February 27, 2004

Mr. Lew W. Myers
Chief Operating Officer
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION
NRC SPECIAL INSPECTION - MANAGEMENT AND HUMAN PERFORMANCE
CORRECTIVE ACTION EFFECTIVENESS - REPORT
NO. 50-346/2003012(DRP)

Dear Mr. Myers:

On December 19, 2003, the NRC completed a Special Inspection at the Davis-Besse Nuclear Power Station. The purpose of this inspection was to review FirstEnergy Nuclear Operating Company's (FENOC) actions to resolve item 4.b of the NRC's Restart Checklist, Revision 3, associated with the effectiveness of corrective actions for organizational effectiveness and human performance. This inspection continued our review of the activities to identify and correct the management and human performance deficiencies which contributed to the reactor pressure vessel head degradation. Specifically, the inspection evaluated the effectiveness of the corrective actions and the tools designed to measure and monitor the effectiveness of those corrective actions. Our review included an evaluation of the performance assessment tools including an internally generated assessment, an externally generated assessment, and tools the station and FENOC are using to monitor safety culture, safety conscious work environment, and the employee concern program. The enclosed report presents the results of our review.

The NRC's Davis-Besse Oversight Panel determined that a special inspection of the management and human performance area was warranted. The overall inspection plan was designed to assure that an appropriate root cause analysis had been completed (Phase 1), that appropriate corrective actions had been identified and implemented (Phase 2), and that the effectiveness of those corrective actions was assessed (Phase 3). The attached inspection report addresses our review of the plan's third phase. No findings were identified during this inspection.

During the inspection, we evaluated FENOC's internal and external safety culture assessment processes, activities to improve the safety conscious work environment at Davis-Besse, and the current status of Davis-Besse's employee concerns program. The team also reviewed all aspects of the Davis-Besse long term safety culture monitoring program; however, because specific elements of the program had not been through Davis-Besse's approval process, the team concluded that a final assessment would be more appropriate following inspection of the approved program. We have concluded that the tools FENOC developed to monitor the effectiveness of its corrective actions were appropriate and provided valuable insights into the

safety culture and safety conscious work environment at the site. We have also concluded, based on our current reviews, our previous inspections in the management and human performance area (reference Inspection Reports 50-346/2002015 and 18), and the results from FENOC's survey tools, that FENOC's corrective actions have had an overall positive effect on the safety culture at Davis-Besse. However, one of those tools, conducted in November 2003, identified that a number of key organizations had provided more negative responses to some questions then in March 2003. Pending further review and understanding of the causes for the change, we are unable to close restart checklist item 4.b. Our follow up in this specific area will be documented in Inspection Report 50-346/04-03.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

John A. Grobe, Chairman
Davis-Besse Oversight Panel

Docket No. 50-346
License No. NPF-3

Enclosure: Inspection Report 50-346/03-12

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REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/03-12
Licensee:	FirstEnergy Nuclear Operating Company
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 North State Route 2 Oak Harbor, OH 43449-9760
Dates:	March 20, 2003 through December 19, 2003
Inspectors:	G. Wright, Team Leader J. Persensky, Human Factors Specialist, Research C. Goodman, Human Factors Specialist, NRR L. Jarriel, NRC Allegation Coordinator, OE J. Beck, Consultant M. Brothers, Consultant (Refer to Attachment A for biographies)
Approved by:	John A. Grobe, Chairman Davis-Besse Oversight Panel

Enclosure

SUMMARY OF FINDINGS

IR 05000346-03-12, FirstEnergy Nuclear Operating Company, on 04/07/03 to 12/19/03, Davis-Besse Nuclear Power Station. Special Inspection.

This report covers a special inspection continuing the NRC's review of the licensee's root cause evaluation and corrective actions for the management and human performance aspects of the reactor coolant system pressure boundary leakage and degraded reactor vessel head. The inspection was conducted by Region III inspectors, specialists from the Offices of Nuclear Regulatory Research and Nuclear Reactor Regulation, and consultants.

The NRC's Management and Human Performance Team (Inspection Team) evaluated the licensee's tools for monitoring the effectiveness of the corrective actions taken in response to the vessel head degradation condition. The Team also evaluated the licensee's actions to improve and protect the site's safety conscious work environment, and the tools the licensee put in place to monitor the effectiveness of those actions. The Team evaluated the internal safety culture assessment tools, the external safety culture assessment tool, the current condition of safety conscious work environment (SCWE) at the site, the activities of the safety conscious work environment review team (SCWERT), and the current status of the employee concern program (ECP). The Team reviewed documents, interviewed individuals, observed management activities, and evaluated licensee survey results.

Based on the information gained through the above activities, the Team came to the following conclusions:

1. The licensee's internal safety culture monitoring tools, including ECP surveys, Nuclear Quality Assurance (NQA) surveys, and the restart readiness review business practice, when taken together, provide an appropriate examination of the site's safety culture. The internal tools generally follow the concepts in internationally recognized guidance from the International Atomic Energy Agency (IAEA), International Nuclear Safety Advisory Group (INSAG), and the Nuclear Energy Agency (NEA).

2. The licensee's external, independent safety culture assessment was appropriately designed and implemented. The process provided a comprehensive review of safety culture traits using methods, concepts, and focus areas accepted by the international nuclear community.

3. Actions to improve the safety conscious work environment at Davis-Besse have been effective; however, there are indications that at least some managers do not fully embrace or understand the concepts of SCWE.

4. The addition of the safety conscious work environment review team (SCWERT) was a positive step in maintaining the sites SCWE; however, a narrowly defined scope and its operational definition of "adverse action" limits its effectiveness.

5. The new ECP is a significant improvement over the previous ombudsman program. The program and its implementation were effective in addressing

issues brought to the ECP. The program's overall effectiveness is limited because it does not look for trends within the submitted issues.

6. There is insufficient information available at this time to judge the approach and effectiveness of the long-term safety culture monitoring program.

7. The results of the ECP survey conducted in November 2003, raised questions regarding the continuing effectiveness of the actions implemented to improve safety culture at Davis-Besse. The survey identified key organizations where responses were less positive in specific areas when compared to the same survey given in March 2003.

Overall, the Team concluded, based on our current reviews, our previous inspections in the management and human performance area (reference Inspection Reports 50-346/2002015 and 18), and the results from your survey tools, that your corrective actions have had an overall positive effect on the safety culture, the safety conscious work environment, and the employee concern program at Davis-Besse. However, additional information regarding the causes for the increase in negative responses to the November 2003 employee concerns program survey are needed before the Team can provide recommendations regarding restart checklist item 4.b.

Throughout the inspection, the team identified areas were additional inspection activities need to be focused as the facility moves forward, including:

1. The approach and effectiveness of the licensee's long term safety culture monitoring program, including:
2. The effective use of the corrective action program in addressing adverse conditions in the management & human performance area
3. The quality of attribute rating criteria in the "FENOC Business Practice on Safety Culture Assessment"
4. The effectiveness of licensee actions to further improve SCWE
5. The continued effectiveness of the employee concerns program.

INSPECTION DETAILS

I. Scope

To assess the licensee's compliance with 10 CFR 50 Appendix B Criterion XVI, by evaluating the effectiveness of the licensee's corrective actions in the human performance area developed from its root cause analyses into the reactor head degradation condition. The inspection focused on the licensee's safety culture assessments and monitoring activities, the current status of the Employee Concerns Program, the activities associated with the sites Safety Conscious Work Environment and Safety Conscious Work Environment Review Team, and the licensee's long term approach for monitoring Safety Culture.

II. Objective

The inspection's objective was to provide the information necessary to allow the Davis-Besse Oversight Panel to make an informed decision on the effectiveness of the Davis-Besse Management and Human Performance corrective actions. The input from this inspection, when combined with other inputs, e.g., System Health inspections, Program Review inspections, Containment Health inspections, and the Corrective Action Team Inspection, will allow the Panel to make this decision.

The inspection was not an attempt by the NRC to independently assess the licensee's safety culture. Rather, it was designed to assess the licensee's and the licensee's independent contractor's tools and methods for assessing the safety culture at Davis-Besse and to independently validate their findings. Therefore, the inspection plan (Attachment B) called for evaluations of the licensee's:

A. internal safety culture assessment process;

B. external assessment conducted by Performance, Safety, and Health Associates (PSHA);

C. integration of internal and external assessments;

D. initiatives to improve the Safety Conscious Work Environment (SCWE) and effectiveness of the Safety Conscious Work Environment Review Team (SCWERT);

E. current status of the Employee Concerns Program (ECP); and

F. measures for monitoring the effectiveness of Management and Human Performance initiatives.

III. Assessment Process

A. Inspection Basis

Recognizing that, with the exception of ECP and to a limited extend SCWE, the NRC has no guidelines for the remaining focus areas being evaluated by this inspection, the Inspection Team used the following as guidance along with their varied experiences and expertise.

1. NRC Policy Statement on the Conduct of Nuclear Power Plant Operations (54FR3424, 01/24/89),
2. International Atomic Energy Agency (IAEA), International Nuclear Safety Advisory Group (INSAG) of IAEA, and Nuclear Energy Agency (NEA) documents. (Refer to List of Reviewed Documents)
3. Assessment of Safety Conscious Work Environment, extracted from NRC Inspection Procedure (IP) 71152; and
4. NRC Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation.

The Inspection Team used NRC IP 40001, “Resolution of Employee Concerns” to evaluate the current status of the ECP.

The IAEA and NEA have taken an active role in the area of safety culture by publishing reports that define, promote, and describe methods for assessing and developing a strong safety culture for the international nuclear community. The attributes of safety culture set forth in these documents have resulted from an international collaboration, research, experience, and maturation of concepts first developed in 1988. The attributes have wide applicability and cut across multiple cultures and applications.

B. Inspection Approach

1. The Inspection Team used the following techniques in applying the available guidance:

    a. Independent review of documents
        1) ECP files
        2) Safety Culture section of the Restart Readiness Review, Business Practice and meeting summaries
        3) Various Safety Culture and SCWE surveys
        4) Comparison of licensee and NRC observations
        5) SCWE training and communication material
    b. Interviews of staff and management selected by the NRC
    c. Observations
        1) Restart Readiness Review Meetings
        2) SCWERT meetings
        3) Others, as noted below

2. Technique Details

a. Document Review

The Inspection Team reviewed First Energy Nuclear Operating Company (FENOC) documents related to safety culture, SCWE, and the ECP. The types of documents reviewed included: various revisions of a Nuclear Operating Business Practice DBBP-VP-0002, "Restart Readiness Review Extended Plant Outage," the final report titled "Independent Safety Culture Evaluation of the Davis-Besse Nuclear Power Station" by Performance, Safety and Health Associates, Inc. (PSHA), dated April 14, 2003, and other FENOC business practices and policies, safety culture performance indicators, procedures, material related to the 4C's (Compliments, Changes, Concerns, and Communication) meetings, a Company Nuclear Review Board (CNRB) meeting agenda, Restart Overview Panel meetings, survey data conducted by various sources, all available ECP files, and training program materials.

In addition to the above documents, the Inspection Team reviewed selected Condition Reports (CRs) related to safety culture and SCWE. The CRs were reviewed to determine whether they reasonably addressed the causes of the problems identified in the evaluations. The inspectors also reviewed the tracking, evaluation and resolution of identified issues. The Inspection Team reviewed issues that had been entered into the corrective action program to determine if the licensee had been effective in identifying problems. A sample of these issues was selected for further review during which the inspectors assessed the adequacy of the corrective actions which had been implemented for the selected issues.

The Inspection Team also reviewed the detailed results of the March 2003 and November 2003 SCWE surveys conducted by the ECP and Nuclear Quality Assessment (NQA) reports and surveys, and self-assessment reports or program reviews related to safety culture to determine if identified problems were entered into the corrective action system for resolution. Documents reviewed included two quality field observations completed by NQA personnel, department self-assessments and an Operating Experience program review.

Refer to the attached List of Documents Reviewed.

b. Interviews

To independently verify the results of the safety culture and safety conscious work environment assessments that Davis-Besse and its independent consultant conducted, the Inspection Team conducted interviews with plant employees. Thirty-nine individuals, below the management level, were selected randomly, representing a sample of all

departments. An additional 20 individuals at or above the supervisor level were also interviewed.

Those aspects of the interview findings related to each element of the inspection are discussed in the following sections of this report. A detailed discussion of the interview findings is in Attachment C.

c. Activity Observations

The Inspection Team observed several licensee activities that were part of the licensee's safety culture improvement activities, e.g., 4C's meetings, Case Studies, and Restart Readiness Review (RRR) meetings. Additional activities were observed representing normal activities that would reflect safety culture principles, e.g., shift turnover, morning meetings, a CNRB meeting, department meetings where the results of the SCWE survey was presented to the staff by their manager, and SCWERT meetings. The observations were conducted to assess how the plant management was incorporating lessons learned from Leadership-in-Action training and from various safety culture and SCWE reports in their interactions with the staff.

IV. Assessment Observations and Conclusions

A. Internal Safety Culture Assessment

1. Inspection Scope

The Inspection Team observed and evaluated the process used to perform the Restart Readiness Review Safety Culture Assessment for Restart (RRR) business practice described in, "Restart Readiness Review Extended Plant Outage" (DBBP-VP-0002). The purpose of the observations and evaluation was to determine the feasibility and appropriateness of DBBP-VP-0002 for evaluating safety culture. The evaluation included the "area's, criteria, and attributes" of Safety Culture included in the process, to determine their applicability and appropriateness. The Inspection Team also looked for weaknesses that would limit the practice's effectiveness as a tool to evaluate safety culture at Davis-Besse. Ten revisions of the document existed during the time period of the inspection. Inspection Team members observed the July 2003 (Mode 3 and 4) and the November 2003 (Mode 1 and 2) implementation of the restart safety culture assessment. The results from the March 2003 (Mode 5) assessment were also reviewed.

2. Observations

The licensee's internal safety culture tool, defined by DBBP-VP-0002, was to assess safety culture at Davis-Besse at various points prior to restart. The assessment process was developed from several sources and implementation involved several stages and all station management. The overall safety culture

assessment was divided into three commitment areas (policy, plant management, and individual) each with 5-7 criteria areas, similar to the IAEA model. Each criteria area had several attributes that were rated (Red, Yellow, White and Green) based on defined assessment criterion. Graphically the process would look like the following:

3 Commitment Areas
5-7 Criteria per Commitment Area
Up to 17 Attributes per Criteria
4 Assessment Criterion per Attribute

There was limited detail in the instruction on how to accomplish the evaluation process including how the inputs from the 21 site organizations were to be integrated into a single rating for attributes, criteria or commitment areas. The process relied on the synergy among the 21 organization managers and the questioning attitude of all participants to arrive at a consensus for each attribute and higher level conclusions. The process involved evaluating multiple sources of information as inputs to provide attribute ratings. The informational inputs were based on work or performance results, management observations, ad hoc surveys of staff, QA assessments, and independent surveys. Some of the information sources were department-specific, others were site-wide, and still others were from independent sources. Refer to Attachment D for a list of representative information sources. The attributes were rolled up to provide an overall assessment of the criteria, which were in turn rolled up to provide an assessment at the commitment area level.

The RRR process was a work in progress, with 10 revisions being issued to the document over the course of the inspection. While the numerous changes resulted in some process issues, e.g., how to apply a specific rating to an attribute, the Inspection Team observed that the management at Davis-Besse demonstrated an increased understanding of the practice with each use. The Inspection Team also observed increased participation by all individuals and improvement in the results with each use.

Implementation of the business practice started with each section manager evaluating the attributes for their area. The results were provided to the review meeting administrator for use during the safety culture portion of the Restart Readiness Review meeting. The safety culture review meeting typically lasted 2-4 days. During that time, site managers, supervisors, and other site individuals representing all 21 organizations on site, reviewed the informational inputs and evaluated the attributes. The dialogue was facilitated, with everyone being encouraged to participate. Differences of opinion with information sources were discussed. The assessment criteria were used as guidelines and management at times considered other factors to assign the final rating. As previously mentioned, a final rating was assigned to each of the attributes, then rolled up to each criteria area, and finally rolled up to all three overall commitment levels.

In response to questions from the Inspection Team on how the roll ups were performed, the licensee developed a numerical system with a simple averaging roll up. The system lacked the sophistication necessary to account for safety significant differences in organizations and attributes. This deficiency could have allowed an inappropriate restart recommendation by aggregating safety significant issues with less significant issues. Following additional discussion with the Inspection Team, the licensee developed a qualitative process to evaluate each attribute, criteria, and ultimately commitment area. The Inspection Team observed the revised process and had no concerns.

The Inspection Team had an overall concern with the specific assessment criteria for many of the attributes at the Yellow rating level. Because the licensee defined a Yellow rating as acceptable for restart but requiring prompt attention, the Inspection Team questioned the appropriateness of the assessment criteria in a number of areas. Discussion with the licensee resulted in many of the criteria being revised. The criterion which were not revised, were individually evaluated by the licensee and the Inspection Team for acceptability on a case by case basis. No restart concerns were identified.

The RRR process was driven by quantitative inputs and the opinions of management. In that regard, the process was limited by a lack of direct staff level input. Compensating for this limitation were the NQA and ECP surveys which provided direct staff input. Refer to Section IV.D of this report for additional details on the NQA and ECP surveys.

The Inspection Team was also concerned that several attributes were repetitive while others only appear once or twice. The concern was that the normal roll up method could cause an undue emphasis on those criteria that are repetitive. For example, few operating experience attributes exist, therefore weaknesses in the operating experience program may not be appropriately reflected in the overall assessment process. The additional management reviews to compensate for the numeric roll up problems also assisted in addressing this concern by providing additional perspective where appropriate.

When Red or Yellow ratings were identified, condition reports were written. The corrective actions often identified an existing corrective action or recommended that a new plan for improvement be developed. Condition Reports in some cases lacked detail. Further, at the time of the inspection, some corrective actions were not yet completed. These corrective actions will be reviewed in future inspections. Corrective actions generated from the RRR safety culture assessment process, often assigned “NA” as a cause code. This results in a situation where it is difficult to track trends for similar corrective actions.

3. Conclusions

The Inspection Team concluded that the Restart Readiness Review process was an effective tool for monitoring the safety culture at the site, as long as management continued to provide narrative evaluation for each area and the

process was supplemented by the QA and ECP surveys. The process included the appropriate elements for assessing Safety Culture and was reasonably consistent with internationally recognized guidance (Attachment E). The criteria and standards were generally acceptable, some of the assessment criteria were less conservative than others; however, the management assessment appropriately reviewed the individual attributes. Long-term use of this tool should consider modification of certain attribute assessment criteria used for Yellow findings.

The Inspection Team also concluded that bringing all 21 site organizations together to discuss common issues was a significant strength of the process. The synergistic atmosphere created by the participation of individuals and the willingness of the participants to challenge the conclusions of their peers was seen by the Inspection Team as extremely positive.

The Inspection Team further concluded that, within the scope of the documents and issues reviewed, safety culture issues were identified. Overall, Davis-Besse had sufficient written documentation related to safety culture assessment prior to restart.

B. External Safety Culture Assessment

1. Inspection Scope

This section of the inspection focused on evaluating the April 14, 2003, final report from the "Independent Safety Culture Evaluation of the Davis-Besse Nuclear Power Station" conducted by Performance, Safety and Health Associates, Inc. (PSHA). The evaluation included the March 20, 2003, draft PSHA report. The Inspection Team reviewed both reports and interviewed staff to evaluate the suitability of the assessment tools, the implementation of the safety culture assessment tools, the data collected, the methodology used to develop results and conclusions, the results derived from application of the safety culture assessment tools, and the application of the convergent validity methodology (more than one tool providing similar information).

2. Observations

The details of the methodology used by PSHA are presented in the April 14, 2003 final report. The methodology was based on work for the Atomic Energy Control Board (Haber and Barriere, 1998). The following five methods were used to collect information on the organizational behaviors identified in Figure 1 of the evaluation report which is reproduced as Attachment F.

a. Functional Analysis
b. Structured Interviews
c. Behavioral Anchored Rating Scales (BARS)
d. Behavioral Observation Checklists
e. Organizational and Safety Culture Survey

The use of multiple methods to assess organizational behavior is intended to assure that the results represent the large majority of the individuals at the station and differences between groups are clearly represented. In addition, the report stated that confirming the results obtained through one method with results obtained from other methods, provides convergent validity for the results, that is, if several of the methods result in the same finding there is high confidence in that finding.

The Inspection Team reviewed the five tools to determine if they were suitable for evaluating the state of safety culture at Davis-Besse. The Inspection Team determined that the tools had a strong technical basis rooted in both research and application in the international nuclear community as well as other industries. The attributes of safety culture, assessed by application of the tools, were consistent with those recognized in the international nuclear community through both the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) (see list of documents reviewed for referenced works).

PSHA personnel implemented the tools as planned and as intended by the developers of the tools. The Inspection Team reviewed the documents reviewed by PSHA and found that they were a reasonable set of background information. The documents allowed PSHA to perform their functional analysis to identify the organizational units, understand the units' function, examine information flow, and identify key positions in each organization. Six hundred sixty one individuals (79.6%) station-wide, in proctored sessions, responded to the PSHA administered survey tool. PSHA also observed over 50 activities in the appropriate areas and conducted 88 individual structured interviews.

The Inspection Team's interviews conducted to assess PSHA's implementation of their process, determined that all individuals felt their answers would be kept confidential, that the interviewers were professional, and that the questions were understandable. The Inspection Team identified that PSHA missed an opportunity to enhance independence when the individuals they were to interview were selected by FENOC, rather than PSHA. The use of multiple methods to collect similar data and the consistency of the findings indicates that this sampling approach did not negatively affect the data collected. PSHA used highly qualified professionals to conduct their assessment. The qualifications of the individuals are provided in the April14, 2003, report.

The methodologies used by PSHA were appropriate, applicable, and comprehensive. As noted earlier, this methodology has a strong technical basis rooted in research and has been applied successfully in the international community and in other industrial settings. The results of the Inspection Team's interviews indicate that the methodologies were applied consistently during the assessment. Based on a review of the April 14, 2003, report, presentations by the PSHA staff, and interviews of PSHA staff, the Inspection Team determined that the statistical techniques used to evaluate the data and derive findings were appropriate. Based on the Inspection Team's review of the entire process, it

determined that PSHA's findings, derived from the interviews, surveys, BARS, and observations, reported to FENOC were consistent with the collected data.

The Inspection Team compared a sample of the data in the appendix of the March 20, 2003, draft report, to the findings described in that report. The Inspection Team's finding was that PSHA's interpretation of the data, described as "Conclusions" in the March 20 report, was reasonable and consistent with the independent assessments conducted by the Inspection Team. The Inspection Team further compared the conclusions from the March 20 draft report with the April 14 final report and determined that the final PSHA report contained the important elements of the draft report with the "Conclusions and Summary" being virtually the same. The primary difference was the formatting of the "Observations" section and a section that described "Areas for Improvement." The Inspection Team determined that the final report's format presented the information to FENOC in a form more readily usable to identify efforts to improve safety culture.

PSHA used the concept of convergent validity to assure that their findings could be substantiated. This is accomplished through the use of diverse monitoring tools to measure the same concepts or constructs. To accomplish the convergent validity, the information collected from the structured interviews, BARS, behavioral observation checklists, and the Organizational and Safety Culture Survey were all used to assess the organizational behaviors identified through the functional analysis. If any of the data did not correspond to other measures, that data was not included in the combined data used to draw conclusions. These outliers could be analyzed independently to determine if it was relevant or an anomaly. Neither PSHA nor the Inspection Team identified any outliers.

3. Conclusions

The licensee's external safety culture assessment was appropriately designed and implemented. The methods and techniques used are common to those used for similar assessments conducted domestically and internationally. The process provided a comprehensive review of the safety culture concepts and attributes accepted by the international nuclear community. The conclusions drawn were consistent with the data collected.

C. Integration of Internal and External Assessments

1. Inspection Scope

This section of the inspection was designed to compare the internal safety culture assessment, as conducted using DBBP-VP-0002, with the external assessment, conducted by PSHA, to determine if the two processes were assessing the same or similar characteristics and if the findings were comparable. The Inspection Team also compared the scope and depth of the two assessments to determine the appropriateness of either method to serve as

a baseline for the licensee. This was accomplished by examining the results of Parts IV.A. and IV.B. of this inspection and reviewing the comparison performed by the licensee as documented in their June 11, 2003, "Internal to External Safety Culture Assessment Comparison." The Inspection Team also compared the elements of the two assessments with the elements described in INSAG-15, "Key Practical Issues in Strengthening Safety Culture (IAEA, 2002)."

The scope also included the determination of how the licensee incorporated the findings from the assessments into their corrective action program and the identification of any weaknesses in DBBP-VP-0002 that would limit its usefulness as a tool for periodic evaluation of safety culture at Davis-Besse. The Inspection Team also reviewed NQA reports and surveys, and self-assessment reports or program reviews related to safety culture to determine if identified problems were entered into the corrective action system for resolution. Documents reviewed included two field observations completed by NQA personnel, department self-assessments and an Operating Experience program review.

2. Observations

The Inspection Team used INSAG-15 as a benchmark to perform the comparison between the internal and external assessments. The 12 basic attributes, six key issues, and three underpinning concepts of safety culture in INSAG-15 were listed and the attributes of both the internal and external assessment methods were reviewed to determine at what level the INSAG-15 elements were addressed. The Inspection Team determined that each of the INSAG-15 elements were addressed at either the primary or secondary aspect of the licensee's assessments. A summary of this comparison is shown in Attachment E. The method used by PSHA was closely aligned with the INSAG characteristics and the internal methodology was derived from the method used by PSHA and the INSAG document. More importantly, the results of the two assessments were also in close agreement when the findings from the PSHA February 2003 data collection and the March 2003 internal assessment were compared in the licensee's June 11, 2003 "Internal to External Safety Culture Assessment Comparison." To further confirm these findings, the data collected by the Inspection Team in May 2003 also resulted in generally the same findings relative to licensee staff responses. The Inspection Team's interview results identified that departments responded to the Inspection Team's questions in the same way they did to the PSHA assessments and the findings related to the difference between staff and management were relatively consistent. Therefore, the Inspection Team found that the two assessment methods were addressing the same aspects of safety culture.

The March 2003 NQA field observations and interviews were detailed and thorough. The scope of the interview assessment included 12 questions to 88 individuals at the supervisory level or below. The questionnaire was developed based upon a review of Davis-Besse events, Institute of Nuclear Power Operations (INPO) recommendations, operating experiences, NRC Inspection Procedure (IP) 71152, and NQA management input. Over 95 percent

of employees interviewed believe that management wants employees to report problems. All but one individual indicated they would personally use the Corrective Action Program to identify concerns. About 80 percent believed that identified concerns had been effectively resolved. On questions regarding operating experience, 95 percent reviewed some type of operating experience; however, only 43 percent had benchmarked (note that benchmarking includes telephone contact), only 65 percent had talked to counterparts at their sister plants, and 42 percent had neither visited the sister plants nor other B&W plants. No condition reports (CRs) were initiated as a result of the NQA field assessment. The benchmarking numbers were identified by the licensee during the November RRR meeting as not meeting their expectation. Actions were assigned to improve in this area. The evaluation of the November 2003 NQA survey will be documented in the Team's Follow Up inspection (50-346/2004003).

Condition reports (CR) written to address safety culture concerns were properly characterized and bounded the scope of the problems. The corrective actions associated with the CRs generally addressed the problems and encompassed the scope of the issues. Based on the safety culture issues reviewed, the inspectors found corrective actions were scheduled commensurate with the risk significance of the issues.

3. Conclusions

The Inspection Team found that the licensees internal assessment process as embodied in DBBP-VP-0002 and the external assessment process as described in the PSHA report compared favorably and were both consistent with internationally recognized standards.

The Inspection Team concluded, because of the number of revisions DBBP-VP-0002 has undergone, that its use as a baseline for future safety culture assessments, has to be closely monitored by the licensee.

The PSHA process for assessing safety culture could serve as a baseline since it is benchmarked and is used consistently in various settings. However, to be used as a benchmark, future external assessments would have to be performed in a manner that is comparable to the PSHA process.

D. Long Term Monitoring Methodology

1. Inspection Scope

This section of the inspection was to determine whether the licensee's long term safety culture monitoring program and methods were appropriate. The licensee's program described in its September 8, 2003, "Safety Culture Long-term Improvement Plan," contains five elements: monthly performance indicators, annual QA assessments and SCWE surveys conducted by the ECP, a no less than every two year internal safety culture assessment using the "FENOC

Business Practice on Safety Culture Assessment," NOBP-LP-2501, dated November 24, 2003, and an external safety culture assessment in the 4th quarter of 2004 and 2006. As part of this inspection, the Inspection Team reviewed:

a. "Safety Culture Long-Term Improvement Plan," September 8, 2003

b. NOBP-LP-2501, Rev.0, "Safety Culture Assessment," effective date November 24, 2003.

c. NOBP-LP-2502, Revision 0, "Safety Culture Monitoring," draft dated November 26, 2003 (not signed).

d. NOBP-Later, Revision 0, "FENOC Safety Culture Monitoring," not dated.

The Inspection Team also reviewed the approach for identifying and responding to trends; to evaluate the frequency and sampling for future periodic safety culture assessments; to evaluate the qualifications of personnel who would conduct future periodic safety culture assessments; to evaluate the criteria for action from future periodic safety culture assessments; and how the findings from the external and internal safety culture assessments will be incorporated into the licensee's corrective action program.

2. Observations

The "FENOC Business Practice on Safety Culture Assessment," NOBP-LP-2501 was derived from the safety culture section of DBBP-VP-0002. The evolution of DBBP-VP-0002 was followed closely by the Inspection Team throughout its development. The Inspection Team observed implementation of the DBBP-VP-0002 process in June and November of 2003. The Davis-Besse management team has demonstrated an increased understanding of the DBBP-VP-0002 process since its initial use. For additional details on the Inspection Team's assessment of DBBP-VP-0002, refer to Section IV.A of this report.

The DBBP-VP-0002 process calls for CR's to be written should any of the criteria be rated Red or Yellow. Since the Inspection Team is concerned about the attribute evaluation levels for determining attribute color ratings (see Section IV.A for details), the Inspection Team is also concerned that findings from future safety culture assessments may not be entered into the corrective action program at an appropriate level.

The licensee's program for monthly monitoring safety culture in the future and approach for identifying and responding to trends is described in both NOBP-LP-2502 and the document designated as NOBP-Later, draft dated November 20, 2003. These documents include a condensation of the larger, more detailed, NOPB-LP-250, and describe a process for tracking safety culture

attributes by monitoring monthly performance indicators which were derived from the FENOC business plan. However, an approved version of the business practice was not available for the Inspection Team to review.

The other safety culture assessment tools are the periodic SCWE survey conducted by the ECP program and the safety culture surveys done by the NQA group and any insight provided by concerns expressed to the Employee Concerns Program. The FENOC business plan includes a commitment to continue these activities. Further, the "Davis-Besse Nuclear Power Station Operational Improvement Plan Operating Cycle 14," Revision 0, includes a commitment to perform two NQA safety culture assessments. Both the NQA and the SCWE surveys have been reviewed and found to be appropriate. In fact, the results of the November 2003 surveys is an indication of the surveys' effectiveness. While the surveys accomplished the task, the survey findings were not entered into the corrective action program as of December 19, 2003, when the issue was raised by the Inspection Team.

In the licensee's September 8, 2003, Safety Culture Long-term Improvement Plan, they state that they will arrange for an outside independent safety culture assessment using the PSHA methodology in 2004 and 2006. There has been no formal commitment as to who will do the assessment, what it will consist of, or when specifically the assessment(s) will be done. The Inspection Team noted, during its review of the 2003 PSHA safety culture assessment, that findings from the assessment had not been entered into the corrective action program until prompted by the Inspection Team.

The qualifications of personnel involved in the internal, periodic assessments of the SCWE survey are satisfactory, as are the personnel who have been involved in the internal NQA assessments and the ECP reviews. The qualifications of those involved in any future, independent assessments is not known since they have not yet been identified.

The only commitment on record regarding how findings from the current and future safety culture assessments will be incorporated into the licensee's corrective action program is through the use of CR's when there is a Red or Yellow rating for the broad commitment areas noted above in NOBP-LP-2501 and in the drafts of the monthly monitoring practices. Unlike the guidance provided for concerns identified during RRR meeting, there is not specific guidance addressing incorporation of findings from the external, NQA or SCWE surveys into the corrective action program.

3. Conclusions

The Inspection Team concluded that the approach and attributes assessed using NOBP-LP-2501 are appropriate for long-term application, but continue to be concerned regarding some attribute rating criteria.

The Inspection Team concluded that the NQA and ECP surveys were appropriate tools for the licensee to gather staff level input on safety culture. Further, the Team concluded that like the RRR meeting, the results from these tools must be evaluated at the individual organizations' response to questions level, as well as the overall organization and site levels.

Because NOBP-LP-2502, Revision 0, "Safety Culture Monitoring," and NOBP-Later, Revision 0, "FENOC Safety Culture Monitoring,", were not available in final form for the Team's review, the team concluded that a final assessment of the licensee's long term monitoring program would be more appropriate following inspection of the approved program.

The Inspection Team concluded that the process for entering deficient conditions into the corrective action program worked when specific criteria were provided e.g., Red or Yellow findings from the safety culture assessment process. The Inspection Team identified numerous occasions where this occurred. However, there were a number of occasions where deficient conditions were identified by other means e.g., surveys, and not entered into the corrective action program until prompted by the Inspection Team.

E. Safety Conscious Work Environment and Safety Conscious Work Environment Review Team Implementation

1. Inspection Scope

The Inspection Team conducted an assessment of the licensee's actions associated with improving its SCWE. The Inspection Team utilized the portion of Inspection Procedure 71152, "Identification and Resolution of Problems," that addresses the SCWE, and the NRC's Policy Statement, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation" as guidance during this assessment. The assessment included a document review, interviews with management and the workforce, and observations of licensee management activities.

The Inspection Team's assessment included a review of FENOC's "SCWE Action Plan" and associated products. The SCWE Action Plan included the development of a SCWE Policy Statement, SCWE Training Modules, a Safety Conscious Work Environment Review Team (SCWERT), expanded Employee Concerns Program, SCWE Communications Strategy, and metrics to monitor the SCWE.

The Inspection Team interviewed both members of the management team and workforce. Workforce individuals were selected randomly from within each department of the plant. Thirty nine workforce individuals and 20 supervisors/managers were interviewed with respect to their willingness to raise safety concerns, management support of the SCWE, and the effectiveness of the corrective action program and Employee Concerns Program.

Finally, the Inspection Team observed a number of internal and public meetings, including RRR meetings, SCWERT meetings, a Company Nuclear Review Board (CNRB) meeting, and NRC entrance and exit meetings.

2. Observations

The SCWE Action Plan was implemented as planned. The SCWE documents and processes developed under the SCWE Action Plan are comprehensive. However, there are limitations on the effectiveness of the SCWERT due to the scope of activities reviewed and its operating definition of adverse action.

The licensee implemented a survey tool to monitor the health of the SCWE. That tool is comprehensive in that it appropriately accesses the key elements of a SCWE as outlined by the NRC's 1996 policy statement, namely: management support of the SCWE (including statements of support and demonstrated behavior); employee willingness to raise concerns without fear of retaliation; the effectiveness of the normal and alternate internal processes available to employees to raise concerns; and, perceptions of potential retaliatory actions.

The SCWE training materials were appropriate and include those elements necessary to effectively maintain a SCWE, including: 1) the laws, regulations, and policies underlying SCWE expectations; 2) elements of retaliation such as protected activity and adverse action; 3) avenues available to employees to raise concerns; 4) expectations for management behavior; and, 5) the concept of "chilling effect" and how to prevent it. However, management actions as reported by interviewees and independently supported by the licensee's review of their safety culture through both their SCWE survey and the PSHA survey show that even though all managers have received SCWE training, not all managers fully understand or fully embrace the concepts. Management continues to take some actions without adequately anticipating or compensating for the potential effect upon the workforce and SCWE, for example, reorganization of the operating shifts after the Normal Operating Pressure tests in November 2003, and failure to anticipate the effects of long working hours over an extended period. Further, managers have not always recognized the impact their comments and demeanor has on individuals and ultimately the organization, e.g., comments attributed to some managers in the SCWE and NQA surveys in November 2003.

Although the general workforce has not yet been formally trained in SCWE concepts, there is evidence that SCWE communications have succeeded in familiarizing the workforce with a working definition of SCWE, the regulations that protect them from retaliation, and the avenues available to them to raise concerns. However, results from the licensee's November 2003 SCWE survey show declining confidence within some key organizations that they can raise concerns without fear of retaliation and challenge non-conservative management decisions.

Along with the implementation of actions to improve SCWE, the licensee established the Safety Conscious Work Environment Review Team (SCWERT).

The SCWERT is a management committee designed to review "adverse actions" to ensure such actions are not retaliatory, to identify potential negative impacts on the organization from a SCWE perspective, and to identify activities to mitigate the negative impacts. With regard to the SCWERT, the Inspection Team initially observed that, although the charter defines "adverse action" in an appropriately broad manner, the application of the definition was, at times, overly narrow. Issues such as the pulling of qualifications and reassignments were not routinely evaluated by the SCWERT during this inspection. As a result, the SCWERT may miss opportunities to review all relevant activities for potential retaliation or activities which may be perceived as retaliatory by the workforce. As the Inspection Team's assessment continued, it appeared that the SCWERT was starting to look at a broader spectrum of potential adverse actions, however, their level of review is still not as broad as the Team expected to see. In addition, the SCWERT does not review proposed adverse actions by contractors, even though experience at other facilities has shown that actions by contractors can have a damaging impact on a station's SCWE, to which the licensee is ultimately held responsible.

3. Conclusions

The licensee has developed a number of new SCWE programs and processes, most of which are comprehensive and all of which have contributed to an improved SCWE at Davis-Besse. In addition, the implementation of the SCWERT was seen as a major improvement in maintaining a SCWE. However, the Inspection Team, for the above reasons and the apparent declines in the November 2003 SCWE survey, has concluded that continued FENOC attention is warranted to ensure the SCWE at Davis-Besse is maintained. Attention is particularly warranted to ensure all Davis-Besse's managers understand and implement SCWE concepts in a manner such that FENOC's policy on SCWE is fully realized. The attention should emphasize the potential negative impact some management behaviors may have on individuals and the organization, and the limits on the effectiveness of the SCWERT. This area also warrants continued NRC oversight.

F. Employee Concerns Program Implementation

1. Inspection Scope

The NRC's assessment of the licensee's actions associated with improving its SCWE also included a review of the ECP. This assessment utilized NRC IP 40001, "Resolution of Employee Concerns." The assessment included a document review and interviews with program management, employees of the program and the general workforce.

The Inspection Team's assessment included, among other things, a review of: 1) procedures governing the program, including the process for receiving, evaluating, dispositioning, tracking, and documenting concerns, 2) the program's independence from line management, 3) the technical adequacy of the licensee's

review and closure of concerns, and 4) analysis of ECP trends for senior management.

2. Observations

The ECP was implemented in March 2003. The Inspection Team found that the ECP adequately processed concerns and appropriately documented and protected pertinent information. Metrics used by the ECP are, for the most part, consistent with industry practices. Between March 2003 and December 2003, the quality of individual ECP investigations improved to a level which fully meets best industry practices. Further, though the number of concerns received increased, the ECP was able to deal effectively with the increased volume of concerns. This improvement in investigations and the ability to handle the increased volume of concerns can in large part be attributed to the use of highly qualified contractors to supplement the ECP program.

There were some weaknesses noted by the Inspection Team. The ECP staff has served in a consulting role for line management on proposed personnel action. This practice can reduce the perceived and actual independence of the ECP, and therefore, its effectiveness.

The ECP provided no thematic analysis of trends or problem areas to Senior Management. Each issue is evaluated individually and no overall assessments are performed to identify trends or problem areas. For example, over ten separate concerns were filed which identified that workers were being discouraged from writing Condition Reports. Each of the concerns was evaluated separately and not substantiated. In another example, several concerns were written to document a chilled environment within a contractor's organization on site. Similar to the concerns identified above regarding Condition Reports, each of these concerns was evaluated independently and not substantiated. In neither case was an assessment for a potential trend conducted to address the broader implications of these perceptions.

The ECP effectiveness was increased in 2003 by the addition of experienced contractors. These contractors have all been released. The ECP manager has limited experience in this area and has recently been given the responsibility of administering an ECP at the other two FENOC sites. The increased responsibility imposed upon this manager along with the loss of experienced contractor support merits continued observation.

3. Conclusions

The ECP is a significant improvement to the previous ombudsman program and provides an acceptable alternative method for problem resolution to existing programs in the line organization; however, the weaknesses noted impact its effectiveness.

G. Measures for Monitoring the Effectiveness of Management and Human Performance

This element of the inspection has been incorporated in the earlier sections of this report as appropriate. Measures related to safety culture are discussed in Section IV. A., B., C., and D. and measures related to SCWE and ECP are in Sections IV. D. and E.

V. Exit Meeting

The Inspection Team met with Mr. Lew Myers and members of his staff on December 19, 2003, to discuss the results of this inspection. Mr. Myers acknowledged the Inspection Team's conclusions.

At that meeting, the Inspection Team indicated that based on the details of the licensee's November 2003 ECP survey tool, the team could not recommend closure of restart checklist item 4.b. The Team's review of the information identified that a number of key organizations had provided more negative responses to specific questions compared to the same survey administered in March 2003. Specifically, the operations, plant engineering, quality assurance, and to a lesser extent maintenance organizations provided more negative answers to questions dealing with safety conscious work environment, production over quality/safety, condition report effectiveness, and management's involvement s than they had in March 2003.

LIST OF KEY PERSONS CONTACTED

F. von Ahn, Vice President - FENOC Oversight
G. Becker, Regulatory Interface Team (Contract)
M. Bezilla, Vice President - Nuclear
L. Dohrmann, Manager - Nuclear Services
G. Dunn, Manager - Outage Management and Work Control
(Presently Manager- Regulatory Affairs)
D. Eshelman, Manager - FENOC Asset Management
P. Faris, Sr. Nuclear Quality Evaluator
D. Farrell, Manager - Radiation Protection (Acting)
R. Fast, Director - Organizational Development
K. Fehr, Nuclear Analyst (Mgmt Observation Program)
S. Frantz, Morgan & Lewis (Contract Legal)
J. Grabner, Manager - Design Engineering
L. Griffith, Manager - Employee Concerns Program
S. Haber, Human Performance Analysis Corp.
D. Haskins, Manager - Nuclear Human Resources
J. Hirsch, Supervisor - Business Planning
R. Hovland, Supervisor - Nuclear Engineering (Electrical/I&C Systems)
R. Huey, Employees Concerns Program (Contract)
M. Landis, Advanced Nuclear Communications Representative
G. Leidich, Executive Vice President - FENOC
C. Lincoln, Lincoln and Assoc. (Contract)
S. Loehlein, Manager - DB Quality Assessment
M. Marler, INPO Loanee to DB Training
P. McCloskey, Manager - Chemistry
W. Mugge, Manager - Nuclear Security (Presently Manager - Outage Management
and Work Control)
L. Myers, Chief Operating Officer
C. Price, Manager - FENOC Business Services
P. Roberts, Manager - Maintenance (Went to Perry during this outage)
M. Roder, Manager - DB Operations (Presently Supervisor -Operations Training)
D. Shurberg, Human Performance Analysis Corp.
S. Steagall, Superintendent - Nuclear Maintenance (Mechanical)
M. Stevens, Director - DB Nuclear Work Management
L. Strauss, Associate Analyst
D. Williams, Supervisor - Nuclear Maintenance (Programs/Corrective Action)
D. Woodfin, Supervisor - Configuration Management

LIST OF ACRONYMS

CR	Condition Report
CA	Corrective Action
FENOC	FirstEnergy Nuclear Operating Company
IP	Inspection Procedure
USNRC	United States Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
ECP	Employee Concern Program
PSHA	Performance, Safety, and Health Associates
DPO	Differing Professional Opinion
SCAQ	Significant Condition Adverse to Quality\
CAQ	Condition Adverse to Quality
EAB	Engineering Assessment Board
ROP	Restart Oversight Panel
CARB	Corrective Action Review Board
PM	Preventive Maintenance
ECR	Engineering Change Request
SCWE	Safety Conscious Work Environment
SCWERT	Safety Conscious Work Environment Review Team
NQA	Nuclear Quality Assurance
4Cs	Meetings between staff and Chief Operating Officer or Site Vice President to address staff issues. 4Cs stands for “Changes, Communication, Compliments, and Concerns.”
RRR	Restart Readiness Review
SC	Safety Culture

LIST OF DOCUMENTS REVIEWED

General

Nuclear Operating Business Practice DBBP-VP-0002, Rev. 02 through Rev.10, Restart Readiness Review Extended Plant Outage, various dates.

MHP-IAP-4a-01, Management & Human Performance Improvement Plan, Rev 2., March 24, 2003

Safety Culture Evaluation of the Davis-Besse Nuclear Power Station, Performance, Safety, and Health Associates, Inc., April 14, 2003

NOBP-LP-2501, Rev.0, Safety Culture Assessment, Effective Date November 24, 2003.

Safety Culture Long-Term Improvement Plan, September 8, 2003

Internal to External Safety Culture Assessment Comparison, Revision 0, June 11, 2003

NOBP-LP-2502, Revision 0, Safety Culture Monitoring

NOBP-Later, Revision 0, FENOC Safety Culture Monitoring

Business Practice, FENOC Safety Culture Performance Indicator, Revision 1, February 3, 2002

FENOC Business Plan 2004-2006, December 10, 2003

Operations Improvement Implementation Action Plan, Revision 2, Action Plan Number ORR-IAP-5C-01

Restart Readiness Review Safety Culture Assessment for Restart of the Davis-Besse Nuclear Power Station, December 2, 2003

Davis-Besse Nuclear Power Station Operational Improvement Plan Operating Cycle 14, Revision 0, November 18, 2003

First Energy Nuclear Operating Company Agendas, Monthly September 2002 - March 2003

D.G. Eisenhut - Assessment of the FENOC Company Nuclear Review Board - August 13, 2002

FENOC 0023, Operations Performance Monitoring Card, Rev.00

FENOC 0024, Training Performance Monitoring Card, Rev. 00

FENOC 0012, Field Observation Card, Rev. 00

LIST OF DOCUMENTS REVIEWED

Davis-Besse Site Organization charts, various dates

2003 FENOC CNRB Meeting Schedule, Beaver Valley, Davis-Besse, and Perry - May 23, 2002

DBB-02-00073, Restart Overview Panel Meeting Dates, April 11, 2003

Numerous Condition Reports related to safety culture and safety conscious work environment

Root Cause Analysis Report, Failure to Identify Significant Degradation of the Reactor Pressure Vessel Head, August 13, 2002

Leadership-in-Action Training materials for upgraded training

FENOC SCWE Action Plan and supporting documents

SCWERT Charter

Procedures

Nuclear Operating Policy, NOPL-LP-2004, Nuclear Safety, Rev. 00

Nuclear Operating Administrative Procedure, NOP-ER-3001, Problem Solving and Decision Making Process, Rev. 0, January 29, 2003

Administrative Procedure General Reference, NG-NA-00305, Operating Experience Assessment Program, Rev. 3, March 1, 2003

Administrative Procedure, NG-VP-00200, Differing Professional Opinion Disposition Process, Rev. 0, March 3, 2003

Miscellaneous

DB12003735, Quality Field Observation (QFO), Oversight and Process Improvement, Nuclear Quality Assessment, Assessment Subject - Generic Safety Culture QFO First Quarter 2003, 01/01/03 - 03/31/03.

DB12003787, Quality Field Observation (QFO), Oversight and Process Improvement, Nuclear Quality Assessment, Assessment Subject - Safety Culture and Safety Conscious Work Environment Survey, 01/27/03 - 02/07/03.

Operating Experience Assessment Program (OEAP) Program Review, Summary Report, Rev. 0, November 2002

P-ADM-07, Operating Experience Review Process, Revision 1, June 26, 2001

NG-NA-00305, Operating Experience Assessment Program, Revision 3, March 1, 2003

LIST OF DOCUMENTS REVIEWED

NOP-LP-3001, Safety and Health Program, Revision 0

SCORE program safety behavior safety criteria for trending, March 2003

DB12003881, Oversight and Process Improvement, Nuclear quality Assessment, Quality Field

Observation, Discussion with the Radiation Protection Manager to determine his plans for compensatory actions following events as documented by CR 03-01869, March 8, 2003

DB12003850, Oversight and Process Improvement, Nuclear quality Assessment, Quality Field Observation, Observation of Infrequently Performed Test and Evolution Brief and ALARA Brief for removing plenum from reactor vessel, February 27, 2003

DB12003774, Oversight and Process Improvement, Nuclear quality Assessment, Quality Field Observation, Observation of Refueling canal Problem Solving plant development, January 27, 2003

DB12003748, Oversight and Process Improvement, Nuclear quality Assessment, Quality Field Observation, Phase II Plant Modification Program Compliance Review, January 20-25, 2003

International Safety Culture Documents

INSAG-4, Safety Culture, IAEA, 1991

INSAG-13, Management of Operational Safety in Nuclear Power Plants, IAEA, 1999

INSAG-15, Key Practical Issues in Strengthening Safety Culture, IAEA, 2002

IAEA-TECDOC-1321, Self-assessment of safety culture in nuclear installations, November 2002

IAEA-TECDOC-1329. Safety culture in nuclear installations, December 2002

OECD/CNRA Regulatory Response strategies for Safety Culture Problems

References

Haber, S.B. and Barriere, M.T. (1998). “Development of a regulatory organizational and management review method.“ Research Report RSP-0060, Canadian Nuclear Safety Commission, Research Report, Ottawa, Canada

Haber, S.B., O’Brien, J.N., Metlay, D.S., and Crouch, D.A. (1991). “Influences of Organizational Factors on Performance Reliability,” NUREG/CR-5538, U.S. Nuclear Regulatory Commission, Washington, D.C.

Schein, E.H. (1992). “Organizational Culture and Leadership”, Jossey-Bass, San Francisco, CA.

Attachment A

Biographies

Geoffrey Wright, Team Leader, is an expert in evaluating safety performance at nuclear power plants. He has 31 years of experience in various aspects of nuclear power facility engineering and operation working in the nuclear power industry and for the NRC. Mr. Wright is currently a senior project engineer in NRC's Region III office in Lisle, Illinois.

Julius Persensky is an expert in human factors and behavioral science technologies in the work environment. He holds a Ph.D. in Applied Psychology and has 30 years of experience in the field. Prior to joining the NRC, Dr. Persensky was a senior behavioral scientist at the National Institutes for Science and Technology and currently is the senior technical advisor for human factors in the NRC's Office of Nuclear Regulatory Research in Rockville, Maryland.

Lisamarie Jarriel is a expert with 21 years experience in nuclear safety, safety conscious work environment and employee concerns program implementation. She has experience in nuclear safety analysis and managing the safety conscious work environment at a nuclear facility. Ms. Jarriel is currently the NRC's senior advisor on allegation policy in the Office of Nuclear Reactor Regulation in Rockville, Maryland.

Clare Goodman is an expert with 30 years experience evaluating human performance issues. She has managed and monitored analyses of human performance and organizational effectiveness, training, organizational communications, and safety culture at nuclear power plants. Ms. Goodman is currently a senior human factors specialist in NRC's Office of Nuclear Reactor Regulation in Rockville, Maryland.

Richard Pelton is an expert in training and root cause assessment. He has 35 years of experience evaluating human performance, training and root cause evaluations. He has reviewed and inspected nuclear power plant operator training and licensing programs. He is currently a training and assessment specialist in NRC's Office of Nuclear Reactor Regulation in Rockville, Maryland.

John Beck is an expert in safe nuclear facility operation. He has 36 years of nuclear management experience serving as Chief Operating Officer, Executive Vice President, Vice President and Director of Engineering for three different successful nuclear utilities. Mr. Beck is currently the President and Chief Executive Officer of Little Harbor Associates in Cohasset, Massachusetts, an organization that specializes in safety culture and safety conscious work environment at nuclear facilities. Little Harbor Associates provided a key role in the recovery of the safety conscious work environment at the Millstone facility in the mid-1990s.

Michael Brothers is an expert in safe nuclear facility operation. He has 27 years nuclear safety experience. Mr. Brothers is a Registered Professional Engineer and has held an NRC Senior Reactor Operator license. His career in the nuclear industry involved positions of increasing responsibility culminating as Vice President of Nuclear Operations at the Millstone facility overseeing recovery of the safety conscious work environment and safe operation of that facility. Mr. Brothers is currently owner of Brothers Engineering and Consulting in Niantic, Connecticut.

ATTACHMENT B

APPROVAL SHEET FOR MANAGEMENT & HUMAN PERFORMANCE ASSESSMENT PHASE 3

Inspection Dates:

Phase 3: March 20 through May 9,2003

Exit: TBD

Applicable Inspection Procedures:

93812, "Emergency Response"
40001, "Resolution of Employee Concerns"

Inspection Procedure:

Prepared by: _____
G. C. Wright, RIII, DRP
Project Engineer/Team Lead

Reviewed by: _____
Christine Lipa
Chief, Projects Branch 4, DRP

Reviewed by: _____
Brent Clayton,
Management & Human Performance
Oversight Manager

Approved by: _____
Jack Grobe, Chairman,
Davis-Besse 0350 Oversight Panel

Approval to use IP 40001:

_____
J. E. Dyer,
Regional Administrator,
Region III

Phase 3: Corrective Action Effectiveness.
This portion of the inspection will be accomplished by a special inspection consisting of NRC inspectors, specialists, and consultants

I. Inspection team make-up:

Team Leader:	Geoffrey Wright, Region III
Team Members:	Clare Goodman, NRR
	Richard Pelton, NRR
	Julius Persensky, RES
	Lisamarie Jarriel, NRR
	John Beck, Consultant
	Michael Brothers, Consultant

II. Inspection Activities:

Docket	=	05000346
Report No.	=	50-346/2003012
Insp. Proc.	=	93812
Inspection IPE	=	ER
Preparation IPE	=	SEP
Documentation IPE	=	SED
Travel	=	AT

Entrance Meeting:	April 7
Inspection Time:	March 20 & 21, April 7-11, and April 28 to May 9, 2003
Exit Meeting:	TBD.

III. Inspection Deliverables:

This special inspection is designed to provide the NRC's 0350 Panel (Panel) with an evaluation of the processes the licensee is using to assess its safety culture, the actions and monitoring activities associated with improving its safety conscious work environment (SCWE), and the status of its employee concern program. The input from this inspection, when combined with other inputs, e.g.,System Health inspections, Program Review inspections, Containment Health inspections, and the Corrective Action Team Inspection, will allow the Panel to make an informed decision on the effectiveness of the licensee's Management and Human Performance corrective actions. To that end, the following deliverables are expected from this special inspection.

A. Internal Assessment

The inspection team will provide the 0350 Panel with an assessment of the input parameters, evaluation techniques, and methods to develop conclusions used in the internal assessment.

B. External Assessment, i.e., Dr. Haber's Review

The inspection team will provide the 0350 Panel with an assessment of the input parameters, evaluation techniques, and methods to develop conclusions used in the external culture assessment.

C. Integration of Internal and External Assessments

The inspection team will provide the 0350 Panel with an assessment of the extent to which the licensee benchmarked and revised, where appropriate, their internal assessments against the external assessment. Further, the team will provide an assessment of the licensee's plans for future monitoring of safety culture.

D. Safety Conscious Work Environment (SCWE) and Safety Conscious Work Environment Review Team (SCWERT).

The inspection team will provide the 0350 Panel with an assessment of the licensee's current and future activities to promote the open identification of deficient conditions, to prevent retaliatory action, and to monitor the program's effectiveness.

E. Employee Concerns Program

The inspection team will provide the 0350 Panel with an assessment of the issues brought to the Employee Concerns Program, the methods to review issues, and the resolution of issues entered into the employee concern program. The team will also, to the extent practicable, provide an assessment of the reasons individuals are using the Employee Concerns Program.

F. Measures for monitoring the effectiveness of Management and Human Performance initiatives.

The inspection team will provide the 0350 Panel with an assessment of the licensee's metrics, evaluation techniques, goals, and methods for developing and implementing corrective actions associated with monitoring the effectiveness of the licensee's Management and Human Performance initiatives.

IV. Inspection Details

A. Internal Safety Culture Assessment (Restart Readiness Review Extended Plant Outage, DBBP-VP-0002, Rev. 2, 3/10/03)

H. Evaluate the following attributes of the licensee's internal assessment tool "Restart Readiness Review Extended Plant Outage, DBBP-VP-0002, Rev. 2, 3/10/03:"

a. The process used to perform the Safety Culture Assessment described in DBBP-VP-0002, Attachment 8, to determine it's feasibility and appropriateness for evaluating safety culture;
b. the elements of Safety Culture listed in DBBP-VP-0002, Attachment 8, to determine their applicability and appropriateness;

c. the criteria in Appendix A. of Attachment 8 of DBBP-VP-0002 to determine their applicability, appropriateness, and comprehensiveness; and
d. any weaknesses in DBBP-VP-Rev. 2, that would limit its effectiveness as the tool to evaluate safety culture at Davis-Besse prior to restart.

B. External Safety Culture Assessment, i.e., the assessment performed by the contractor.

1. Evaluate suitability of the following licensee's safety culture monitoring tool(s):

a. survey questions;
b. interview questions;
c. activity observation selection and plans, including sampling and techniques;
d. documents reviewed; and
e. sampling plan for all above.

2. Evaluate implementation of the licensee's safety culture monitoring tool(s) to determine:

a. if each of the tools (survey, interview, and observation) was implemented as planned;
b. how individuals were selected to participate as described in the process; and
c. the qualifications of the personnel (DB and contractors) performing the assessment.

3. Evaluate the methodology used to develop results and conclusions from the data to determine:

a. if the methodology is appropriate, applicable, and comprehensive;
b. if the methodology was applied consistently; and
c. if the statistical techniques applied to sampling and to the results were appropriate.

4. Evaluate the results of the safety culture monitoring tools and the data collected by the contractor to determine:

a. if the results drawn from the surveys are consistent with the data collected;
b. if the results drawn from the interviews are consistent with the data collected;
c. if the results drawn from the observations are consistent with the data collected;

d. if the overall conclusions drawn from implementation of the safety culture tool(s) are consistent with the data collected by the contractor.

E. Evaluate the application of the convergent validity methodology to evaluate:

a. how individual issues were integrated into the overall conclusions; and
b. how outliers were evaluated and handled.

C. Integration of Internal and External Assessments

1. Review and compare the integration of the internal and external assessments and evaluate the following areas:

a. how the findings from implementation of DBBP-VP-0002, Rev. 2, internal safety culture assessment will be compared with the findings from implementation of the external safety culture monitoring activity;
b. if the process described in DBBP-VP-0002 is of the appropriate scope and depth as the baseline established by the external safety culture monitoring activity;
c. if the elements described in DBBP-VP-0002 capture the same safety culture elements as the baseline established by the external safety culture monitoring activity;
d. how the licensee will incorporate the findings from implementation of DBBP-VP-0002, Rev. 2, internal safety culture assessment, into their corrective action program; and
e. Identify any weaknesses in DBBP-VP-Rev. 2, that would limit its effectiveness as the tool to periodically evaluate safety culture at Davis-Besse.

2. Review the licensee’s long term implementation strategy to determine and evaluate:

a. whether the “Restart Readiness Review Extended Plant Outage,” DBBP-VP-0002, Rev. 2, 3/10/03, is an appropriate tool to perform the periodic assessments
b. the licensee's program for monitoring safety culture in the future, and approach for identifying and responding to trends;
c. the safety culture assessment tools, if other than DBBP-VP-0002, which will be used for future periodic safety culture assessments;
d. the frequency and sampling for future periodic safety culture assessments;
e. the qualifications of personnel who will conduct future periodic safety culture assessments;
f. the criteria for action from future periodic safety culture assessments; and
g. how the findings from this baseline assessment and future periodic safety culture assessments will be incorporated into the licensee's corrective action program;

D. Safety Conscious Work Environment (SCWE) and Safety Conscious Work Environment Review Team (SCWERT) Implementation.

1. Use the following material as guidance in the review:

    a. Inspection Procedure 71152 “Identification and Resolution of Problems” section 03.03d “Assessment of Safety Conscious Work Environment” (Attachment 2); and
    b. NRC: Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation (Attachment 3).

2. Evaluate metrics to monitor program effectiveness;
3. Define interview population – numbers and distribution;
4. Evaluate the licensee’s performance against its policy NOPL-LP-2003 “Policy for Maintaining a Safety Conscious Work Environment (SCWE);”
5. Evaluate the effectiveness of the Training programs for employees and contractors; and
6. Evaluate the effectiveness of internal communications.

E. Employee Concerns Program Implementation

1. Evaluate the licensee’s ECP using the following guidance:

    a. Inspection Procedure 40001, Resolution of Employee Concerns, (Attachment 1);
    b. NRC Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation (Attachment 3); and
    c. NEI 97-05

2. Evaluate metrics to monitor program effectiveness.

F. Measures for monitoring the effectiveness of Management and Human Performance initiatives.

1. Review the licensee’s metrics for monitoring the effectiveness of corrective actions in the Management and Human Performance area and evaluate:

    a. the appropriateness of monitored items;
    b. the criteria used to assess effectiveness; and
    c. the process used when item does not meet criteria

2. Review the licensee’s actions to address areas which do not meet goals or metrics with declining trends and evaluate:

    a. the system used to address issues;
    b. how the issues are tracked;
    c. how well the issues handled; and
    d. the effectiveness of the corrective actions.

V. Brief 0350 Oversight Panel on findings and conclusions from inspection.

VI. Exit Meeting

VII. RAM items to be addressed by the full Management and Human Performance Inspection Plan, i.e., all three phases of the inspection effort.

1. E-22
2. E-25
3. SUP-08
4. SUP-09
5. SUP-10
6. SUP-11
7. SUP-19 in part

Attachments

1. **Inspection Procedure 40001, Resolution of Employee Concerns**

2. **Assessment of Safety Conscious Work Environment, Extracted from IP 71152**

3. **NRC: Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation**

Attachment 1

INSPECTION PROCEDURE 40001
RESOLUTION OF EMPLOYEE CONCERNS

40001-01 OBJECTIVE
To Evaluate the licensee's process for resolving safety-related[1] concerns reported by licensee or contractor employees while preventing any retaliatory action against those employees.

40001-02 INSPECTION REQUIREMENTS

NOTE: Implementation of this inspection procedure requires the approval of the appropriate Regional Administrator.

02.01 Inspection Preparation

1. Allegation History. Review the allegation history of the site before performing the inspection. Determine any positive or negative aspects of the licensee's handling of allegations. The inspection should include concerns that are the subject of allegations reviewed by the NRC as well as concerns that were not submitted to the NRC.

2. Process for Resolving Concerns. Review procedures that govern the licensee's Employee Concerns Program (ECP) and focus on the information flow process. Review the licensee's process for receiving, evaluating, dispositioning, tracking and documenting concerns. This review should be based on the licensee having an ECP in place and the pertinent procedures being available to the inspector. The inspector should conduct this review before the inspection.

3. ECP Organization. Review whether the licensee's process for resolving concerns ensures a suitable level of independence between the ECP and line organizations.

02.02 Evaluation of the Licensee's Process for Resolving Employee Concerns. On the basis of available documents and data, Evaluate the overall performance of the licensee by focusing on them licensee's effectiveness in (1) processing and resolving safety related concerns and (2) protecting from retaliation those employees who raise concerns.

1. Documentation of Concerns. Examine safety-related concerns reported by employees within the last 2 years. Evaluate pertinent documentation of the receipt, review, and closure of each safety-related concern selected for this examination. This review should Evaluate the technical adequacy of the licensee's review and closure of the concerns.

NOTE: Any allegations brought to inspectors by employees during the inspection should be forwarded to the regional office allegation coordinator (OAC) for processing through the NRC[1] allegation review process. At no time during the NRC review should the confidentiality of any employee be jeopardized.[2]

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[1] For this inspection, we will not limit our review to safety related concerns

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2. Corrective Actions. Evaluate the adequacy of corrective actions associated with the closure of selected safety related concerns. Contact the appropriate employees to discuss their satisfaction with the adequacy of the corrective actions.

NOTE: Discussions with employees should be held only if employees voluntarily agree to discuss their concerns with the NRC. Inspectors should expend maximum effort to protect the identity of those employees contacted including contact by phone and/or offsite meetings.

3. Prioritization of Concerns. Evaluate whether concerns are prioritized on the basis of safety significance.

4. Feedback to Employees. Evaluate the adequacy and timeliness of feedback to employees regarding the review and resolution of their concerns. Contact appropriate employees to discuss their satisfaction with the feedback process regarding their concerns.

5. Independent ECP Staff Review. Evaluate the ability of the licensee's staff administering the ECP to impartially review, track, disposition, and record concerns independent of the employee's line organization.

6. Environment for Reporting Concerns. Evaluate if and how the licensee publicizes the ECP as an avenue for employees to report concerns when they are reluctant to report them to their line organization. Evaluate how employees are assured that confidentiality will be preserved, if they wish to maintain confidentiality. Evaluate how all employees, including new employees, are made aware of procedures that govern accessibility to, reporting concerns to, and implementation of the ECP. Evaluate whether departing or dismissed employees are debriefed regarding any remaining concerns.

7. Protection Against Retaliation. Determine whether sufficient controls are in place to protect those employees who identify concerns from any type of retaliatory action. Ascertain whether management supports measures to ensure achievement of that end. Contact appropriate employees to discuss their satisfaction with the protection against retaliation afforded to them by the ECP and licensee's management.

8. Expertise of ECP Staff. If problems with the handling of concerns are identified, Evaluate whether the ECP staff can promptly respond to and correctly resolve a variety of concerns. Evaluate the extent of the ECP staff's reliance on line organizations and consultants. Determine whether training is provided for all personnel involved in the handling of concerns.

1. Self-Evaluation. Evaluate the licensee's monitoring and auditing of the ECP by internal and external organizations, and determine whether lessons learned are provided as feedback to management.

02.03 Reporting. Identify any negative findings about the licensee's processing and reporting of concerns to NRC management before the final exit interview with the licensee. Determine whether more extensive follow up review should be performed or if more issues should be forwarded to the OAC. Keep NRC management informed of significant adverse findings.

General Guidance

An ECP is an avenue independent of the line management process for licensee and contractor employees to report safety concerns to their employers without fear of retaliation. NRC regulations do not include specific guidance or requirements for the establishment of an ECP. The applicable regulatory requirement in Section 50.7 of Title 10 of the Code of Federal Regulations (10 CFR 50.7) and in the Energy Reorganization Act, Section 211, is not to impede or hinder the reporting of safety-related concerns by employees of licensees or contractors and subcontractors. To the extent that safety-related concerns are being dispositioned through the ECP, evaluation of the process falls under 10 CFR Part 50, Appendix B, Criterion XVI. Some licensees have well-established ECPs, while others have none at all. The ECPs in existence do not adhere to one universal format and range from those lacking formality to those that are very well defined. Increased NRC interest in this area resulted in the development of Temporary Instruction 2500/028, "Employee Concerns Program," in 1993 and the modification of Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems," Section 03, to aid inspectors in reviewing licensee programs for the phenomenon known as the "chilling effect" (a term that refers to the negative effect a hostile environment may have on employees[3] raising concerns to the NRC or on those who may want to raise concerns). This inspection procedure should be used to Evaluate whether a licensee has adequately resolved safety-related employee concerns without retaliation against those employees who raise concerns.

Inspectors are directed not to attempt to enforce the programmatic elements presented in this inspection procedure. Any problems identified concerning a licensee's processing of concerns are to be reported as observations. Inadequate resolution of concerns should be evaluated for impact on plant safety, if time permits. If time does not permit evaluation, the licensee and NRC management should be informed of the staff's concerns with the licensee's resolution. Allegations received by inspectors during the review should be forwarded to the regional OAC, as appropriate[4].

Specific Guidance

03.01 Inspection Preparation. Determine whether the licensee is responsive and sensitive to those issues that employees believe could affect the safe operation or shutdown of a nuclear facility or endanger the health and safety of the public. These attributes can be determined in part by assessing whether a licensee's ECP comprises programmatic elements that ensure a responsive, effective operation. The inspector should review ECP procedures and data and submit pertinent questions to the licensee before the site inspection.

1. Allegation History. In reviewing the allegation history, determine the number of technical and wrongdoing (e.g., harassment, intimidation, discrimination) employee concerns reported to the ECP staff and allegations reported to the NRC over the last 2 years. Compare the number of technical and wrongdoing concerns or allegations received by

[3] For this inspection revise wording to read “...have on employees willingness to raise concerns to the NRC or the licensee...”

[4] For this inspection, revise to delete “...as appropriate.”

the ECP[5] staff with those received by the NRC for the last 2 years and note any parts of the organization that reported concerns to the NRC but not to the ECP staff.

2. Process for Resolving Concerns. In reviewing the licensee's ECP procedures, determine whether the following programmatic elements are present:

Corporate policy disseminated on employee concerns and protection of employees against retaliation.
Information on how licensee and contractor employees can access the ECP.
Methods for reporting concerns (e.g., in person, mail, fax, telephone).
Assurance of employee confidentiality.
Measures to protect employees from retaliation.
Assignment of staff independent from line organizations for fair and impartial evaluation of employees concerns.
Methods for prioritization, evaluation, tracking, resolution, documentation and feedback regarding employee concerns exist and are adhered to while concerns are being resolved.

3. ECP Organization. Ascertain whether the ECP organization is independent of line organizations and whether the ECP staff is competent. Determine the ECP manager reporting chain and whether:

The ECP staff is responsible for investigating, evaluating, tracking, and resolving each concern, and guidance is provided on when and how ECP staff can call on other sources of expertise.
Qualifications of ECP counselors and investigators are established.

03.02 Assessment of the Licensee's Process for Resolving Employee Concerns. Select a minimum of 10 and maximum of 20 safety-related employee concerns and evaluate the licensee's (1) processing and resolving safety-related concerns and (2) protecting from retaliation those employees who raise concerns.

NOTE: This assessment should be done by interviewing ECP staff, reviewing applicable ECP files, and, where necessary, conducting employee interviews.

1. Documentation of Concerns. Review ECP files (files containing records of employee concerns) for selected safety related concerns, and determine whether:

All safety concerns are formally documented (not resolved on the phone).
Controls exist requiring records of pertinent conversations and meetings.
Sufficient detail is documented to determine the safety impact of the concern, where possible.
Sufficient records exist on the processing of the concern, including records on receipt of concern, interviews, assignment to staff, summaries of telephone conversations, resolution, and feedback to the employee.
Records are maintained in an officially designated secure location accessible only to internal auditors, ECP staff, and authorized management.

2. Corrective Actions

[5] For this inspection, revise to read "...received by the licensee staff..."

Perform an independent review of the adequacy of corrective actions associated with the closure of selected safety-related concerns. Contact appropriate employees, particularly when a concern does not appear to have been adequately resolved, to discuss their satisfaction with the closure of their concerns. Focus on the following:

Review selected corrective actions to determine whether licensee actions committed to in response to employee concerns were adequate.
Determine whether employees voicing safety-related concerns believe the corrective actions addressed the identified concerns.
Perform an independent review of the adequacy of the licensee's resolution of a sample of the concerns selected for review. Focus on the following:
Did the licensee investigate and resolve each issue raised by the employee.
Was the scope and depth of the licensee's review adequate to address the questions raised.
Was the licensee's review timely given the safety significance of the issue and the operating status of the plant.

3. Prioritization of Concerns. Determine whether concerns are screened and assigned priorities on the basis of safety significance. Determine whether issues of the highest safety or organizational significance receive the highest priority.

4. Feedback to Employees. Determine whether adequate and timely feedback is provided to employees raising concerns to the ECP staff. Focus on the following:
   formal acknowledgment of receipt and specific details of the concern
   interim status of review of concern
   results of review and resolution of concern

5. Independent ECP Staff Review. Determine whether the ECP staff provide an impartial and independent review the employees' concerns (independent of the employee's line organization) and whether ECP procedures provide formal guidance for accomplishing an independent review of employees' concerns. Lack of guidance could result in employees obtaining opinions or resolutions from individuals in the line organization that the employees did not agree with in the first place.

6. Environment for Reporting Concerns. During discussions with ECP staff and employees, determine:
   Whether employees are encouraged to report concerns.
   Whether information provided (e.g., purpose and function of the ECP, procedures governing its operation, and persons who have access to it) is consistent.
   To whom and how to raise a concern.
   Whether the ECP is independent.
   Whether confidentiality of employees is maintained.
   Whether first-line through senior management endorses and supports the ECP.
   Whether employees understand the accessibility, confidentiality, and protection against retaliation provided by the ECP.
   Why certain parts of the organization (on the basis of allegation history) choose to report concerns to the NRC but not the ECP staff.

CAUTION: If, during your review of the licensee's allegation history, you find that the licensee has pending harassment, intimidation, or discrimination case(s) before either the Department of Labor (DOL) or NRC's Office of Investigations, do not document a finding of "no chilling effect" as a result of your inspection. Similarly, if the licensee has recently been issued a Notice of Violation by the NRC, or been found liable by a final DOL adjudicative body for violations pertaining to harassment, intimidation, or discrimination, a finding of "no chilling effect" should not be issued. If you are unclear or not certain about the meaning of specific issues identified in the licensee's files, you should consult with the NRC Regional Office Allegation Coordinator (OAC) for guidance before reaching any inspection findings.

7. Protection Against Retaliation. Determine whether the licensee's or contractor's employees are encouraged to report safety-related concerns without fear of retaliation; also, whether:

No retaliation is permitted.
Employees are informed that the ECP is an acceptable alternative method for raising safety concerns and that its use by co-workers is not to be viewed negatively.
Control measures or policies are implemented.
Formal controls exist to inform senior management of instances of reported retaliation.
Management supports measures and becomes involved in the resolution of concerns.
Each concern is treated as legitimate unless proven otherwise.
How individual confidentiality is maintained, including confidentiality of those entering or leaving the ECP office.
Employees requesting confidentiality are alerted that despite the ECP's efforts to protect their identity, the narrow focus of their concern could potentially cause their identity to be revealed.
The ECP staff hours accommodate employees' schedules and flexibility for offsite interviews is considered.
An "appeal process" has been implemented to preserve the affected employee's protected activities and personal remedies.

8. Expertise of ECP staff. Examine the training of ECP and plant staff by reviewing training records and lesson materials. Determine whether:

The ECP staff receives training on how to conduct investigations and interviews of employees while protecting their confidentiality.
First-line management receives training on handling concerns and are required to meet an established training grade.
All levels of management receive training on "lessons learned."
All plant staff receive initial indoctrination and periodic refresher training on the basic concepts and purpose of the ECP.
Management receives training on how to foster an atmosphere that encourages employees to readily express their concerns.

i. Self-Assessment. In determining how effectively management and the ECP staff oversee the ECP, review the following:

Monitoring and auditing of the effectiveness of the ECP by internal and independent review organizations.
Encouragement and evaluation of employee feedback.
Dissemination of the results to management and the staff.
ASSESSMENT of employee satisfaction with reporting safety concerns to the ECP.

03.03 Reporting. Safety-significant inspection findings should be promptly identified to the appropriate regional management and, if appropriate, the OAC, for consideration of follow up action. Significantly adverse findings should also be discussed with appropriate NRR management.

40001-05 REFERENCES

10 CFR 50.7, "Employee Protection"
Energy Reorganization Act of 1974, Section 211, "Employee Protection"
END

Attachment 2

Assessment of Safety Conscious Work Environment
Extracted from IP 71152.

d. Assessment of Safety Conscious Work Environment. In conducting interviews with or observing other activities involving licensee personnel during the inspection, be sensitive to areas where employees may be reluctant to raise concerns. Although the licensee may be implementing an employee concerns program regarding the identification of safety issues, the possibility of existing underlying factors that would produce a "chilling" effect or reluctance to report such issues could exist and the inspector should be alert for such indications.

Below is a list of questions that can be used when discussing PI & R issues with licensee individuals to help Evaluate whether there are impediments to the establishment of a safety conscious work environment. It is not intended that inspectors conduct formal interviews solely for the purpose of evaluating the work environment, but rather, that the inspectors make use of the questions listed below during discussions with licensee individuals concerning other attributes of the inspection. It is expected that during this inspection, discussions/interviews will be held with both licensee management and staff. If, as a result of the interviews or observations, the inspector becomes aware of specific examples of employees being discouraged from raising safety or regulatory issues within the licensee's or contractor's organization or to the NRC, the inspector should get as complete a set of facts as possible. If the inspector becomes aware of a reluctance of employees to raise safety or regulatory issues unrelated to a specific event or incident, continue pursuing the issue during the remaining interviews and try to determine the reason employees are reluctant to raise issues. However, if any indication of a "chilling" effect is suspected, inform regional management for further review and follow-up. Inspectors should be sensitive to the need to appropriately capture and forward any allegations that may be received during the inspection.

SUGGESTED QUESTIONS FOR USE IN DISCUSSIONS WITH LICENSEE INDIVIDUALS CONCERNING PI & R ISSUES

The following are suggested questions that may be used when discussing PI & R issues with licensee individuals. It is not intended that these questions be asked verbatim, but rather, that they form the basis for gathering insights regarding whether there are impediments to the formation of a safety conscious work environment.
Suggested Questions

1. How would the individual raise a safety or regulatory issue (e.g. inform supervisor, corrective action program, employee concern program (ECP), NRC)?
2. Why would they pick that approach (e.g. supervisor's preference, trying to keep numbers down, system difficult to use)?
3. Has the person ever submitted an issue to the corrective action program or the ECP? Was the issue adequately addressed? If not, did he or she pursue the issue? If not, why not?
4. Does the individual know whether employee concerns are tracked to completion and whether employees are informed of the result?
5. Does the individual believe the licensee's corrective action programs are successful in addressing issues submitted?
6. Is the individual aware of any specific instances in which another employee submitted an issue to the corrective action program or ECP and considered the license e's response incomplete or unacceptable or was retaliated against for pursuing the issue? (Try to get enough specific information to follow up with the other employee.)

7. Does the individual believe there has been a change in the amount of time necessary to resolve corrective action issues or employee concerns?
8. Is the individual aware of or have there been interactions with NRC personnel that suggest that some employees may be hesitant to raise concerns or present information to the NRC?
9. Is the individual aware of any events that would discourage employees from raising concerns (e.g. chastisement for submitting issues to corrective action program, ECP, or NRC; supervisors holding up submittal of concerns). Has there been an unexplainable change in the number or nature of concerns raised by employees to the licensee's corrective action program or employee concern program or the NRC?
10. Are there any unofficial corrective actions or tracking systems that exist because the existing formal systems are thought to be ineffective? (Unofficial corrective actions that bypass the recognized corrective action program have been previously in engineering and health physics areas.)

Attachment 3

NRC: Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation - Federal Register Notice

U.S. Nuclear Regulatory Commission

Policy Statement for Nuclear Employees Raising Safety Concerns Without Fear of Retaliation - Federal Register Notice
[Federal Register: May 14, 1996 (Volume 61, Number 94)]
[Notices]
[Page 24336-24340]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr14my96-136]
NUCLEAR REGULATORY COMMISSION
Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation; Policy Statement
AGENCY: Nuclear Regulatory Commission.
ACTION: Statement of Policy.

SUMMARY: The Nuclear Regulatory Commission (NRC) is issuing this policy statement to set forth its expectation that licensees and other employers subject to NRC authority will establish and maintain safety-conscious environments in which employees feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation. The responsibility for maintaining such an environment rests with each NRC licensee, as well as with contractors, subcontractors and employees in the nuclear industry. This policy statement is applicable to NRC regulated activities of all NRC licensees and their contractors and subcontractors.

DATE: May 14, 1996

SUPPLEMENTARY INFORMATION:
Background

NRC licensees have the primary responsibility to ensure the safety of nuclear operations. Identification and communication of potential safety concerns1 and the freedom of employees to raise such concerns is an integral part of carrying out this responsibility.

In the past, employees have raised important issues and as a result, the public health and safety has benefitted. Although the Commission recognizes that not every concern raised by employees is safety significant or, for that matter, is valid, the Commission concludes that it is important that licensees' management establish an environment in which safety issues are promptly identified and effectively resolved and in which employees feel free to raise concerns.

Although hundreds of concerns are raised and resolved daily in the nuclear industry, the Commission, on occasion, receives reports of individuals being retaliated against for raising concerns. This retaliation is unacceptable and unlawful. In addition to the hardship caused to the individual employee, the perception by fellow workers that raising concerns has resulted in retaliation can generate a chilling effect that may discourage other workers from raising concerns. A reluctance on the part of employees to raise concerns is detrimental to nuclear safety.

As a result of questions raised about NRC's efforts to address retaliation against individuals who raise health and safety concerns, the Commission established a review team in 1993 to reassess the NRC's program for protecting allegers against retaliation. In its report (NUREG-1499, "Reassessment of the NRC's Program for Protecting Allegers Against Retaliation," January 7, 1994) the review team made numerous recommendations, including several recommendations involving issuing a policy statement to address the need to encourage responsible licensee action with regard to fostering a quality-conscious environment in which employees are free to raise safety concerns without fear of retribution (recommendations I.A.-1, I.A.-2, and I.A.-4). On February 8, 1995, the Commission after considering those recommendations and the bases for them published for comment a proposed policy statement, "Freedom of Employees in the Nuclear Industry to Raise Safety Concerns Without Fear of Retaliation," in the Federal Register (60 FR 7592, February 8, 1995).

The proposed policy statement generated comments from private citizens and representatives of the industry concerning both the policy statement and NRC and Department of Labor (DOL) performance. The more significant comments related to the contents of the policy statement included:

> The policy statement would discourage employees from bringing their concerns to the NRC because it provided that employees should normally provide concerns to the licensee prior to or contemporaneously with coming to the NRC.
>
> The use of a holding period should be at the discretion of the employer and not be considered by the NRC in evaluating the reasonableness of the licensee's action.
>
> The policy statement is not needed to establish an environment to raise concerns if NRC uses its authority to enforce existing requirements by pursuing civil and criminal sanctions against those who discriminate.
>
> The description of employee concerns programs and the oversight of contractors was too prescriptive; the expectations concerning oversight of contractors were received as the imposition of new requirements without adherence to the Administrative Procedure Act and the NRC's Backfit Rule, 10 CFR 50.109.
>
> The need for employee concerns programs (ECPs) was questioned, including whether the ECPs fostered the development of a strong safety culture.
>
> The suggestion for involvement of senior management in resolving discrimination complaints was too prescriptive and that decisions on senior management involvement should be decided by licensees.

In addition, two public meetings were held with representatives of the Nuclear Energy Institute (NEI) to discuss the proposed policy statement. Summaries of these meetings along with a revised policy statement proposed by NEI were included with the comments to the policy statement filed in the Public Document Room (PDR).

This policy statement is being issued after considering the public comments and coordination with the Department of Labor. The more significant changes included:

> The policy statement was revised to clarify that senior management is expected to take responsibility for assuring that cases of alleged discrimination are appropriately

investigated and resolved as opposed to being personally involved in the resolution of these matters.

References to maintenance of a "quality-conscious environment" have been changed to "safety-conscious environment" to put the focus on safety.

The policy statement has been revised to emphasize that while alternative programs for raising concerns may be helpful for a safety-conscious environment, the establishment of alternative programs is not a requirement.

The policy statement continues to emphasize licensees' responsibility for their contractors. This is not a new requirement. However, the policy statement was revised to provide that enforcement decisions against licensees for discriminatory conduct of their contractors would consider such things as the relationship between the licensee and contractor, the reasonableness of the licensee's oversight of the contractor's actions and its attempts to investigate and resolve the matter.

To avoid the possibility suggested by some cementers that the policy statement might discourage employees from raising concerns to the NRC if the employee is concerned about retaliation by the employer, the statement that reporting concerns to the Commission "except in limited fact-specific situations" would not absolve employees of the duty to inform the employer of matters that could bear on public, including worker, health and safety has been deleted. However, the policy statement expresses the Commission's expectation that employees, when coming to the NRC, should normally have provided the concern to the employer prior to or contemporaneously with coming to the NRC.

Statement of Policy

The purpose of this Statement of Policy is to set forth the Nuclear Regulatory Commission's expectation that licensees and other employers subject to NRC authority will establish and maintain a safety-conscious work environment in which employees feel free to raise concerns both to their own management and the NRC without fear of retaliation. A safety-conscious work environment is critical to a licensee's ability to safely carry out licensed activities.

This policy statement and the principles set forth in it are intended to apply to licensed activities of all NRC licensees and their contractors2, although it is recognized that some of the suggestions, programs, or steps that might be taken to improve the quality of the work environment (e.g., establishment of a method to raise concerns outside the normal management structure such as an employee concerns program) may not be practical for very small licensees that have only a few employees and a very simple management structure.

The Commission believes that the most effective improvements to the environment for raising concerns will come from within a licensee's organization (or the organization of the licensee's contractor) as communicated and demonstrated by licensee and contractor management. Management should recognize the value of effective processes for problem identification and resolution, understand the negative effect produced by the perception that employee concerns are unwelcome, and appreciate the importance of ensuring that multiple channels exist for raising concerns. As the Commission noted in its 1989 Policy Statement on the Conduct of Nuclear Power Plant Operations (54 FR 3424, January 24, 1989), management must provide the leadership that nurtures and maintains the safety environment.

In developing this policy statement, the Commission considered the need for:

(1) licensees and their contractors to establish work environments, with effective processes for problem identification and resolution, where employees feel free to raise concerns, both to their management and to the NRC, without fear of retaliation;

(2) improving contractors' awareness of their responsibilities in this area;

(3) senior management of licensees and contractors to take the responsibility for assuring that cases of alleged discrimination are investigated and resolved; and

(4) employees in the regulated industry to recognize their responsibility to raise safety concerns to licensees and their right to raise concerns to the NRC.

This policy statement is directed to all employers, including licensees and their contractors, subject to NRC authority, and their employees. It is intended to reinforce the principle to all licensees and other employers subject to NRC authority that an act of retaliation or discrimination against an employee for raising a potential safety concern is not only unlawful but may adversely impact safety. The Commission emphasizes that employees who raise concerns serve an important role in addressing potential safety issues. Thus, the NRC cannot and will not tolerate retaliation against employees who attempt to carry out their responsibility to identify potential safety issues.3

Under the Atomic Energy Act of 1954, as amended, the NRC has the authority to investigate allegations that employees of licensees or their contractors have been discriminated against for raising concerns and to take enforcement action if discrimination is substantiated. The Commission has promulgated regulations to prohibit discrimination (see, e.g., 10 CFR 30.7 and 50.7). Under Section 211 of the Energy Reorganization Act of 1974, as amended, the Department of Labor also has the authority to investigate complaints of discrimination and to provide a personal remedy to the employee when discrimination is found to have occurred.

The NRC may initiate an investigation even though the matter is also being pursued within the DOL process. However, the NRC's determination of whether to do so is a function of the priority of the case which is based on its potential merits and its significance relative to other ongoing NRC investigations4.

Effective Processes for Problem Identification and Resolution

Licensees bear the primary responsibility for the safe use of nuclear materials in their various licensed activities. To carry out that responsibility, licensees need to receive prompt notification of concerns as effective problem identification and resolution processes are essential to ensuring safety. Thus, the Commission expects that each licensee will establish a safety-conscious environment where employees are encouraged to raise concerns and where such concerns are promptly reviewed, given the proper priority based on their potential safety significance, and appropriately resolved with timely feedback to employees.

A safety-conscious environment is reinforced by a management attitude that promotes employee confidence in raising and resolving concerns. Other attributes of a work place with this type of an environment may include well-developed systems or approaches for prioritizing problems and directing resources accordingly; effective communications among various departments or elements of the licensee's organization for openly sharing information and

analyzing the root causes of identified problems; and employees and managers with an open and questioning attitude, a focus on safety, and a positive orientation toward admitting and correcting personnel errors.

Initial and periodic training (including contractor training) for both employees and supervisors may also be an important factor in achieving a work environment in which employees feel free to raise concerns. In addition to communicating management expectations, training can clarify for both supervisors and employees options for problem identification. This would include use of licensee's internal processes as well as providing concerns directly to the NRC5. Training of supervisors may also minimize the potential perception that efforts to reduce operating and maintenance costs may cause supervisors to be less receptive to employee concerns if identification and resolution of concerns involve significant costs or schedule delays.

Incentive programs may provide a highly visible method for demonstrating management's commitment to safety, by rewarding ideas not based solely on their cost savings but also on their contribution to safety. Credible self assessments of the environment for raising concerns can contribute to program effectiveness by evaluating the adequacy and timeliness of problem resolution. Self-assessments can also be used to determine whether employees believe their concerns have been adequately addressed and whether employees feel free to raise concerns. When problems are identified through self-assessments, prompt corrective action should be taken.

Licensees and their contractors should clearly identify the processes that employees may use to raise concerns and employees should be encouraged to use them. The NRC appreciates the value of employees using normal processes (e.g., raising issues to the employee supervisors or managers or filing deficiency reports) for problem identification and resolution. However, it is important to recognize that the fact that some employees do not desire to use the normal line management processes does not mean that these employees do not have legitimate concerns that should be captured by the licensee's resolution processes. Nor does it mean that the normal processes are not effective. Even in a generally good environment, some employees may not always be comfortable in raising concerns through the normal channels. From a safety perspective, no method of raising potential safety concerns should be discouraged. Thus, in the interest of having concerns raised, the Commission encourages each licensee to have a dual focus: (1) on achieving and maintaining an environment where employees feel free to raise their concerns directly to their supervisors and to licensee management, and (2) on ensuring that alternate means of raising and addressing concerns are accessible, credible, and effective.

NUREG-1499 may provide some helpful insights on various alternative approaches. The Commission recognizes that what works for one licensee may not be appropriate for another. Licensees have in the past used a variety of different approaches, such as:

(1) an "open-door" policy that allows the employee to bring the concern to a higher-level manager;

(2) a policy that permits employees to raise concerns to the licensee's quality assurance group;

(3) an ombudsman program; or

(4) some form of an employee concerns program.

The success of a licensee alternative program for concerns may be influenced by how accessible the program is to employees, prioritization processes, independence, provisions to protect the identity of employees including the ability to allow for reporting issues with anonymity, and resources. However, the prime factors in the success of a given program appear to be demonstrated management support and how employees perceive the program. Therefore, timely feedback on the follow-up and resolution of concerns raised by employees may be a necessary element of these programs.

This Policy Statement should not be interpreted as a requirement that every licensee establish alternative programs for raising and addressing concerns. Licensees should determine the need for providing alternative methods for raising concerns that can serve as internal "escape valves" or safety nets."6 Considerations might include the number of employees, the complexity of operations, potential hazards, and the history of allegations made to the NRC or licensee. While effective alternative programs for identifying and resolving concerns may assist licensees in maintaining a safety-conscious environment, the Commission, by making the suggestion for establishing alternative programs, is not requiring licensees to have such programs. In the absence of a requirement imposed by the Commission, the establishment and framework of alternative programs are discretionary.

Improving Contractors' Awareness of Their Responsibilities

The Commission's long-standing policy has been and continues to be to hold its licensees responsible for compliance with NRC requirements, even if licensees use contractors for products or services related to licensed activities. Thus, licensees are responsible for having their contractors maintain an environment in which contractor employees are free to raise concerns without fear of retaliation.

Nevertheless, certain NRC requirements apply directly to contractors of licensees (see, for example, the rules on deliberate misconduct, such as 10 CFR 30.10 and 50.5 and the rules on reporting of defects and noncompliances in 10 CFR Part 21). In particular, the Commission's prohibition on discriminating against employees for raising safety concerns applies to the contractors of its licensees, as well as to licensees (see, for example, 10 CFR 30.7 and 50.7).

Accordingly, if a licensee contractor discriminates against one of its employees in violation of applicable Commission rules, the Commission intends to consider enforcement action against both the licensee, who remains responsible for the environment maintained by its contractors, and the employer who actually discriminated against the employee. In considering whether enforcement actions should be taken against licensees for contractor actions, and the nature of such actions, the NRC intends to consider, among other things, the relationship of the contractor to the particular licensee and its licensed activities; the reasonableness of the licensee's oversight of the contractor environment for raising concerns by methods such as licensee's reviews of contractor policies for raising and resolving concerns and audits of the effectiveness of contractor efforts in carrying out these policies, including procedures and training of employees and supervisors; the licensee's involvement in or opportunity to prevent the discrimination; and the licensee's efforts in responding to the particular allegation of discrimination, including whether the licensee reviewed the contractor's investigation, conducted its own investigation, or took reasonable action to achieve a remedy for any discriminatory action and to reduce potential chilling effects. Contractors of licensees have been involved in a number of discrimination complaints that are made by employees. In the interest of ensuring that their contractors establish safety-conscious environments, licensees should consider taking action so that:

(1) each contractor involved in licensed activities is aware of the applicable regulations that prohibit discrimination;

(2) each contractor is aware of its responsibilities in fostering an environment in which employees feel free to raise concerns related to licensed activities;

(3) the licensee has the ability to oversee the contractor's efforts to encourage employees to raise concerns, prevent discrimination, and resolve allegations of discrimination by obtaining reports of alleged contractor discrimination and associated investigations conducted by or on behalf of its contractors; conducting its own investigations of such discrimination; and, if warranted, by directing that remedial action be undertaken; and

(4) contractor employees and management are informed of (a) the importance of raising safety concerns and (b) how to raise concerns through normal processes, alternative internal processes, and directly to the NRC.

Adoption of contract provisions covering the matters discussed above may provide additional assurance that contractor employees will be able to raise concerns without fear of retaliation.

Involvement of Senior Management in Cases of Alleged Discrimination

The Commission reminds licensees of their obligation both to ensure that personnel actions against employees, including personnel actions by contractors, who have raised concerns have a well-founded, non-discriminatory basis and to make clear to all employees that any adverse action taken against an employee was for legitimate, non-discriminatory reasons. If employees allege retaliation for engaging in protected activities, senior licensee management should be advised of the matter and assure that the appropriate level of management is involved, reviewing the particular facts and evaluating or reconsidering the action.

The intent of this policy statement is to emphasize the importance of licensee management taking an active role to promptly resolve situations involving alleged discrimination. Because of the complex nature of labor-management relations, any externally-imposed resolution is not as desirable as one achieved internally. The Commission emphasizes that internal resolution is the licensee's responsibility, and that early resolution without government involvement is less likely to disrupt the work place and is in the best interests of both the licensee and the employee. For these reasons, the Commission's enforcement policy provides for consideration of the actions taken by licensees in addressing and resolving issues of discrimination when the Commission develops enforcement sanctions for violations involving discrimination. (59 FR 60697; November 28, 1994).

In some cases, management may find it desirable to use a holding period, that is, to maintain or restore the pay and benefits of the employee alleging retaliation, pending reconsideration or resolution of the matter or pending the outcome of an investigation by the Department of Labor (DOL). This holding period may calm feelings on-site and could be used to demonstrate management encouragement of an environment conducive to raising concerns. By this approach, management would be acknowledging that although a dispute exists as to whether discrimination occurred, in the interest of not discouraging other employees from raising concerns, the employee involved in the dispute will not lose pay and benefits while the action is being reconsidered or the dispute is being resolved. However, inclusion of the holding period approach in this policy statement is not intended to alter the existing rights of either the licensee

or the employee, or be taken as a direction by, or an expectation of, the Commission, for licensees to adopt the holding period concept. For both the employee and the employer, participation in a holding period under the conditions of a specific case is entirely voluntary

A licensee may conclude, after a full review, that an adverse action against an employee is warranted7. The Commission recognizes the need for licensees to take action when justified. Commission regulations do not render a person who engages in protected activity immune from discharge or discipline stemming from non-prohibited considerations (see, for example, 10 CFR 50.7(d)). The Commission expects licensees to make personnel decisions that are consistent with regulatory requirements and that will enhance the effectiveness and safety of the licensee's operations.

Responsibilities of Employers and Employees

As emphasized above, the responsibility for maintaining a safety-conscious environment rests with licensee management. However, employees in the nuclear industry also have responsibilities in this area. As a general principle, the Commission normally expects employees in the nuclear industry to raise safety and compliance concerns directly to licensees, or indirectly to licensees through contractors, because licensees, and not the Commission, bear the primary responsibility for safe operation of nuclear facilities and safe use of nuclear materials8. The licensee, and not the NRC, is usually in the best position and has the detailed knowledge of the specific operations and the resources to deal promptly and effectively with concerns raised by employees. This is another reason why the Commission expects licensees to establish an environment in which employees feel free to raise concerns to the licensees themselves.

Employers have a variety of means to express their expectations that employees raise concerns to them, such as employment contracts, employers' policies and procedures, and certain NRC requirements. In fact, many employees in the nuclear industry have been specifically hired to fulfill NRC requirements that licensees identify deficiencies, violations and safety issues. Examples of these include many employees who conduct surveillance, quality assurance, radiation protection, and security activities. In addition to individuals who specifically perform functions to meet monitoring requirements, the Commission encourages all employees to raise concerns to licensees if they identify safety issues9 so that licensees can address them before an event with safety consequences occurs.

The Commission's expectation that employees will normally raise safety concerns to their employers does not mean that employees may not come directly to the NRC. The Commission encourages employees to come to the NRC at any time they believe that the Commission should be aware of their concerns10. But, while not required, the Commission does expect that employees normally will have raised the issue with the licensee either prior to or contemporaneously with coming to the NRC. The Commission cautions licensees that complaints that adverse action was taken against an employee for not bringing a concern to his or her employer, when the employee brought the concern to the NRC, will be closely scrutinized by the NRC to determine if enforcement action is warranted for discrimination.

