

**Draft**  
**Safety Culture Policy Statement**  
**Implementation Plan**

**January 2012**

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## EXECUTIVE SUMMARY

This Implementation Plan summarizes the various activities the staff has completed and planned in response to Staff Requirements Memorandum (SRM)-SECY-11-0005, "Proposed Final Safety Culture Policy Statement," dated March 7, 2011, and the Chairman's tasking memorandum, dated July 22, 2011. The Policy Statement clearly communicates the Commission's expectations that individuals at organizations performing or overseeing regulated activities establish and monitor a positive safety culture commensurate with the safety and security significance of their activities and the nature and complexity of their organizations and functions. The education and communication activities described in this plan seek to achieve the vision that safety culture within the regulated nuclear sector will improve by the involved organizations understanding the Commission's expectations and by the NRC staff providing the necessary support to effectively employ the Safety Culture Policy Statement (SCPS).

### Completed Activities:

The staff has completed activities, including:

- Developed educational tools, such as case studies, brochures, and posters.
- Provided presentations at meetings with NRC staff, licensees, and stakeholders in the regulated communities at industry and international conferences and workshops.
- Developed newsletters and a Regulatory Information Summary to share information related to the SCPS.
- Developed expectations for inspectors such as revisions to training requirements and provided guidance for communication with licensees.
- Engaged in activities relating to the SCPS that are under previous Commission direction in the Reactor Oversight Process (ROP) and in the Construction Reactor Oversight Process (cROP), and for fuel facilities and spent fuel storage and transportation.
- Participated on a number of national and international bodies that set standards, establish research agendas, or share information on topics related to safety culture.
- Interacted with a number of stakeholders, including domestic and foreign industry representatives and organizations, national trade groups, and international nuclear organizations to engage them on safety culture issues and implementation strategies.

### Planned Activities:

The staff has planned activities, including:

- Continue to develop educational tools such as additional case studies.
- Provide presentations on the SCPS to industry groups and dialogue with stakeholders, NRC staff and the diverse groups of licensees.
- Revise various licensing guidance, Inspection Manual Chapters (IMC) and NUREGS to incorporate the SCPS. For example, IMC1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area" and the NUREG-1556 series, and revise licensing guidance on uranium recovery and decommissioning.
- Draft revisions to the construction reactor oversight process (cROP), and the fuel cycle oversight process (FCOP).

## **Roles and Responsibilities**

The Office of Federal and State Materials and Environmental Management Programs (FSME), Office of Nuclear Reactor Regulation (NRR), Office of New Reactors (NRO), and Office of Nuclear Material Safety and Safeguards (NMSS) are directly responsible for outreach and education and for incorporating the Safety Culture Policy Statement (SCPS), as appropriate, when revising existing program office procedures, documents, and inspection activities. These offices lead the NRC's business lines as reflected in the budget for Fiscal Year 2012.

The Office of Enforcement (OE) supports the program offices by developing presentation and educational materials and has played a major role in coordinating policy-related matters and providing outreach at meetings, conferences, and workshops.

The Office of Nuclear Regulatory Research (RES) and Office of Nuclear Security and Incident Response (NSIR) support OE and the other program offices in their SCPS-related activities by providing technical expertise and support as needed.

This plan describes the activities of these offices in SCPS-related outreach and education, as well as activities performed in response to previous Commission direction.

## **Nuclear Materials Users and Decommissioning and Low-Level Waste Business Lines**

### **Completed Activities**

Materials Users: FSME leads the NRC's business line for Nuclear Materials Users and Decommissioning and Low-Level Waste. FSME discussed the SCPS during a teleconference at the Periodic Meeting of the Advisory Committee on the Medical Uses of Isotopes in January 2011, the 43rd Annual National Conference on Radiation Control in May 2011, the Master Material Licensee Counterpart Meeting in July 2011, the Organization of Agreement States (OAS) Annual Meeting in August 2011, the Child Health Corporation of America Radiology Directors Forum in September 2011, the 2011 National State Liaison Officers Conference in November 2011, and a meeting with Navy officials who oversee the Navy Master Material License in November 2011.

In addition to the external stakeholder, Agreement States, State, and federal counterpart meetings, the FSME staff has completed presentations to its divisions and the regions.

Regional and Agreement State inspectors are providing education and awareness of safety culture to the licensees by using key messages from the safety culture brochure and case studies during inspection entrance or exit meetings.

