

**INDEPENDENT REVIEW RESPONDING TO THE  
JANUARY 28, 2004 NRC LETTER  
REGARDING THE  
SAFETY CONSCIOUS WORK ENVIRONMENT  
AT THE  
SALEM AND HOPE CREEK GENERATING STATIONS**

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## I. EXECUTIVE SUMMARY

On January 28, 2004, the NRC informed PSEG of its interim findings arising out of the NRC's special review at the Salem and Hope Creek Generating Stations to assess the stations' environment for raising and addressing safety issues. As a result of its preliminary findings, the NRC requested PSEG to "conduct [its] own in-depth assessment" of the stations' work environment. On February 13, 2004, E. James Ferland, Chairman and Chief Executive Officer, PSEG, chartered an independent assessment of the stations' work environment for raising and addressing safety concerns.

The Independent Assessment Team conducted an in-depth examination of the work environment for raising and addressing safety concerns at the Salem and Hope Creek Generating Stations. James O'Hanlon, former President and Chief Operating Officer of Dominion Energy, was the Team leader and provided overall direction to the Team's activities. The Assessment Team first identified the criteria and elements of a safety conscious work environment (SCWE) and then reviewed PSEG activities most relevant to those criteria and elements. The Team developed criteria and elements from a number of sources, specifically, SCWE-related NRC materials, good industry practices, and the Team's collective nuclear industry experience. Collectively, these materials point to four basic criteria in assessing a SCWE. The Team then derived nine elements from NRC's 1996 Policy Statement on the Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation to further consider the work environment. Finally, and consistent with the NRC's January 28th letter, and PSEG's charter, the Team also considered: operational decision-making, unresolved conflicts, the NRC inspection record, and the corporate / site interface.

The Team conducted its field work at the Salem and Hope Creek site and PSEG headquarters from February 18, 2004 through April 16, 2004. During this time, the Team collected information through structured interviews of personnel and the review of relevant documentation and performance indicators. The Team conducted approximately 190 structured interviews of current and former Salem and Hope Creek site personnel and personnel working at PSEG Headquarters. Personnel were asked questions based on the Team's industry experience, NRC SCWE expectations, and site-specific events that could represent unresolved conflicts. Personnel were selected from the Salem and Hope Creek organizations or departments that, based on the results of the Synergy Survey, USA Assessment, or interviews, were identified as exhibiting characteristics of a challenged work environment. The Team also interviewed former employees, if necessary, to understand an event or issue under review, and randomly interviewed an additional limited number of employees to provide the Team further assurance that it had identified and understood the nature and scope of SCWE issues at Salem / Hope Creek. For its part, PSEG informed all site personnel that they could voluntarily come to the Team and be interviewed. The Team interviewed all eleven persons who volunteered for interviews. Finally, the Team also interviewed senior PSEG executives, senior site management, and other management personnel, including all nuclear officers, the PSEG Power President, the PSEG Chief Financial Officer, the PSEG Chairman of the Board and Chief Executive Officer, and several other corporate officials who provide support services to PSEG Nuclear.

The Team first reviewed PSEG's previous efforts to assess and enhance the work environment. The Team concludes that, prior to 2003, PSEG Nuclear's efforts to assess and enhance the work environment were limited. The Team further concludes that, beginning in 2003, with the initiation of the Synergy Survey and USA Assessment, management has taken

sufficient steps to assess the work environment. Although it appears to the Team that PSEG has taken appropriate initial and immediate actions in response to these two recent initiatives as reflected in PSEG's February 27, 2004 letter to the NRC, it is too soon for the Team to further characterize or assess the sufficiency of PSEG's response. In this regard, PSEG plans to consider the findings and recommendations of these initiatives, together with this report, in formulating a comprehensive set of actions to enhance the work environment.

In requesting that PSEG conduct an in-depth review, NRC referred PSEG to NRC's inspection record and certain unspecified unresolved conflicts involving operational decision-making. PSEG also asked the Team to consider any impact on the work environment from the corporate / site interface. In organizing its findings, the Team first reviewed the SCWE implications of: (1) NRC's inspection record (Section V.A); (2) events involving operational decision-making and unresolved conflicts (Section V.B), including their SCWE and broader management implications (Section V.C); and (3) the corporate / site interface (Section V.D). The Team then made findings relative to the four SCWE criteria: (1) employee willingness to raise concerns (Section V.E); (2) effectiveness of the normal processes for resolving concerns (Section V.F); (3) effectiveness of the Employee Concerns Program (ECP) (Section V.G); and (4) management effectiveness in detecting and preventing retaliation and chilling effect (Section V.H).

The Team's conclusions as to the four criteria in assessing SCWE are:

1. Do personnel feel free to raise nuclear safety concerns without fear of retaliation for doing so?

Conclusion

Personnel will raise nuclear safety concerns. Some individuals did express some hesitancy in raising issues for fear of retaliation, while others expressed similar hesitancy because of issues having been raised yet not resolved; the lingering effects from the unresolved issues cited in this report, or an ineffective corrective action program.

2. Is the site problem identification and resolution process effective (primarily the corrective action program) when addressing employee concerns?

Conclusion

While management has been receptive to issues perceived to be significant or involving a nuclear safety issue, management has been less receptive and ineffective in addressing other employee concerns, particularly longstanding equipment problems, principally due to ineffective implementation of the corrective action program and work management practices.

3. Are there alternate mechanisms, such as an Employee Concerns Program, available for personnel to raise nuclear safety concerns and are they effective?

Conclusion

Although the Employee Concerns Program has the requisite elements of an acceptable program, it could be enhanced. As implemented, the ECP has been ineffective in that a significant fraction of site personnel (15-20 percent) do not view it as a viable alternative to raise

concerns, and the program did not identify to management with sufficient clarity the SCWE issues reflected in the findings of this report, the Synergy Survey, and USA Assessment.

4. Is management effective at detecting and preventing retaliation and addressing any chilling effect in response to employee concerns?

Conclusion

The Team did not review the merits of individual claims of retaliation currently pending at the company; however, based upon the numerous interviews the Team did conduct, and the relatively small number of such claims, the Team could not identify a systemic issue involving management's ability to detect and prevent retaliation. In contrast, as best illustrated in Section V. B., "Unresolved Conflicts," management has not been effective at understanding or addressing the potential for a chilling effect in response to how management has addressed highly visible employee concerns and actions associated with operational events.

The Team's conclusions and recommendations as to the nine elements of a healthy SCWE, derived from NRC's Policy Statement, are:

1. Documentation and communication of management's SCWE expectations

Conclusion

PSEG recently issued an appropriate SCWE Policy, but now needs to effectively communicate that policy and assure it is reflected in implementing procedures, training, and promotional material.

Recommendation

Assure management expectations and standards regarding SCWE and professionalism are established and communicated.

- Assure the recently issued SCWE policy is reflected in all implementing procedures, as well as SCWE training and promotional material.
- Document expectations regarding procedural compliance, conservative decision-making, and roles and responsibilities for operational decisions.
- Emphasize management's responsibility to promote and act in conformance with these standards and expectations.

2. Training on, and reinforcement of management's SCWE expectations

Conclusion

SCWE and supervisory skills training has been insufficient and needs to be upgraded.

Recommendation

Train all personnel on the recently-issued SCWE policy, upgrade existing supervisory skills training, and thereafter, promote and reinforce SCWE on an ongoing basis. This training should include:

- Revising site access training to incorporate the revised SCWE policy.
- Training all personnel on SCWE, including contractors, concerning how to raise an issue and what to expect from management in responding. Consider using the

unresolved issues discussed in this report as case studies, to train workers on management's SCWE expectations; also consider involving the participants in the unresolved conflicts in developing, reviewing, and / or teaching these case studies.

- Training for all supervisors and above on SCWE. This effort should begin with an initial needs-based analysis of the components of SCWE and supervisory skills training, including how to respond to a concern, as well as identification of retaliation and chilling effect. In reviewing the basic supervisory skills training, consider emphasizing the relationship between supervisory skills and SCWE in such Leadership Academy courses as: "People Skills," "Communication Skills," "Conflict Management," and "Power of Recognition." Similar messages and expectations should be incorporated into the Leadership Academy courses which are focused on performance management skills and best practices, such as "Performance Issues," "Behavioral Event Interviewing," and "Positive Discipline."
- Ensure all supervision receive basic supervisory skills training. In this regard, establish a time period (e.g., 90 days) for all current supervisors to receive such training, and a time period (e.g., 30 days) for all new supervisors to receive comparable training.
- Implement and maintain a communications strategy that includes SCWE elements, such as:
  - Communicate SCWE action plan elements to the site (including the findings, conclusions, and recommendations of this report and PSEG's responses to NRC's January 28th letter) and thereafter maintain them on the SCWE web page.
  - Consider SCWE stand-downs to address and resolve unresolved conflicts and legacy issues, and to reset expectations.
  - Increase management visibility and two-way interaction with all levels of management and workers, e.g., town hall meetings with senior management, management by walking around (MBWA), observing work in the field, tailgate sessions, etc.
  - Make greater use of PSEG's "Good Catch" program.
  - Add SCWE elements to "4Cs" meetings.
  - Develop additional and varied promotional materials and publicize them using various methods around the site, e.g., intranet, posters, electronic billboards, news articles.
  - Develop and implement an external communications plan, including to the NRC and interested stakeholders.
  - Make effective use of the change management process.