Retaliation against employees engaged in protected activities, whether they have raised concerns to their employers or to the NRC, will not be tolerated. If adverse action is found to have occurred because the employee raised a concern to either the NRC or the licensee, civil and criminal enforcement action may be taken against the licensee and the person responsible for the discrimination.

Summary

The Commission expects that NRC licensees will establish safety-conscious environments in which employees of licensees and licensee contractors are free, and feel free, to raise concerns to their management and to the NRC without fear of retaliation.

Licensees must ensure that employment actions against employees who have raised concerns have a well-founded, non-discriminatory basis. When allegations of discrimination arise in licensee, contractor, or subcontractor organizations, the Commission expects that senior licensee management will assure that the appropriate level of management is involved to review the particular facts, evaluate or reconsider the action, and, where warranted, remedy the matter.

Employees also have a role in contributing to a safety-conscious environment. Although employees are free to come to the NRC at any time, the Commission expects that employees will normally raise concerns with the involved licensee because the licensee has the primary responsibility for safety and is normally in the best position to promptly and effectively address the matter. The NRC should normally be viewed as a safety valve and not as a substitute forum for raising safety concerns.

This policy statement has been issued to highlight licensees' existing obligation to maintain an environment in which employees are free to raise concerns without retaliation. The expectations and suggestions contained in this policy statement do not establish new requirements. However, if a licensee has not established a safety-conscious environment, as evidenced by retaliation against an individual for engaging in a protected activity, whether the activity involves providing information to the licensee or the NRC, appropriate enforcement action may be taken against the licensee, its contractors, and the involved individual supervisors, for violations of NRC requirements.

The Commission recognizes that the actions discussed in this policy statement will not necessarily insulate an employee from retaliation, nor will they remove all personal cost should the employee seek a personal remedy. However, these measures, if adopted by licensees, should improve the environment for raising concerns.

Dated at Rockville, Maryland, this 8th day of May, 1996.
For the Nuclear Regulatory Commission.
John C. Hoyle,
Secretary of the Commission.

Throughout this Policy Statement the terms "concerns," "safety concerns" and "safety problem" refer to potential or actual issues within the Commission's jurisdiction involving operations, radiological releases, safeguards, radiation protection, and other matters relating to NRC-regulated activities.

Throughout this Notice, the term "licensee" includes licensees and applicants for licenses. It also refers to holders of certificates of compliance under 10 CFR Part 76. The term "contractor" includes contractors and subcontractors of NRC licensees and applicants defined as employers by section 211(a)(2) of the Energy Reorganization Act of 1974, as amended.

An employee who believes he or she has been discriminated against for raising concerns may file a complaint with the Department of Labor if the employee seeks a personal remedy for the discrimination. The person may also file an allegation of discrimination with the NRC. The NRC

will focus on licensee actions and does not obtain personal remedies for the individual. Instructions for filing complaints with the DOL and submitting allegations can be found on NRC Form 3 which licensees are required to post. The NRC and DOL have entered into a Memorandum of Understanding to facilitate cooperation between the agencies. (47 FR 54585; December 3,1982).

Training of supervisors in the value of raising concerns and the use of alternative internal processes may minimize the conflict that can be created when supervisors, especially first line supervisors, perceive employees as "problem employees" if the employees, in raising concerns, bypass the "chain of command."

In developing these programs, it is important for reactor licensees to be able to capture all potential safety concerns, not just concerns related to "safety-related" activities covered by 10 CFR Part 50, Appendix B. For example, concerns relating to environmental, safeguards, and radiation protection issues should also be captured.

When other employees know that the individual who was the recipient of an adverse action may have engaged in protected activities, it may be appropriate for the licensee to let the other employees know, consistent with privacy and legal considerations, that (1) management reviewed the matter and determined that its action was warranted, (2) the action was not in retaliation for engaging in protected activity and the reason why, and (3) licensee management continues to encourage them to raise issues. This may reduce any perception that retaliation occurred. The expectation that employees provide safety and compliance concerns to licensees is not applicable to concerns of possible wrongdoing by NRC employees or NRC contractors. Such concerns are subject to investigation by the NRC Office of Inspector General. Concerns related to fraud, waste or abuse in NRC operations or NRC programs including retaliation against a person for raising such issues should be reported directly to the NRC Office of the Inspector General. The Inspector General's toll-free hotline is 800-233-3497.

Except for the reporting of defects under 10 CFR Part 21 and in the area of radiological working conditions, the Commission has not codified this expectation. Licensees are required by 10 CFR 19.12 to train certain employees in their responsibility to raise issues related to radiation safety.

The Commission intends to protect the identity of individuals who come to the NRC to the greatest extent possible. See "Statement of Policy on Protection, the Identity of Allegers and Confidential Sources."

ATTACHMENT C

Staff Interview Results

Methodology

In order to assess the safety culture and safety conscious work environment surveys that Davis-Besse had conducted, the inspection Team conducted a follow-up survey with a group of plant employees. Individuals were selected randomly within each department of the plant, and all were in positions below the management level. NRC staff administered the survey to a total of 39 employees through individual interviews. The survey contained mostly two part questions, a yes or no question followed by an open-ended question to gather further details when relevant. It also contained some single open-ended questions to solicit information.

Some clarifications must be made in regards to the results. First, participants did not always answer every single question. Furthermore, they did not always provide additional details to follow up questions, while in contrast some participants volunteered responses even when not prompted to by a relevant question. Therefore, the number of responses to each question varies and is not always the same for each part on related or multi part questions. In the survey, a small section of questions pertained to the Safety Culture at the plant, while the rest focused on aspects of Safety Conscious Work Environment (SCWE). Results on Safety Culture will be discussed first, followed by summary of findings on SCWE topics.

Results - Safety Culture

Overall, the results revealed several strong areas in Safety Culture. For example, the responses demonstrated high employee awareness of Safety Culture activities conducted by Davis-Besse and its parent company First Energy Nuclear Operating Company (FENOC). All participants (100%) answered they were aware of recent safety culture surveys and interviews and had participated in those activities. In the activities, the majority (97%) experienced opportunities to fully answer questions and to provide follow up information, and most (76%) had awareness of results or feedback, with the majority (55%) of responders from both formal methods, such as meetings, and more informal means, such as e-mail and online postings. When asked about a briefing or copy of results, 68% responded they would expect such information. On the surveys, the clear majority (95%) did not feel pressure to respond positively in order to restart the plant. When prompted for additional details, 50% of responders answered that they felt no pressure and that it was important to answer truthfully, while 36% admitted to feeling some pressure or overhearing such comments.

When asked how the management emphasizes the policy for Safety Culture to the staff, the participants listed numerous examples of opportunities which fit into multiple categories. The responses ranged from listing a variety of meetings (60%), various means on a daily basis (32%), diverse tools such as slogans, posters, stickers, etc. (13%), and miscellaneous other methods (32%). On the effects of the focus on Safety Culture, 71% felt there have been changes in the work environment. A follow up question asked participants to describe one such major change, and the majority (57%) of those responding provided positive examples, such as questioning attitudes encouraged, improved handling of issues or concerns, and increased focus on safety. Only 7% gave negative responses, while 27% answered there had been little or no change (some in this category felt that their organization had not needed any improvements.)

In regards to the 4-Cs meetings, the majority (58%) of those surveyed had already participated [13]. When asked if they felt free to participate openly in the meetings, 80% of respondents answered positively, while the rest gave negative responses. In a related question, 75% felt their concerns or ideas were addressed in the meetings. When asked to describe the meeting follow up, the majority (63%) provided positive responses, such as change witnessed, affirmation given, and open discussion encouraged, while 37% gave negative responses.

Some of the questions highlighted areas for improvements. When asked regarding the most important aspect of the policy on Safety Culture, the majority (56%) cited safety and the importance of safety, while a large percentage (47%) gave a response that better described SCWE (some gave more than one answer). Only a small number (3%) could not offer a response. Another question inquired if supervisors have conducted ad hoc Safety Culture surveys, as referenced by the RRR business practice. Only 26% answered in the affirmative to this question, whereas the majority (74%) had not participated in such surveys.

Several related questions on the frequent changes in management showed the most negative responses and the weakest areas. The participants were first asked if the changes have affected their work environments. To this inquiry, a significant majority (93%) answered there had been effects. When prompted for additional details, the majority of those who offered more information (77%) cited negative results, such as too many changes, turnover too high, stability needed, or other examples. Only 18% of responders named improvements due to the changes.

When asked if the changes have affected their morale or motivation, the majority (66%) answered yes. When prompted for details, 50% of responders to the question cited negative results or decreased morale, while a smaller group (25%) identified positive results and improvement. In regard to their workgroup's morale and motivation, again the majority (71%) answered that the workgroup had been affected. In the additional responses to this question, 46% provided negative responses related to decreased morale/motivation, although a smaller group (20%) did cite improvements. To a related question, 58% answered that they have expressed concerns regarding the amount of change to management, supervisors, and other sources.

When compared to the overall length and depth of responses to the survey, the answers to this group of questions were significantly longer and more detailed. It was evident that the participants felt very strongly about the frequent management changes.

Results - Safety Conscious Work Environment

The first several questions on the survey applied to both Safety Culture and SCWE, and therefore the responses for SCWE are the same as described above for Safety Culture. Again, the responses demonstrated high employee awareness of SCWE activities conducted by Davis-Besse and FENOC; all participants (100%) answered they were aware of recent SCWE surveys and interviews and had participated in those activities. In these activities, the majority (97%) experienced opportunities to fully answer questions and to provide follow up information, and most (92%) felt free to answer questions without fear of reprisal and believed their answers would be held in confidence. Of the individuals who did not feel comfortable, the reasons given were management retaliation problems and identification of employees. Most of the participants (76%) had awareness of the results or had received feedback from the activities [5], with the majority (55%) of responders from formal methods, such as meetings, and more informal means, such as e-mail and online postings. When asked about expecting a briefing or copy of results, 68% responded they would expect such information.

When requested for the most important aspect of SCWE, the majority (66%) gave aspects of the SCWE definition, such as the ability to bring up problems or concerns without fear of retaliation and management properly addressing those problems and concerns. A small number (17%) gave responses which better described Safety Culture. In regards to bringing up concerns, all respondents (100%) were aware of the company's policy on protecting employees against retaliations or discriminations for raising safety concerns. Furthermore, 95% of the participants felt that management is supportive of the company's SCWE policy. When asked about their own feelings towards the protection against retaliation and discrimination, 90% agreed that they were satisfied. Those who abstained from agreement did not volunteer further details. The results from this set of questions are in general mostly positive.

Management Practices

One section of questions explored the effects of management practices. Most (94%) believed that management communicates reasons for disciplinary actions on others. When asked if this helps or hurts the environment, responses were mixed. 43% gave examples of improvements or answered this sometimes helps, while 26% offered negative responses. In regards to communicating information about the future of the plant and their position, 68% agreed that management shares sufficient information on these topics. In the related additional responses, 45% cited pressure or uneasy feeling towards restart and other negative comments, while 36% answered management sometimes conveys this information or did not know. Concerning employee welfare, 89% felt that management does take employees into consideration when making business decisions, and the majority (73%) of respondents to the follow up question provided positive comments. Additionally, during the current period of change, 84% felt that management have treated employees fairly, and those in disagreement cited examples of inconsistencies in treatment. Overall, results in this section were positive, but some areas, such as effects of management sharing information with employees, could be improved upon.

Raising Concerns

Another section of the questions focused on raising concerns. The majority (85%) of responders have brought up a concern to management before. The responses to the follow up question were mixed, describing both positive and negative results. However, none of the responders appeared completely satisfied with the results of the process (although those who were satisfied could have abstained from responding). Regarding protecting confidentiality, most have not experienced management breaching their confidentiality (94%) or know of anyone else who has (93%). Those who were aware of someone whose confidentiality had been violated mentioned the ombudsman as the source.

When asked about employees being hesitant to raise concerns or bring information to the NRC, the majority of the participants (87%) answered that they were not aware of anything that would suggest such. Of those offering additional details, 33% mentioned the Siemaszko incident, and 17% answered going to the NRC would be considered going against the company. In a related question, 92% of participants answered they were not aware of any events that would discourage employees from raising concerns. Regarding recent press coverage on Andrew Siemaszko, most were aware of these articles (86%) as well as FENOC's letter to the NRC concerning the reasons for company actions against him (95%). Asked if they would be less willing to raise concerns, specifically to the NRC, because of the comments in FENOC's letter, the majority (75%) of those who answered (less than one third of all participants), responded that they would not be less willing to raise concerns. However, when prompted by a follow up

question to give additional details, 46% answered maybe, 31% answered others may be less willing, and 8% did not know.

Methods to Raise Concerns

A considerable portion of the survey focused on various methods available to raise issues or concerns. When asked how one would raise a safety or regulatory issue, the top three responses were through a supervisor or manager (66%), writing a Condition Report (CR) (48%), and through the NRC (18%). The remainder of the responses fell into five more methods. Overall, close to half of the responses named more than one method. This demonstrates that the participants were aware of multiple methods to raise issues. In response to why they would choose the method they identified, the majority (64%) responded because that is the typical approach, to follow procedures or training, or there are no reason not to.

Several questions focused on the Employee Concern Program (ECP). The large majority (90%) of responders has submitted an issue through the program previously, and 60% of those offering additional details cited a positive experience or did not experienced any problems. Additionally, 80% felt that the issue was addressed adequately by the process, but participants were divided equally on wether they would use it again. However, when further inquired, 75% answered they would use it again but just have not had the need to. All (100%) participants responded that they knew how to use the ECP, even though they may not have used it yet and that it is well advertised. In regard to accessibility, 89% felt that the ECP office and investigators were accessible and visible, and none of the additional responses on this topic were negative.

In the next few more in-depth questions on the ECP, a number of participants were not certain of their answers or could not provide responses. Pertaining to concerns filed though the ECP, most (70%) felt they are tracked to completion and that employees are informed of the results. However, in the detailed responses, 76% answered they were not sure. For another question, the majority (92%) were not aware of any employees who considered the response to their concerns filed through the process to be incomplete or unacceptable or any employees who felt had been retaliated against as result of the filing [(34)]. When asked if there had been a change in the amount of time needed to resolve concerns, 45% were not sure, but more felt the process was taking less time (32%) than more time (9%). In regards to ECP investigators, 100% of respondents felt they were competent to address a variety of issues (36), but when asked for additional details, they did not seem sure (36). Most (86%) felt their management is supportive of the ECP, but a large number of those offering additional comments answered that they did not actually know (44%). Likewise, most (85%) were not aware of who holds access to ECP files. The results of this section are difficult to summarize. For many questions, even though the participants answered the first question, they could not give additional details to support their answers or gave answers which contradicted their first response. Additionally, some participants may have provided answers such as “do not know” in their detailed responses but abstained from answering the initial yes or no question.

With the CAP approach, 84% of responders had submitted an issue through the method previously. The majority of this group (88%) felt the concern had been addressed adequately, and additional comments were equally positive and negative. When asked how easy the process is to use, the results were mixed, with 53% answering easy to use and the rest (48%) feeling that the process or some aspects were difficult to use. As to the CAP’s effectiveness, most (77%) felt that it has been successful in addressing submitted issues. However, in follow up responses, more (44%) gave negative comments regarding the CAP than positive (38%).

Finally, most (75%) respondents were not aware of instances where an employee who submitted an issue to the CAP considered the response to be incomplete or unacceptable or had been retaliated against for the submission.

Individuals were specifically asked about Conditioned Reports (CR). All (100%) responders felt that CRs were tracked to completion and that employees were informed of the results. Asked if points in the process exist where the employee is consulted, 93% answered yes. Regarding the amount of time necessary to resolve CRs, the majority (82%) believed it has changed, but the detailed responses did not offer better insights on how they have changed. A large group (44%) answered the volume has changed, while equal numbers (both at 11%) answered the process is slower or is faster. In reference to filing CRs, 87% did not believe it could be done anonymously. However, in the additional responses, almost all participants answered they actually did not know. One question inquired if any unofficial corrective actions or tracking systems exist because the current formal systems are considered to be ineffective, and the large majority (96%) answered that they did not believe so. Only one participant mentioned an additional source, the "FIN Team".

In regard to another approach, SCWERT, only 43% answered they knew about the method, and about two thirds of those answering affirmatively gave additional details about the process. For the DPO approach, most (53%) were not aware of the process or the purpose of the process. In the detailed responses, over half (51%) explained they did not know about or have not had any experience with the process, while a smaller group (34%) displayed some knowledge towards it.

