONS:

1. Improve validation process used during NRC simulator exam.
2. Economize simulator time to make more time for simulator training.
3. Integrate multi-unrelated scenarios into simulator training to evaluate candidate prioritization.
4. Clarify expectations of briefs during implementation of critical tasks.
5. Review instant SRO training for panel and plant familiarity.
6. Evaluate use of 3 person LOT crews.

1994/1995 EXAM COMPARISONS

- 1994:** *Diagnostics was a strength.*
- 1994:** *RO Knowledge of Tech Specs and TRIPS weak.*
1995: *RO knowledge of Tech Specs and TRIPS was much better.*
- 1994:** *Conduct of briefs that stopped activities.*
1995: *Conduct of briefs at inappropriate times.*
- 1994:** *Written exam question cognitive level.*
1995: *Written exam question cognitive level.*
- 1994:** *Plant locations was a strength.*
1995: *Plant locations and panel familiarity weak.*
- 1994:** *Admin requirements knowledge was a strength.*
1995: *Admin requirement knowledge could be improved.*
- 1995:** *Knowledge of interlocks could be improved.*
- 1995:** *Planning, managing, prioritizing actions can be improved.*

CONCLUSIONS:

- *Corrected RO Tech Spec/EOP bases knowledge.*
- *Cognitive level of questions can further be improved.*
- *Clarification of brief timing expectations required.*
- *Admin Training for SRO's can be improved.*
- *More emphasis in planning, managing and prioritizing actions is appropriate.*

GENERAL ISSUES:

- *1 candidate Navy background & not enough in plant time.*
- *1 candidate with medical condition, distracting.*
- *Are standards for exams changing?*
Did we fail to learn from other plants?
- *Terminology used not familiar to candidates.*
- *LOR applicability.*
- *LOT - Ensure that PECO candidates will pass the NRC exam with confidence.*

CAUSES:

- *Did not ensure candidate utilized full training time to prepare. Did not anticipate/recognize higher standard in multi-unrelated event management, cognitive knowledge level and PSA accident sequences.*
- *Do not teach the terminology used for PSA.*

CORRECTIVE ACTIONS:

1. *Candidates registered for LOT should have no extracurricular activities to distract from training.*
2. *Perform bench marking with other plants to evaluate knowledge expectations.*
3. *Update classroom training to include dominant accident sequence terminology to familiarize candidates.*
4. *Set clear standards for scenario management, monitoring of critical parameters and briefing management.*
5. *Raise PECO candidate performance criteria.*

CLOSING:

OPEN DISCUSSION: