

July 21, 1998

FOR: The Commissioners

FROM: L. Joseph Callan /s/
Executive Director for Operations

SUBJECT: PROPOSED OPTIONS FOR ASSESSING A LICENSEE'S SAFETY CONSCIOUS WORK ENVIRONMENT

PURPOSE:

The purpose of this paper is to propose options for assessing, on either an ongoing or as-needed basis, the safety conscious work environment at licensees' facilities and to set forth associated policy issues for Commission consideration and feedback. The staff seeks guidance on the Commission's preferred option before expending additional resources developing detailed plans in this area.

BACKGROUND:

In July 1993, the Executive Director for Operations (EDO) established a review team to assess the NRC's program for protecting allegeders against retaliation. The review team made 47 recommendations for improving NRC's program, including four that addressed the work environment at licensees' and contractors' facilities (NUREG-1499, "Reassessment of NRC's Program For Protecting Allegers Against Retaliation"). These recommendations included: (a) issuing a policy statement emphasizing the importance of licensees and their contractors establishing and maintaining a work environment conducive to raising safety and regulatory concerns (II.A-1); (b) incorporating consideration of the licensee environment for problem identification and resolution into the Systematic Assessment of Licensee Performance (SALP) (II.B-1); (c) developing inspection guidance for identifying problem areas in the workplace where employees may be reluctant to raise concerns or provide information to the NRC (II.B-2); and, (d) developing a survey instrument to independently and credibly assess a licensee's environment for raising concerns (II.B-3).

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In SECY-94-089, the staff outlined its plans for evaluating and implementing the recommendations of the review team. These plans addressed the first three of the team's recommendations. The Commission approved the staff's plan, with comments, in a Staff Requirements Memorandum (SRM) dated June 2, 1994. In response to the SRM, a final policy statement was published in the *Federal Register* on May 1, 1996; Management Directive 8.6 (MD 8.6), "Systematic Assessment of Licensee Performance," was revised on January 27, 1995, adding guidance on how to consider the licensee work environment in SALP; and Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems," was revised to include guidance on identifying situations in which employees may be reluctant to raise concerns. Additionally, the staff evaluated the issue of developing a survey instrument and, in a memorandum to the Commission dated November 16, 1994, recommended against developing such a survey. The staff cited the cost associated with developing a survey instrument and the ability to order a licensee to perform a survey as the rationale for the recommendation. The Commission subsequently accepted the staff's recommendation.

On December 12, 1995, the EDO established another review team to conduct an independent evaluation of the history of the handling of employee concerns and allegations related to licensed activities at Millstone Station. On September 16, 1996, the review team issued its report, "Report of Millstone Independent Review Group Regarding Millstone Station and NRC Handling of Employee Concerns and Allegations," which included a statement that more sophisticated methods appeared to be needed to accurately measure the workplace environment. The team recommended that the NRC develop expert resources to establish and monitor performance indicators which could effectively measure licensee employee trust and confidence in its management's ability to resolve employee concerns without fear of discrimination.

The staff responded to the review team's recommendation in SECY-97-006, dated January 7, 1997, that it was in the process of soliciting public comments on how best to ensure that licensees establish and maintain a safety-conscious work environment, including developing a survey instrument. Further, the staff stated that it would delay proposing additional recommendations pending Commission approval to seek public comments and the subsequent analysis of those comments. The staff published the request for public comment in the *Federal Register* (62 FR 8785) on February 26, 1997. Additionally, in a letter to Congress dated June 11, 1997, responding to recommendations in a General Accounting Office report (GAO/HEHS-97-51) titled "Nuclear Employee Safety Concerns: Allegation System Offers Better Protection, but Important Issues Remain," March 1997, the Chairman stated that the Office of Research was conducting a review of available methodologies for assessing work environments, including survey instruments.