Training

The final set of questions pertained to training on SCWE. Of the responders, 80% had received training, both in formal and informal settings. Specifically, 50% could cite certain information they had learned, 25% offered positive responses towards the training, and the rest cited various other aspects of the training. Pertaining to their supervisors, all (100%) believed their supervisors had received some training on SCWE. However, in the detailed responses, most (91%) answered that they did not actually know. In a related question, 83% felt the training for their supervisors was adequate, but most (75%) of the detailed answers show that the responders did not really know. The results show that most of those surveyed had received training in SCWE but were not aware of the type or amount of training their supervisors have experienced.

Attachment C (continued)
NRC
Davis Besse Safety Culture Survey

1. Are you aware of the recent surveys and interviews regarding safety culture and safety conscious work environment conducted by Davis-Besse/FENOC and various contractors?

2. Have you participated in any of these surveys/interviews?

If yes, which ones?

-SCWE Surveys
-Haber Survey
-Other Surveys
-Haber Interview
-Not aware of SCWE survey results:

3. Did or would you feel free to answer questions without fear of reprisal and that your answers would be held in confidence?

If no, explain

4. Were you able to fully answer questions and/or provide follow-up information?

If no, explain

5a. Are you aware of any results or feedback from these surveys/Interviews?

If yes, in what form/forum was it given?

5b. Do you expect a briefing or copy of the results?

6. Has there been any pressure to respond positively to Safety Culture surveys in order to get permission to restart?

If yes, explain

7. As part of the restart readiness process managers are suppose to do Ad Hoc surveys of their staff to get information on recent issues. Has your supervisor conducted any of these ad hoc safety culture surveys?

If yes, on what topics?

8. What is the most important aspect of the policy on Safety Culture? Why?

9. What is the most important aspect of the policy on Safety Conscious Work Environment? Why?

10. Specifically, how does management emphasize these policies to the staff?

12a. Have the frequent management changes affected your work environment?

12b. Your morale or motivation?

12c. Your workgroups morale or motivation?

12d. In what way?

13a. Have you participated in a 4-Cs meeting?

13b. Were you free to participate openly in the meetings?

13c. Were your concerns/ideas addressed?

13d. Describe the follow-up?

14. Have there been any changes in your work environment because of the focus on Safety Culture?

If yes, describe one major change that has come about because of the focus on Safety Culture?

15. How would an individual raise a safety or regulatory issue? (e.g. supervisor, CAP, ECP, NRC)

16. Why would they pick that approach? (e.g. supervisor's preference, trying to keep #'s down, system difficult to use)

17. Are you aware of your company's policy with regard to protecting employees against retaliations/discrimination for raising safety concerns?

18. Is your management supportive of SCWE policy? (e.g. encourage bring him/her concerns; reward individuals for raising concerns; discourage peer-to-peer retaliation)

19a. Have you ever brought a concern to your manager?

19b. Was the issue adequately address? (Was he receptive? Helpful? Timely in his/her response?) If not, did you further pursue the issue? If not, why not? Did your manager involve you in resolution of concerns you brought to him/her?

20. Are you satisfied with the protection against retaliation/discrimination afforded you at D-B?

21a. Has your confidentiality been breached by management?

21b. Do you know of anyone whose has?

22. Are you aware of anything that suggests that some employees may be hesitant to raise concerns or present information to the NRC?

23. Are you aware of any events that would discourage employees from raising concerns (e.g. chastisement for submitting issues to CAP, ECP, or NRC; supervisors holding up submittal of concerns).

24a. Are you aware of recent articles in the press concerning a former employee, Andrew Siemaszko?

24b. Are you aware of FENOC's letter to the NRC concerning their reasons for company actions taken against Mr. Siemaszko?

24c. Are you, or do you believe others may be, less willing to raise concerns, specifically to the NRC, because of comments made in FENOC's letter?

25. Does your management communicate reasons for disciplinary actions on others? Does this help the environment (ensures no retaliation) or hurt the environment (avoidance to prevent public flogging?)

26. Does your management share sufficient information about the future of the plant/your position? (Trust)

27. Do you believe that your manager has the employees welfare at heart when making business decisions?

28. Does your management treat employees fairly during this time of change (i.e. new processes, raised expectations)?

29. What do you know about SCWERT? (Membership, purpose)

30a. Have you ever submitted an issue to the ECP?

30b. Was the issue adequately addressed? If not, did you further pursue the issue? If not, why not?

30c. Would you use it again?

31. If you haven't used the ECP do you know how? Is the ECP well advertised?

32. Is the ECP office accessible? Too visible? Do you see the ECP Manager/Investigators around the plant?

33. Do you know whether employee concerns filed with ECP are tracked to completion and whether employees are informed of the result?

34. Are you aware of any specific instances in which another employee submitted an issue to the ECP and considered the licensee's response incomplete or unacceptable? Or was retaliated against for pursuing the issue?

35. Do you believe there has been a change in the amount of time necessary to resolve employee concerns?

36. Do you believe the ECP investigators are competent to address a variety of issues?

37a. Is your management supportive of the ECP program? How? (e.g. make clear it is ok to use; doesn't inappropriately use to dodge mgr responsibilities; cooperates with investigations)

37b. Who has access to ECP files?

38a. Have you ever submitted an issue to the CAP?

38b. Was the issue adequately addressed? (Addressed concern, timely) If not, did you further pursue the issue? If not, why not?

39. How hard/easy is the process to use?

40. Do you believe the CAP is successful in addressing issues submitted?

41. Do you know whether CRs are tracked to completion and whether employees are informed of the result?

42. Are there points in the process where the employee is consulted?

43. Are you aware of any specific instances in which another employee submitted an issue to the CAP and considered the licensee's response incomplete or unacceptable? Or was retaliated against for pursing the issue?

44. Do you believe there has been a change in the amount of time necessary to resolve CRs?

45a. Are there unofficial corrective actions or tracking systems that exist because of the existing formal systems are thought to be ineffective? (Usually in RP/HP and Eng)

45b. Can CRs be filed anonymously?

46. Are you aware of the DPO process and its purpose? If so, have you ever used it? What was your experience? Would you use it again?

47a. Did you receive any training concerning SCWE?

47b. If so, what did you learn? (Employee rights under 211, employee responsibilities) How would you describe the quality of the training?

48a. Do you know if your supervisor received any training in SCWE?

48b. Do you think the training was adequate? (Noticed a difference in him/her)

ATTACHMENT D

Sources of information for the internal safety culture assessment

- Business plan (need number of critical success area initiatives on safety, whether implementation plans exist, and implementation information)

- Nuclear Quality Assurance (NQA) interviews
  - Percentage of employees willing to raise concerns
  - Percentage of individuals willing to use the CAP

- NQA field assessment results
  - Number of NQA audits or assessments of important safety activities
  - Number of NQA field assessments that show managers and supervisors are effective
  - Number of acceptable pre-job briefs shown by management observations
  - Number of individuals that raise problems in the field
  - Number of individuals using procedures or work orders
  - Compliance with procedures (probably using the Davis-Besse Program Compliance Plan, Rev. 4)

- Self-assessments (implementation information)

- Management Observation Program
  - Percentage performed as scheduled
  - Percentage identified as self-critical
  - Percentage corrective action implemented
  - Percentage observations leading to coaching)
  - Number of acceptable pre-job briefs
  - Number of individuals that raise problems in the field
  - Number of individuals using procedures or work orders
  - Compliance with procedures

- Training
  - Percentage completed Leadership in Action within 12 months of appointment
  - Restart training completed
  - Pass rate for new operators
  - Pass rate for requalification
  - Percentage for personnel that have received training on TapRoot
  - Percentage completed operability determination training
  - Percentage completed SCWE training (managers, supervisors, and operators)
  - Percentage of training on decision making
  - Percentage of personnel that have received standards and expectations training
  - Curriculum Review Committee Training is completed in a timely manner
  - Licensed operator pipeline
  - Percentage related to training attendance
  - Number of yellow or red windows in training
- Corrective Actions Program
  - Percent completed on schedule and number of overdue SCAQs and CAQs for the previous quarter
  - Percentage of those required for restart completed on schedule

- Completed number of CAP designated for restart
- Percentage of self-identified CRs
- Percentage of CRs per person per group
- Number of programmatic CRs
- CR category accuracy rate
- Percentage of CAs completed on schedule without extensions

- Engineering Assessment Board (EAB) measure (measure of quality of engineering products)

- 4Cs survey results
  - Percentage of employees that feel that work groups display trust, openness and commitment
  - Are individuals willing to raise concerns
  - Do individuals believe that communication is good

- Restart Overview Panel (ROP) concerns

- Corrective Action Review Board (CARB)
  - Backlog
  - Root cause evaluation approval rate

- SCWE survey results
  - Percentage indicate job satisfaction
  - Percentage that aware of policies
  - Percentage willing to raise concerns
  - Percentage individuals believe management supports ECP

- SCWERT program results (including number of allegations submitted to the NRC)

- ECP program results
  - number of concerns per year
  - percentage of ECP concerns per year that request confidentiality or anonymity
  - employees satisfied with the process
  - complaints of confidentiality

- Operating Experience Program (Compliance with)

- System Health Report (Number of long standing equipment problems)

- SCORE Program (percentage of safe behavior)

Specific Value Inputs

- Number of managers, supervisors that are ANSI qualified
- Staffing Adequacy
- Funding status relative to Project Review Committee (PRC)
- PMs completed
- Work Orders completed

- ECRs completed
- Number of Performance Indicators related to safety and frequency of updating
- Safety and quality content of personnel performance appraisals and timely status
- Agenda content related to safety of the Nuclear Committee of Board of Directors
- Agenda content related to safety of the CNRB
- Recommendations form the independent assessment of the CNRB
- Individual error rate
- Number of sections that have statements of expectations
- Percentage of performance appraisals completed on schedule
- Percentage of managers and supervisors that have development plans
- Percentage of completed Operability reviews
- System assessment improvements
- Percentage of managers that have been evaluated to assess their competence
- Percentage of requisitions for management positions
- Percentage of programs benchmarked against industry standards
- Percentage and number of operator work-arounds
- Percentage and number of control room deficiencies
- Percentage of work scheduled completed on time
- Number of Maintenance rule (a)(1) systems
- Number of temporary modifications
- Number of major plant evolutions
- Program and process error rate
- Event free clock value
- Number of outstanding corrective maintenance (CM) activities
- OSHA recordables
- Significant human performance errors
- Number of open procedure change requests (PRCs)
- Percentage of PMs scheduled that are completed
- Rework rate
- Percentage of work orders completed
- Deficiency rate for QC holds points
- Number of radiation protection events
- Chemistry performance index value

Subjective Inputs (Adhoc surveys/interviews or other information from employees)

- Percent of employees that understand SC and SCWE policies and consider safety a value
- Percentage of employees that are aware of policies according to surveys and interviews
- Frequency of management meetings with plant personnel to express safety values
- Number of methods used in last month to provide emphasis on safety and questioning attitude
- Frequency of implementation of NOP-EN-3001 on Problem Solving and Decision Making Process
- Inputs into safety significant decisions
- Completion of improvements in safety margin
- Status of significant plant activities
- Percent of employees that understand that safety is the highest priority
- Number of programs that have assigned owners

- Are employees clear on goals and priorities
- Level of involvement by employees in developing business plan, setting goals, and establishing work priorities
- Evidence of cross-functional teamwork
- Number of process breakdowns between departments
- Percentage of staff willing to raise safety concerns
- Amount of information shared between departments
- Cross-functional stakeholders solving problems
- Amount of systemic learning
- Number of management personnel demonstrating FENOC values and principles
- Number of management supporting organization over department
- Amount of information shared within departments
- Employees initiative to complete work
- Employees have ownership of assignments, plans or projects
- Individuals that are willing to use CAP

ATTACHMENT E

Comparison of elements of PSHA and RRR Methods to INSAG 15

IAEA/INSAG 15	Haber	DBBP
Statement of Policy	Importance of safety documented Value transmitted	Policies on SC and SCWE clear Management Values in Business Plan
Management Structure	Roles and responsibilities are clear Delegation with authority appropriate	Ownership and accountability are clear Independent Oversight
Resources	Necessary allocation of resources	Resources are available or obtainable
Self-regulation	Use of self-assessment	Self-assessment is a tool to monitor
Define responsibilities	Roles and responsibilities are clear Delegation with authority appropriate Change management process	Goals and roles are clear
Define and control safety practices	Quality documentation and processes	(Use of procedures) (Procedures compliance)
Qualifications and training	Continuous development of staff	Training and Qualifications are valued
Rewards and Sanctions	(Performance Evaluation)	(Incentive program PI) (Personnel performance appraisals)
Audit, review and compare	Use of operational experience PI's tracked and evaluate	(Incorporating industry operating experience) (PI's)
Questioning attitude	Decision making reflects safety	Questioning attitude and challenge welcome Environment of engagement and commitment
Rigorous and prudent approach	CAP Good housekeeping	Rigorous work control and prudent approach Nuclear professionalism
Communications	Visibility and involvement of management Involvement and motivation of staff	Open Communication Visible commitment to safety Cross-functional work management and communications Continuous improvement is clear

Not in INSAG 15	Relationship with regulator	Drive for excellence
KEY ISSUES		
Commitment	Management Commitment	Management Commitment
Use of Procedures	Quality documentation and processes	(Use of procedures) (Procedures compliance)
Conservative decision making	Decision making reflects safety	Questioning attitude and challenge welcome Environment of engagement and commitment
Reporting culture	Open reporting culture	Policies on SC and SCWE clear
Challenging Unsafe Acts and Conditions	Ability to resolve conflicts	Environment of engagement and commitment
Learning organization	Use of operational experience PI's tracked and evaluate	(Incorporating industry operating experience)
Underpinnings		
Communication	(External communications) (Interdepartmental communication) (Intradepartmental communication)	Open Communication Visible commitment to safety Cross-functional work management and communications
Clear Priorities	(Goal setting /Prioritization)	(Clear goals and priorities)
Organization	Roles and responsibilities are clear Delegation with authority appropriate Necessary allocation of resources	Ownership and accountability are clear Resources are available or obtainable

Statements in parenthesis are second level attributes for that approach.

Performance Objectives	Safety Culture Characteristics	Organizational Behaviors
• Documentation that describes importance and role of safety in operation of organization exists. • Value of safety is clearly transmitted and understood by all personnel through multiple mechanisms. • Decision-making that reflects value and priority of safety in timely and focused manner exists. • Necessary allocation of resources including time, equipment, personnel and money, is being made.	Safety is a clearly recognized value.	• Attention to Safety • Decision-making • Goal Setting/Prioritization • Resource Allocation • Time Urgency • Aggressive-Defensive Style (high perfectionistic)
• Roles and responsibilities clearly defined and understood. • Compliance with regulations and procedures exists. • An independent and constructive relationship with an oversight body exists. • Delegation of responsibility with appropriate authority exists. • Management commitment to safety is evident at all levels.	Accountability for safety in the organization is clear.	• Roles and Responsibilities • Performance Quality • Management Emphasis on Safety • Employee Awareness of Risk • External Communication
• Good housekeeping, material condition and working conditions exist • Quality of documentation and processes from planning to implementation and review is good. • Sets of performance indicators are tracked, trended and evaluated. • Use of self-assessment is evident. • Integration of all types of safety is evident in organization • Knowledge and thorough understanding of work processes exists. • Collaboration and teamwork is encouraged, supported and recognized.	Safety is integrated into all activities in the organization.	• Coordination of Work • Formalization • Training • Organizational Knowledge • Constructive Cultural Style • Cohesion • Hazard • Offsite Consequences • Onsite Consequences
• Visibility and involvement of management in safety-related activities. • Involvement and motivation of all staff in organization is evident. • Change management process that promotes orderly transition is evident • An organizational process for conflict resolutions exists and is effectively used. • The impact informal leaders have on safety culture is recognized.	A safety leadership process exists in the organization.	• Organizational Culture • Communication (Inter and Intra) • Commitment • Job Satisfaction
• Open reporting culture without blame exists. • Use of organizational and operating experience, both internal and external to organization, is evident. • Process to identify problems, develop and implement integrated corrective action plan, exists. • Continuous development of staff, both professionally and technically, is evident. • A questioning attitude is evident at all organizational levels.	Safety culture is learning-driven in the organization.	• Organizational Learning • Problem Identification and Resolution • Performance Evaluation • Personnel Selection • Passive-Defensive Style (low Avoidance)