### 3. Elements and implementation of the Corrective Action Program

#### Conclusion

Implementation of the Corrective Action Program and work management processes have been ineffective as set forth in this report and the USA Assessment.

#### Recommendation

Correct identified deficiencies in the implementation of the Corrective Action Program and work management processes as set forth in this report and the USA Assessment. In this regard:

- Leadership needs to re-establish the roles and responsibilities of those involved in these programs and re-emphasize adherence to these processes.
- Re-establish management's expectations as to the appropriate threshold for raising issues in light of the practice that has developed relative to longstanding issues.
- Develop and effectively implement a plan to aggressively address longstanding equipment problems. Involve Operations in the process, ensure sufficient resources are applied, and communicate status to the site.

### 4. Elements and implementation of the Employee Concerns Program

#### Conclusion

Although the Employee Concerns Program has the requisite elements of an acceptable program, it could be enhanced, and, as implemented, it has been ineffective in the two respects previously noted.

#### Recommendation

Upgrade ECP consistent with the findings in this report, including elements, such as:

- Define core ECP responsibilities and then assure resources are adequate.
- Establish and follow a rigorous administrative process for core ECP functions, including case management, investigations, and documentation.
- Augment and enhance ECP promotional materials and activities.

### 5. The quality and use made of SCWE self assessments

#### Conclusion

Recent work environment assessments performed by Synergy and USA are appropriate diagnostic assessments, the results of which are currently under review by management. Comparable assessments should be conducted on a periodic basis.

#### Recommendation

Continue PSEG SCWE self assessment activities, including:

- Periodically perform a survey similar to the recent Synergy Survey so as to monitor progress and trends.

- Upgrade the PSEG SCWE quarterly survey to include elements, such as:
  - Identification of department affiliation of those surveyed to define the existence of pockets in need of management attention.
  - Provide more meaningful analysis of survey results to include comparison of industry data.
  - Provide clearer and more meaningful recommendations upon which management can act.
- Establish SCWE Performance Indicators and thereafter monitor such indicators consistent with how management monitors and responds to other indicators of plant performance.
- 6. SCWE implications from management's administration of Labor Relations and Human Resources policies, procedures, and practices

Conclusion

The Human Resources (HR) support and Labor Relations practices need to be better aligned with SCWE principles.

Recommendation

Align HR and Labor Relations Practices with management's SCWE expectations, including:

- Establishing an Executive Review Board to review PSEG and contractor proposed adverse actions from a SCWE perspective.
- Establishing a "People" Response Team to identify emerging personnel issues and assure an effective response.
- Define, and train on, the interplay among SCWE, the collective bargaining agreement, performance evaluations, and disciplinary programs.
- Consider inclusion of SCWE attributes in supervisory performance evaluations and other means to hold managers accountable for performance in SCWE areas through the established performance evaluation and/or discipline system.

7. NRC allegations, including PSEG's responses to NRC referred allegations

Conclusion

The number of NRC allegations in 2003 appear to be within the industry norm for a three-unit site. Although the number has risen during the first quarter of 2004, this is not atypical given the current level of scrutiny at Salem and Hope Creek. PSEG has appropriately responded to those allegations the NRC has referred back to PSEG.

Recommendation

Continue to trend NRC allegations and assure allegations referred back to PSEG are promptly and thoroughly reviewed.

8. Management's responses to claims of retaliation

Conclusion

A uniform system is not in place to assure all claims of retaliation are promptly and uniformly reviewed, and management has not sufficiently understood or considered the chilling effect in response to such claims.

Recommendation

Establish a process to assure prompt and uniform investigation of retaliation claims regardless of where they are raised in the organization. This fact-finding function should not remove ultimate responsibility from line management in responding to claims of retaliation.

9. Management of and interface with contractor personnel

Conclusion

Management of and interface with contractor personnel does not present a programmatic challenge to the SCWE at the Salem and Hope Creek site; however, one contractor indicated a hesitancy to raise an issue because he was a contractor.

Recommendation

Assure providers of contract personnel establish a comparable SCWE program, including a SCWE policy, training, and a requirement that PSEG is notified of any retaliation claim and provided the results of any review.