In SECY-97-260, the staff provided the Commission a summary and analysis of the public comments received in response to the *Federal Register* notice. In its response, the Nuclear Energy Institute (NEI) stated: "The NRC's current inspection and enforcement program is adequate to identify, in a timely manner, those few instances where a licensee's safety culture does not appear to meet the NRC's expectations." The Union of Concerned Scientists (UCS) stated: "We believe that the existing policy statement on freedom of employees in the nuclear industry to raise safety concerns without fear of retaliation along with rigorous and consistent enforcement of existing regulations is sufficient to achieve the NRC's objectives." In its proposed resolution of public comments (SECY 97-260), the staff agreed that the Commission already had in place the necessary mechanisms to ensure that licensees maintain a safety conscious work environment, but stated:

Nonetheless, the staff still believes that the agency should consider the emergence of adverse trends in licensees' abilities to maintain a safety-conscious work environment. Appropriate early intervention may result in a significant contribution to safety as a reluctance on the part of

nuclear employees to raise safety concerns is detrimental to nuclear safety. The staff does not believe that the Commission should adopt a strategy in which the NRC acts only upon receiving an allegation of an actual case of discrimination or where the safety-conscious work environment has failed.

Giving consideration to potential indicators of a deteriorating work environment may alert the NRC to emerging problems in a licensee's safety-conscious work environment that warrants staff involvement to encourage licensee management to address the environment for raising concerns. The effort to identify emerging trends at a licensed facility, while difficult, would be less than the regulatory effort required in responding to a licensed facility where the safety-conscious work environment has already deteriorated.

Therefore, the staff concludes that consideration of potential indicators to determine whether a safety-conscious work environment is deteriorating at a licensed facility is warranted in order to better focus NRC resources and more importantly licensee's attention, where improvement in the safety-conscious work environment is necessary to reduce the potential chilling effect on employees at the facility.

As a result, the Office of Nuclear Regulatory Research (RES) was asked by the Deputy Executive Director for Regulatory Effectiveness (DEDE) to develop an options paper to present alternatives to the Commission for assessing a licensee's safety conscious work environment.

DISCUSSION:

Currently, the NRC assesses the work environment at licensees' facilities on a case-by-case basis through the review of allegations of chilling effect and special task forces, performs inspections of licensees' Employee Concerns (EC) programs on an as-needed basis, and, on a case-by-case basis, may order a licensee to perform a survey of its Safety Conscious Work Environment (SCWE). There are three disadvantages to the current practice. First, when assessing the work environment at licensees' facilities on a case-by-case basis, the staff is currently limited to interviewing licensee and contractor employees. Second, because assessments of a licensee's SCWE are undertaken for cause, the staff does not have the ability to identify emerging trends that could lead to early intervention. Third, if the NRC does not have consistent knowledge of, or control over, the process by which licensee SCWE surveys are developed, validated, and implemented, the staff's ability to independently judge a survey is diminished.

As noted in the Background section of this paper, MD 8.6 commits the staff to consider a licensee's work environment in the SALP process, and IP 40500 provides guidance to the staff on how to identify situations in which employees are reluctant to raise safety concerns. However, the guidance provided in these documents is insufficient to assess a licensee's SCWE, identify when employees are reluctant to raise safety concerns, or enable inspectors to address allegations of a "chilled" effect when the allegor provides non-specific information and is unwilling to have the concerns referred to the licensee. Accordingly, the staff has not fully or consistently implemented this guidance, and the staff's experience indicates that better guidance and training for inspectors is needed.

Independent of the limitations and disadvantages of the current tools and guidance stated above, the NRC found that at Millstone, a site where the NRC had significant concern about the SCWE, the use of a third party to conduct a SCWE survey provided some assurance to the NRC that SCWE concerns were being addressed.

To address the commitment made in the response to GAO/HEHS-97-51, the staff proposes, for Commission consideration, five options for assessing a licensee's SCWE. The first option is essentially to continue the current methods for assessing the work environment at licensees' facilities while revising IP 40500 to provide clearer guidance, providing additional training for NRC inspectors, and ensuring full and consistent implementation. In addition, this option would include NRC participation in industry activities related to SCWE issues. Options 2-5 provide specific potential improvements to the NRC's current methods. The options, along with the implementation and policy issues associated with each, are discussed below. Additionally, given the comments received from NEI and UCS in response to the *Federal Register* notice which indicate that the Commission already has in place the necessary mechanisms to ensure that licensees maintain a SCWE, the staff believes that the Commission should also consider the possibility of discontinuing any agency efforts to independently assess SCWE.

Option 1: Assess the work environment at licensees' facilities on a case-by-case basis and encourage or order, on a case-by-case basis, a licensee to conduct a survey of its SCWE, on its own or by a third party, and report the results to the NRC. Implement clarifying revisions to IP 40500, provide training to inspectors in the proper implementation of the IP and ensure full and consistent implementation. Offer to participate in industry activities in order to clearly communicate the NRC's ongoing concerns for a SCWE and its measurement.