In addition, a Regulatory Issue Summary (RIS) has been developed to share the safety culture policy statement and related materials with the regulated communities. The RIS was originally developed for materials licensees, but has been broadened to be an agency-wide generic communication.

Decommissioning and Low-Level Waste (includes Uranium Recovery): Regional and Agreement State inspectors are providing education and awareness of safety culture to licensees by using key messages from the safety culture brochure during site visits.

### **Planned Activities**

Materials Users: FSME will continue to dialogue with NRC licensees and Agreement States through FSME Newsletters, FSME letters, teleconferences, and annual meetings with the OAS and the Conference of Radiation Control Program Directors for awareness and education purposes.

The FSME staff will continue making presentations at conferences, internal meetings, and other opportunities to inform and educate NRC and Agreement State staff, licensees, and the industry about the SCPS. As previously discussed in SECY-11-0005, FSME will also address safety culture information sharing with the NRC staff as it relates to the licensees by introducing the safety culture policy and traits into the FSME revision to Inspection Manual Chapter (IMC) 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area." This document will be given a new number and will apply specifically to the Nuclear Materials Users program.

As discussed in SECY-11-0005, FSME will incorporate safety culture updates into the NUREG-1556, "Consolidated Guidance about Materials Licenses," series. Although FSME and

the Agreement States are looking for ways to introduce safety culture into these documents, addressing safety culture is not the primary reason for updating these documents. The work on these updates has begun. FSME is involving the Agreement States in these efforts so that the NRC can learn from the best practices in the Agreement States. The update of the NUREG-1556 series is anticipated to take about 3½ years. The incorporation of safety culture into the NUREG-1556 series will (1) describe the NRC's expectation and to whom it applies and (2) define "nuclear safety culture" and describe the related traits. The appendices will also include a copy of the SCPS. An announcement of the availability of draft NUREG-1556, Volume 2, Revision 1, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Industrial Radiography Licensees," for comment was published in the *Federal Register* (76 FR 72005) on November 21, 2011. Agreement States and the safety culture workshop panel members were notified of the opportunity to comment on the draft volume.

The Nuclear Materials Users program, which is run by FSME, Region I, Region III, and Region IV, will evaluate the effectiveness of safety culture education and outreach activities through discussions at inspection entrance or exit meetings. This activity will be performed under the budgeted resources in FY 2012 and FY 2013. Based on the evaluation, the materials program will determine whether additional enhanced outreach and education activities are needed. FSME has preliminarily discussed this activity with the Organization of Agreement States Board lead for safety culture and with representatives of the regions.

Decommissioning and Low-Level Waste (includes Uranium Recovery): Regional and Agreement State inspectors will continue to provide education and awareness of safety culture to licensees by using key messages from the safety culture brochure during site visits and inspections. FSME will incorporate safety culture updates into the uranium recovery and decommissioning licensing guidance documents.

## **Operating Reactors Business Line**

NRR leads the Operating Reactors Business Line.

### **Completed Activities**

Operating Reactors: The NRR staff gave presentations on the SCPS at the Region III Seminar in June 2011; the Human Performance, Observations/Root Cause/Corrective Action, Trending/Self-Assessment and Operating Experience Conference in June 2011; and the Corrective Action Program Owners Group in August 2011. NRR has also included an article on the SCPS in the Inspector Newsletter.

Reactor Oversight Process: Beginning in 1989, the NRC published two policy statements about safety culture at nuclear power plants. One described the Commission's expectations for the conduct of operations in control rooms; the second established the Commission's expectation for maintaining a safety-conscious work environment (SCWE) in which workers are able to raise nuclear safety concerns without fear of retaliation. The ROP's approach to addressing safety culture takes these policy statements into consideration. In 2003, the Davis-Besse Nuclear Power Station reactor vessel head degradation event led the Commission to direct the staff to monitor efforts to develop objective measures that serve as indicators of possible problems with safety culture. Subsequently, on July 1, 2004, the staff issued SECY-04-0111, "Recommended Staff Actions Regarding Agency Guidance in the Areas of Safety Conscious Work Environment and Safety Culture," which proposed possible options for enhancing oversight of SCWE and safety culture. In response to this SECY, the Commission issued SRM-SECY-04-0111 on August 30, 2004, approving several options that included (1) enhancing the ROP treatment of cross-cutting areas to more fully address safety culture, (2) ensuring that inspectors were properly trained, and (3) developing a process for determining the need for conducting safety culture evaluations of plants in the Degraded Cornerstone Column of the ROP Action Matrix. Since 2006, the NRC's oversight of safety culture for power reactors through the ROP has included guidance and procedures for inspecting and assessing aspects of licensees' safety culture. In 2008, the NRC developed several additional changes to the guidance on oversight of safety culture in the ROP as a result of lessons learned from the supplemental inspection conducted at Palo Verde Nuclear Generating Station. The NRR staff believes that the current process for monitoring and assessing safety culture is effective within the established framework of the ROP.

The staff continues to enhance ROP guidance documents, as needed, based on lessons learned and stakeholder feedback. Although the staff believes that the existing ROP already fits within the framework of this policy statement, NRR will continue to work with internal and external stakeholders through the normal processes to better align with the philosophy and language of the final policy statement and to consider insights from ongoing industry initiatives on safety culture.

One of the industry initiatives that the staff may gain insights from is the voluntary industry safety culture initiative, NEI 09-07, "Fostering a Strong Nuclear Safety Culture". Through NEI in partnership with INPO, the nuclear power industry pilot tested a broad initiative to monitor and improve its nuclear safety culture. Four nuclear power plants volunteered to participate in the industry's pilot application of the "Site Nuclear Safety Culture Process," documented in NEI 09-07. NRR agreed to observe three key elements of the safety culture initiatives

underway at the pilot plants. The NRC staff observed all four of the pilot applications as well as a revision to the NEI 09-07 process at Hope Creek Generating Station, including the nuclear safety culture assessment process (NSCA). The staff has communicated comments about the NSCA to NEI and is currently awaiting a new revision for review.

Another effort to enhance ROP guidance documents is the common language effort. Before initiation of the policy statement development, the industry asked the NRC to work with it to harmonize the language of the INPO principles of safety culture and the NRC ROP. This effort was deferred while the policy statement was being developed. With the insights gained during the policy statement development, NRR is continuing to work with NEI, INPO, and the public to develop a common language for safety culture that can be used in the ROP and the INPO principles. This effort will remain within the Commission-directed framework for enhancing the ROP treatment of cross-cutting areas to more fully address safety culture. A workshop to discuss common language was deferred to assist the agency's response to the Fukushima event and the first meeting was held in December 2011.

Research and Test Reactors: NRR provided the case studies and brochures at the annual conference for this stakeholder group held in September 2011.

### **Planned Activities**

Operating Reactors: NRR staff will continue to provide communication and outreach efforts as opportunities are available and will continue to work with external stakeholders on the common language effort.

Research and Test Reactors: NRR staff will continue to provide information and communication as opportunities are available. The staff also plans to address safety culture by providing training to NRC inspectors so that they are better aware of how safety culture may have contributed to incidents and are, therefore, able to provide information to licensees about how a positive safety culture can impact the facility.

Vendors and Suppliers: The diverse group of vendors and suppliers presents the greatest challenge for outreach and education on the SCPS. A number of factors, such as allegations related to vendors, inspection observations at vendors, and review of vendor operating experience, affect how NRR looks at the efforts by licensees to uphold a rigorous safety culture for vendors and suppliers. This will be an ongoing effort. The office will look for opportunities to explore lessons learned that can be considered to ensure that the vendors and suppliers maintain a positive safety culture. NRR will continue to inform and educate vendors about the policy during inspections and discuss the policy at public meetings, professional meetings, and vendor conferences.



## **New Reactors Business Line**

NRO leads the agency's New Reactors Business Line.

### **Completed Activities**

New Construction: NRO developed a communication plan to enhance staff awareness of the policy and to provide guidance for the staff to discuss the policy with external stakeholders (e.g., engineering meetings, license-related public meetings, professional conferences). The Region II Center for Construction Inspection has done the same in order to communicate and inform the inspection staff of the safety culture policy and its implementation. Current inspector qualifications and the construction inspection manual chapters provide information and guidance to the inspectors on the implementation of safety culture.

The NRO staff established an internal working group in 2009 to determine how the Commission direction on safety culture (SECY-09-0113, "Update on the Development of Construction Assessment Process Policy Options and the Construction Inspection Program Information Management System," dated August 14, 2009) should be addressed in the construction inspection oversight program. Recommendations from the working group were considered and implemented in the construction inspection manual chapters and procedures. NRO developed the new construction inspection program based on past construction lessons learned (NUREG-1055, "Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants: A Report to Congress," issued May 1984), on the insights gained from NRR inspection programs and ROP lessons learned, and on the construction inspectors' experience with previous nuclear plant construction.

During the last five years, NRO has engaged its stakeholders in the development of the construction inspection program. NRO conducted a series of public meetings in 2008 and 2009 to request stakeholder feedback about the incorporation of safety culture into the construction inspection oversight program. The safety culture approach developed for construction is consistent with the ROP methodology, including the use of safety culture components, aspects, and cross-cutting issues. This approach provides the office with the means to communicate with licensees about the impact of findings about the safety culture at the construction site. IMC 0613, "Documenting 10 CFR Part 52 Construction Inspections," and IMC 2505, "Periodic Assessment of Construction Inspection Program Results" (similar to the ROP's IMC 0305, "Operating Reactor Assessment Program," and IMC 0310, "Components within the Cross-Cutting Areas"), provide the guidance to assess the safety culture of a construction site. IMC 2505 also includes references to the supplemental inspection procedures, which are used when there is a decline in safety performance at a construction site. These procedures provide inspectors with guidance on how to assess the safety culture at a construction site with escalating levels of efforts commensurate with the significance of a site's performance decline. The supplemental inspection procedures also provide inspectors with the tools to communicate safety culture issues to stakeholders.

Vendors and Suppliers: NRO has educated vendors about the policy during inspections, and discussed the policy at public meetings, professional meetings and at vendor conferences. NRO staff provided an overview of safety culture policy at the Workshop on Vendor Oversight in June 2010.

## **Planned Activities**

**New Construction:** NRO staff will continue to provide communication and outreach efforts as opportunities are available.

NRO is in the process of completing a draft revision to the construction reactor oversight process (cROP) assessment process based on the ROP assessment program as directed by the Commission (SECY-10-0140, "Options for Revising the Construction Reactor Oversight Process Assessment Program," dated October 26, 2010) and has begun a pilot of the revised cROP beginning January 1, 2012. Based on the results from the pilot program, NRO will evaluate any revisions needed to improve the construction oversight process, including the oversight of safety culture as described in IMC 2505 and IMC 0613. In addition, the NRO staff continues to work with NRR on possible revisions to the oversight of how safety culture is currently implemented. Both offices are evaluating the use of common terminology between the NRC and the industry, considering the consolidation or revision of the safety culture components and aspects to reflect the safety culture traits in the policy, and will be assessing stakeholder feedback received as NRO conducts the cROP pilot program in CY 2012 at the Vogtle Electric Generating Plant and Virgil C. Summer Nuclear Station construction sites.

**Vendors and Suppliers:** Like NRR, NRO's oversight of the diverse group of vendors and suppliers represents the most challenging group with respect to the SCPS as it applies to the construction program. Allegations related to vendors and inspection observations at vendors affect how NRO looks at the efforts by licensees to uphold a rigorous safety culture for vendors and suppliers. The office will look for opportunities to explore lessons learned which can be considered to ensure that the vendors and suppliers maintain a positive safety culture. NRO will continue to inform and educate vendors about the policy during inspections, and discuss the policy at public meetings, professional meetings and at vendor conferences. This is an ongoing activity and a routine aspect of the vendor inspection program. The next workshop on the vendor oversight program is scheduled on June 28, 2012. NRO will take this opportunity to continue to communicate expectations to vendors and suppliers.

## **Fuel Facilities and Spent Fuel Storage and Transportation Business Lines**

NMSS leads the NRC's Business Lines for Fuel Facilities and for Spent Fuel Storage and Transportation.

### **Completed Activities**

Fuel Facilities: In June 2010, NMSS hosted the annual Fuel Cycle Information Exchange (FCIX), which included a workshop on safety culture at which the SCPS was discussed.

Spent Fuel Storage and Transportation: In May 2011, the NMSS Division of Spent Fuel Storage and Transportation (SFST) briefed internal and external stakeholders on the SCPS. The audience included NRC regional independent spent fuel storage installation inspectors, licensees, vendors, State representatives, and members of the public at the NEI Used Fuel Forum. In July 2011, NMSS staff held an interactive discussion with stakeholders at a licensing improvement public workshop. In November 2011, brochures, posters, and case studies were shared at NMSS's Spent Fuel Storage and Transportation Regulatory Conference.