In addition to the four criteria and nine elements, the Team focused on SCWE implications from certain unresolved events involving operations, the NRC inspection record, and corporate / site interface. The Team's conclusions and recommendations as to these areas are:

1. Unresolved Events

Conclusion

While none of the unresolved events that are described in this report involved reactor operations that put either the plant or public at risk, these events demonstrate that some in management, as well as some among the workforce:

- Place a greater emphasis on production and schedule considerations than conservative decision-making.
- Tolerate degraded equipment conditions and expect personnel to work around operational challenges presented by such conditions.
- Tolerate procedural non-adherence.

These events also demonstrate that some in management:

- Do not clearly communicate standards or the rationale behind their actions, or provide feedback to those raising issues.
- Have taken actions, or failed to take actions, that have had a chilling effect on the willingness of certain employees to raise concerns.



- Become involved in decisions more appropriately the responsibility of Operations.

Management is addressing and making progress in overcoming many of these perceptions, but has not yet regained the trust and confidence of Operations. For example, management is in the process of ensuring that the responsibility and decision-making authority remains within Operations, but needs to further clarify expectations in light of these earlier misperceptions, and then act over an extended period of time consistent with those expectations. This effort is made more difficult by some in the workforce who have not accepted the need to strictly adhere to procedures. In some cases, mixed messages from management's actions with respect to procedural adherence compound the difficulty.

#### Recommendation

Although former management is largely responsible for allowing the conditions to exist that caused these unresolved conflicts to occur and linger, the current Salem / Hope Creek management team must visibly embrace the above recommendations (particularly recommendations 1, 2, 3, and 6) and lead implementation over time to regain the trust and confidence of the workforce.

#### 2. NRC Inspection Record

##### Conclusion

The record reflects the site's failure to:

- Consistently translate engineering information into work documents.
- Consistently take prompt and effective correction action.
- Adequately identify or properly classify procedural violations.

##### Recommendation

- Review the corrective action program data base to determine if there are similar findings identified regarding the process for translating engineering requirements into working documents. From this review, determine the scope of the problem, and if additional corrective actions are warranted.
- Determine if the findings in Section V.A. of this report represent a systematic problem, and determine if additional corrective actions are appropriate.
- Perform a review of the Root Cause Analysis and the corrective action statement for the "A" Emergency Diesel to determine that the correct level of analysis is specified for copper content.
- Reconsider the evaluation findings of Notification 20140525 to ensure consistency of the facts with the findings. Verify that the messages sent in the corrective actions are consistent with management's standards and expectations for procedural adherence.

### 3. Corporate / Site Interface

#### Conclusion

- As to working-level personnel and mid-level management, the interface has not caused a past or current SCWE issue in that the vast majority of individuals within this group have not linked the interface with the raising or addressing of concerns. Some working-level personnel and mid-level site managers, however, have assumed a negative impact from the interface in that they infer: (1) site management is not fixing longstanding equipment issues because corporate is not providing the necessary funds, and (2) site management's conduct in the course of the unresolved conflict events resulted from perceived pressure from corporate to place production and scheduling issues over conservative decision-making.
- As to senior site and corporate management, again this group has not linked the interface with the raising or addressing of concerns. Nonetheless, several within this group are frustrated because they believe corporate guidance has not been clearly communicated, and the roles and responsibilities among nuclear officers and their corporate counterparts, particularly in the areas of HR, Labor Relations, Budget, and Financial Planning, have not been clearly defined. Further, some employees have perceived the business planning process and incentive compensation process as communicating a greater emphasis on production and schedule than on conservative decision-making.

#### Recommendation

PSEG needs to more effectively communicate between corporate and nuclear. It also needs to clearly define the interplay between PSEG Nuclear, PSEG Power, and PSEG relative to such support functions as financial planning, HR support, and Labor Relations, and thereafter, document the respective roles and responsibilities in appropriate guidance documents, such as the PSEG Power Play Book. Specifically, corporate should:

- Improve the direct communications link from corporate to the site.
- Improve the communication of corporate issues to the site, including business planning, incentive compensation, corporate structure, and reorganizations.
- Provide better senior level and middle management level direct interfaces between corporate and the site.
- Establish and maintain a nuclear succession plan to assure stability.
- Review goals and revise as necessary to assure proper relationships among safety and production parameters.
- Revise Power Behaviors to include a safety value and list it first.
- Review incentive compensation to assure alignment with recommendations 4-6 above.
- Site management must embrace and consistently communicate corporate goals and behaviors.