Discussion: The NRC would continue its current practice of assessing the work environment at licensees' facilities on a case-by-case basis, encouraging or ordering the conduct of licensee-specific SCWE assessments on an as-needed basis, and would receive licensee reports of the results. There would continue to be a level of uncertainty about the validity, reliability, and objectivity of any particular assessment; and the staff would be unable to independently verify a licensee's claims of the absence of a "chilled" environment or of an unbiased survey. In addition, because such assessments would continue to be conducted for cause, trending information would be limited and emerging indications of trends would not normally be available; therefore early intervention may not be possible. Finally, the staff would be unable to assess employee concerns of "chilled" environments in cases when an allegor does not provide sufficiently specific information to conduct an inspection or investigation and does not want the concern referred to the licensee.

Implementation: With the exception of potentially increased NRC participation in industry SCWE activities, no changes would be needed to the broad outlines of the staff's policy for assessing the work environment at licensees' facilities. Current guidance and tools available to NRC inspectors would be enhanced, as would the training of inspectors in the proper implementation of the IP. These enhancements could be implemented within current budget requests.

In cases when employees allege that they are fearful of bringing nuclear safety issues to licensee management because of specific actions, the staff will evaluate the actions if the information provided is sufficiently specific. If the allegation is substantiated and constitutes a regulatory violation, the staff will request that the licensee address the potential for a chilling effect on the raising of nuclear safety concerns as part of the corrective actions for the violation. When the allegor is willing to have the concerns referred to the licensee, the staff will refer the issue to the licensee and request that the licensee respond to the potential for a chilling effect. In those cases when the allegor does not provide sufficiently specific information to enable the NRC

to conduct an inspection or investigation and does not want the concern referred to the licensee, the alleged will be informed that the staff will take no further action. This approach is consistent with how the staff treats non-specific allegations concerning other issues.

Option 2: Separately or in conjunction with industry, develop a set of guidelines for SCWE survey development, testing, and administration, and make it available to licensees in the form of regulatory guidance for their use in undertaking their own surveys.

Discussion: The NRC would assess the work environment at licensees' facilities and encourage or order licensee-specific assessments of the SCWE on an as-needed basis and would receive licensee reports of the results of these assessments. However, the NRC also would develop guidelines that could be used voluntarily by licensees in developing and conducting such assessments or require licensees to submit alternate approaches for NRC approval. Because licensees would implement surveys in accordance with the regulatory guidance or would propose alternative approaches for NRC approval, the NRC would have confidence in the validity, reliability, and objectivity of the instrument used. Because surveys would continue to be requested or ordered only for cause, they would not support identification of emerging trends. As in Option 1, allegations with insufficiently specific information and in which the alleged did not want the issue referred to the licensee would not be pursued by the staff.

Implementation: The development effort would require a commitment of staff resources of up to one FTE over one year. Minimal changes would be needed to the way the work environment is assessed at licensees' facilities.

Option 3: Separately or in conjunction with industry, review and evaluate existing, available survey instruments for their suitability for the assessment of a SCWE. Adopt or adapt such instruments, if appropriate. If no suitable and available instruments can be found, develop such an instrument. Upon acceptance or development of the survey instrument, the NRC would make it available to licensees in the form of regulatory guidance. Further, the NRC could, on a case-by-case basis, order a licensee to conduct an assessment using this instrument.

Discussion: In practice, this option would have the same effect as Option 2, in that licensees could voluntarily use the survey or could be required to submit alternative approaches for NRC approval. The NRC would have greater confidence in the validity, reliability, and objectivity of an instrument that was developed specifically for this purpose and that was used consistently across the industry, and would be able to compare findings among licensees or over a period of time. Surveys would still be requested or ordered only for cause, and thus would not indicate emerging trends. As in Option 1, in situations in which allegeders do not want their concern made known to the licensee and provide insufficient specificity for NRC inspection or investigation, the staff will not pursue the concern.

Implementation: A number of survey instruments of relevance to the assessment of a SCWE have been developed, validated and implemented in the nuclear industry, both in the U.S. and abroad. Existing, available instruments would be carefully reviewed, and development of a new survey would be undertaken only if current instruments proved unsuitable. To develop a new instrument would require a commitment of staff and contractor resources of up to one FTE and \$500K over two years. Resources, estimated at one staff month per year, would be required to maintain the instrument. Working cooperatively with industry to develop the survey might require additional time and effort.