Vendors and Suppliers: Communications to these stakeholders occur as part of routine management discussions with the Vendor Task Force.

### **Planned Activities**

Fuel Facilities: As the NMSS Division of Fuel Cycle Safety and Safeguards develops the agenda for the next FCIX in June 2012, topics including an element of safety culture are likely. NMSS staff will continue to consider safety culture in evaluating the root cause of significant events at fuel facilities.

In SRM-M100429, "Briefing on the Fuel Cycle Oversight Process Revisions," dated May 12, 2010, and SRM-SECY-10-0031, "Revising the Fuel Cycle Oversight Process," dated August 4, 2010, the Commission directed the staff on near-term activities related to revising the fuel cycle oversight process (FCOP). Consistent with Commission direction, in February 2011, the staff provided a paper to the Commission comparing integrated safety analysis (ISA) and probabilistic risk assessment (PRA) methods in the context of fuel cycle facility oversight. In SECY-11-0140, "Enhancements to the Fuel Cycle Oversight Process," dated October 7, 2011, the staff described its development of safety cornerstones for fuel cycle facilities, its considerations for a fuel cycle significance determination process (FCSDP), and its work to provide licensees with incentives to maintain an effective corrective action program. The staff integrated the results of these activities with the insights from the ISA/PRA comparison and provided, for Commission consideration, three options for next steps to enhancing the FCOP.

The Commission approved the staff's recommended option to develop an FCOP with cornerstones, an FCSDP, a performance assessment process based on the FCDSP, a fuel cycle action matrix, and the cross-cutting areas used in the ROP and informed by the SCPS. The FCOP, as directed by the Commission, would provide the tools for inspecting and assessing licensee performance in a more risk-informed, objective, predictable, and transparent way. Additionally, this FCOP will provide a systematic way to adjust the inspection program based on licensee performance.

Spent Fuel Storage and Transportation: NMSS is planning other outreach and education opportunities as the staff progresses in licensing and oversight improvement activities for the spent fuel program. The NMSS staff is not currently considering enhancements similar to the FCOP enhancements. However, the staff is assessing the SFST inspection program for effectiveness and efficiency improvements as directed in the SRM for COMSECY-10-0007, "Project Plan for Regulatory Program Review to Support Extended Storage and Transportation of Spent Nuclear Fuel," dated December 6, 2010. As this assessment proceeds and enhancements are proposed and implemented, the staff may consider further oversight initiatives that may include something akin to the FCOP.

Vendors and Suppliers: NMSS staff will continue to provide communication and outreach efforts as opportunities are available. Communications to these stakeholders are in routine management discussions with the Vendor Task Force.

## Office of Enforcement

As a support organization, OE does not have direct responsibility for implementing the SCPS. However, OE is providing tools to help communicate with interested stakeholders about the Policy Statement and safety culture in general.

### **Completed Activities**

Because it is important for individuals and organizations to understand the role that a positive safety culture can play in the safe and secure use of nuclear materials, the staff has developed “tools” to illustrate this point. These tools include the development of safety culture case studies, which is an ongoing effort, a safety culture user guide, a brochure in both English and Spanish, and posters. The OE staff requested feedback from its stakeholders, including the stakeholder panelists from the 2010 safety culture public workshop and those at public meetings and teleconferences during the development of these educational tools. Their response was very positive. The case studies, user guide, and brochure are available for download from the U.S. Nuclear Regulatory Commission’s (NRC’s) public Web site.

Safety Culture Case Studies describe real-life events for which review of the circumstances surrounding an event and the results of the investigations by other organizations in an oversight role found clear examples of the manner in which safety culture contributed to or mitigated the causes and consequences of the event. The case studies are intended to represent a breadth of industries, including energy, medical, and transportation. The case studies use the safety culture traits from the SCPS as the basis for learning and have been well received by the industry and the NRC staff. OE has used a press release, daily notes, and presentations to inform the industry and program offices that these case studies are available on the NRC safety culture Web site. The following case studies have been issued:

1. June 2009 collision of two Washington, DC, Metropolitan Area Transit Authority Metrorail trains
2. January 2009 U.S. Airways flight 1549 forced landing on the Hudson river
3. April 1978 partial collapse of the Willow Island cooling tower

A Safety Culture Case Study User Guide helps individuals and organizations use the various case studies more effectively by providing them with a better understanding of what safety culture is and why a strong safety culture and safety-first focus are important. The user guide reinforces the learning aspects of the case studies by providing thought-provoking questions for the user to consider.

The Brochure and Posters include a brief overview of the development of the SCPS, a discussion of the importance of safety culture in regulated entities, and the NRC’s definition and traits of a positive safety culture. To date, the NRC has distributed nearly 4,000 copies of the SCPS brochure to stakeholders, program offices, and the regions and at international forums. To extend the breadth of the outreach, the brochure and the *Federal Register* notice, including the Statement of Policy, are available in Spanish. The NRC also provided the brochure to the Agreement States in a format that would allow customization to meet their specific needs. OE also developed posters that echo the design and content of the brochure for the program offices to use at conference and meetings.

The Safety Culture Web site, Newsletters, and Blogs continue to be important resources on current activities and documents in the NRC's safety culture initiative. Links to public meeting summaries, case studies, the brochure, and the SCPS are found here. A safety culture blog, press releases, and daily notes have all been effectively used to disseminate information about the policy statement and related NRC activities.

Outreach to Workshop Panelists: Involvement with our stakeholders, including the stakeholders who served as panelists at the February 2010 safety culture workshop, continues to be an important aspect of the agency's safety culture activities. Public meeting teleconferences were held in July and September 2010 to provide an update on the SCPS and Commission expectations and discuss next steps, such as the case studies and brochure initiatives. Since then, the NRC staff has continued dialogue with the panelists through e-mails and a public meeting teleconference in June 2011 to elicit feedback on agency initiatives and licensee activities, as well as to stay informed of stakeholder workshops and conferences that include or specifically address safety culture.

Presentations (Enclosure 3): Since March 2011, the staff has had many opportunities to discuss the SCPS at meetings and conferences. The OE staff has worked with the program offices to provide presentations to NRC staff on the SCPS at counterpart meetings in the regions and division meetings at Headquarters. The purpose of this information sharing is to ensure that the inspection staff is aware of the SCPS and the NRC's expectations that licensees are responsible for the development and maintenance of a positive safety culture at their own facilities, as well as to provide an awareness of the educational tools available for licensees.

The OE staff has given presentations about the SCPS at numerous conferences and workshops, such as the International Radiation Protection Association Workshop on Radiation Protection Culture in February 2011, the Regulatory Information Conference in March 2011, the Health Physics Annual Meeting in June 2011, the National Association of Employee Concerns Professionals (NAECP) and the Agency Allegation Coordinators workshop in September 2011, a vendor-sponsored Continuous Improvement Conference for Operators of Nuclear Power Plants in September 2011, and a safety culture workshop sponsored by the Institute of Nuclear Power Operations (INPO) and Duke Engineering in November 2011.

International Efforts (Enclosure 3): There has been significant interest in the NRC's SCPS in the international community. The first request from the international community to learn about the U.S. efforts to develop an SCPS was through the U.S. Department of State; the NRC gave a presentation on safety and security in nuclear power plants to the regulator and licensees in Egypt in October 2010. Continuing efforts included participation in an IAEA Technical Meeting in Vienna, Austria, in February 2011, which included (1) providing U.S. input for a technical document related to the regulator's oversight of safety culture, and (2) a staff presentation on the SCPS at the Technical Meeting. After the Technical Meeting, the NRC staff participated in two IAEA Consultancy Meetings, both of which were held for the purpose of developing the technical document, "Regulatory Oversight of Safety Culture at Nuclear Installations." As a result, the SCPS appears in an Appendix to this IAEA document. In addition to the efforts surrounding the development of the IAEA technical document, the staff gave presentations related to the SCPS to the regulator and licensees in Russia in June 2011 and Jordan in September 2011. In addition, Argonne National Labs and IAEA sponsored an SCPS presentation for South Africa and European nations in August 2011. This audience consisted of members from many nations who will be embarking on a new nuclear program.

The staff has also been involved in an IAEA Consultancy Meeting for the development of an IAEA Report Series document, "How to Continuously Improve Safety Culture," designed primarily for use by licensees but also appropriate for regulators. The education tools developed for the SCPS, such as case studies and a safety culture blog, have been incorporated into this IAEA Report Series document. Finally, staff members from OE and NRR attended an IAEA Technical Meeting in Vienna, Austria, in October 2011, to provide further input into the IAEA Report Series document, "How to Continuously Improve Safety Culture," as well as the IAEA Report Series document, "How to Perform Safety Culture Self-Assessments."