Option 4: Adapt, adopt or develop a survey instrument as in Option 3, but the NRC would conduct the survey of a licensee's SCWE on a case-by-case or periodic basis.

Discussion: The current NRC practice of requesting (or in the case of Millstone, ordering) licensee-specific assessments of the safety conscious work environment on an as-needed basis would be replaced by a process in which the NRC would conduct such assessments. Because bias in survey instruments can occur during administration as well as development, the NRC would have a higher degree of confidence in the validity, reliability, and objectivity of the results obtained from the use of the instrument if it conducted such surveys. In addition, with a proven instrument administered by NRC, the staff would have the option of conducting surveys on a periodic basis, thus collecting trending information that could provide leading indicators of the deterioration of a licensee's SCWE. Finally, a survey developed and conducted by NRC would enable response from allegeders who might be unwilling to participate if the survey were administered by the licensee.

Implementation: In addition to a development effort that would require a commitment of staff and contractor resources for up to one FTE and \$500K over two years, this option would require continuing staff resources for administration, evaluation, and reporting. These resources are estimated to be eight staff months per year.

Option 5: Develop guidance in the form of a new inspection procedure to be used on-site by NRC staff on a case-by-case basis to obtain information from licensee employees concerning the SCWE when allegeders do not wish to be identified and are unwilling to have the NRC forward the concern to the licensee for resolution.

Discussion: Option 5 offers an alternative approach to addressing the need to obtain concerns from licensee employees. This option would focus on NRC inspectors talking to licensee employees. It offers an alternative approach to learning about concerns from individuals who do not want to be identified and do not want the concern turned over to the licensee. In addition, this option provides a method to assess employee concerns of "chilled" environments in cases when an allegeder does not provide sufficient information to conduct an inspection or investigation. It does not, however, address development or use of a survey instrument, and thus does not resolve concerns addressed by the other options presented in this paper.

Implementation: Developing a new inspection procedure would require a commitment of staff resources of up to one FTE over one year. In addition, training would have to be provided to the inspection staff in the procedure.

RESOURCES AND IMPACTS:

The resources for conducting the assessments described in Option 1 are currently provided for in the budget. Although additional resources would be required to revise the inspection guidance and perform additional inspector training, the staff believes that they would be minimal and could be redirected from lower priority activities. The resources to address Options 2-5 are not provided for in the budget. Option 2 would require up to one FTE over one year. In Option 3, development of a new instrument would require up to 0.5 FTE and \$250K in each of two years, plus continuing resources of one staff month per year to maintain the instrument. Option 4 would require the same developmental resources as Option 3, with the addition of .67 FTE per year to administer the survey. Option 5 would require one FTE for one year to develop the improved guidance, plus additional resources to train inspectors. Should the Commission elect to discontinue agency efforts to independently assess SCWE, the savings would be only the minimal costs discussed above for Option 1, since the staff has not been consistently implementing the guidance in MD 8.6 and IP 40500 and would continue to evaluate allegations of chilling effect that provide sufficient specificity.

RECOMMENDATION:

The staff recommends Option 1, which provides for a continuation of the broad outlines of the current policy, with the addition of the development and implementation of additional guidance and training to inspectors in support of more complete and consistent program implementation.

However, given the agency's present budget constraints and the comments received from NEI and UCS in response to the *Federal Register* notice which indicate that the Commission already has in place the necessary mechanisms to ensure that licensees maintain a SCWE, the staff believes that the Commission should also consider the option of discontinuing any agency efforts to independently assess SCWE. While the staff previously committed to assessing SCWE as part of SALP and 40500 inspections, this commitment has not been fully implemented. Although current guidance is sufficient to identify the possibility of a problem, it is not adequate to verify that a problem exists or to assess the extent to which employees are reluctant to raise safety concerns. Finally, there has been a reluctance to assess SCWE because it is not addressed directly in any NRC requirements, but in a Commission Policy Statement. If the Commission believes that the agency's resources would be better spent in other areas, the staff recommends the Commission discontinue efforts to independently assess SCWE.

Once the Commission has informed the staff of its decision, the staff will prepare an updated response to the GAO, if necessary, as well as detailed implementation plans.

COORDINATION:

The Office of the General Counsel (OGC) has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer (OCFO) has reviewed this paper for resource implications and has no objections.

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