These activities potentially affect the development of common language in the international community and have validated the process used and results achieved in the development of an SCPS.

### **Planned Activities**

As requested by the U.S. Department of State, the staff will give an SCPS presentation to the Nuclear Safety and Security Group in Washington, DC, on March 7-8 and April 18-19, 2012. In addition, OE staff will give an SCPS presentation at the NAECP in New Orleans on February 28, 2012. In addition, OE staff will provide outreach on the SCPS to reactor licensees at the 2012 Regulatory Information Conference (RIC).

OE staff will continue to coordinate policy related matters and provide outreach at meetings, conferences, and workshops to support the program offices in their outreach and education efforts. OE also anticipates additional outreach in the international arena.

OE staff will continue to develop case studies, with plans for a case study related to the Big Branch mining accident, as well as the BP oil spill.

OE staff is also supporting NRR on the Safety Culture Implementation Team (SCIT) and in their common language efforts.

## **Office of Nuclear Regulatory Research**

As a support organization, RES does not have direct responsibility for implementing the SCPS. However, the RES staff has continued to support OE and the program offices in their SCPS-related activities by providing technical expertise and consultation, as requested, primarily through the user needs process. In addition, the RES staff participates, on an ongoing basis, on a number of national and international bodies that set standards, establish research agendas, or share information on topics related to safety culture.

### **Planned Activities**

#### **Technical Support to OE and Program Offices**

RES currently provides technical expertise and support to OE and the program offices under two user needs. The RES staff is continuing to support OE by participating in the OE-led SCPS working group and conducting exploratory data analyses to evaluate the possible relationship of the SCPS traits to safety performance. The RES staff is also assisting NRR in the evaluation of NEI's proposed nuclear safety culture assessment process and the development of a common terminology with industry for the ROP. No new user needs to provide additional support are anticipated.

#### **Information Sharing**

The RES staff participates in a number of national and international bodies that set standards, conduct research, or share information related to the technical bases for the NRC's safety culture activities. The RES staff also maintains liaisons with representatives of other Federal agencies who are similarly conducting research and implementing programs to enhance safety culture in their organizations and regulated entities. Participation in these activities avoids duplication of effort among disparate groups and ensures that NRC views on safety culture are incorporated into collaborative research agendas, "good practices" documents, and standards on related topics. Disseminating information internally from these activities provides agency staff with the opportunity to learn from research results and operational experience related to safety culture that are developed internationally and in other domains.

For example, the RES staff represents the NRC on the Organisation for Economic Co-operation and Development, Nuclear Energy Agency, Committee on the Safety of Nuclear Installations, Working Group on Human and Organisational Factors. The IAEA and the Working Group on Human and Organisational Factors sponsored an international workshop on safety culture, held September 26–28, 2011, in Chester, United Kingdom, as a followup to a similar workshop held in 2006. The purpose of the workshop was to discuss lessons learned by regulators and licensees in the enhancement and oversight of safety culture since the previous workshop, when most Member nations had not yet initiated safety culture activities. The RES staff presented a paper on the methodology used to develop the SCPS definition and traits, "Continuing the Conversation: Development of the U.S. NRC's Definition of Safety Culture and its Traits." Outcomes of the workshop, including gaps in fundamental knowledge about safety culture, will be documented in the proceedings and shared internally.



## **Office of Nuclear Security and Incident Response**

As a support organization, NSIR does not have direct responsibility for implementing the SCPS. However, the NSIR staff has continued to support OE and the program offices in SCPS-related endeavors. On a recurring basis, the NSIR staff interacts with a number of nuclear constituents—domestic and foreign industry representatives and organizations, national trade groups, and international nuclear organizations—and engages them on safety culture issues and implementation strategies.

### **Planned Activities**

#### **Technical Support to OE and Program Offices**

NSIR currently provides technical expertise and support to OE and the program offices. NSIR will continue to support SCPS working group activities led by OE. NSIR will also continue to support FSME's, NRO's, NRR's and NMSS' SCPS outreach and educational initiatives.

#### **Information Sharing**

NSIR management meets periodically with industry representatives at the Nuclear Security Working Group and the Emergency Preparedness Working Group in Washington, DC. Through these venues, NSIR maintains a dialogue on safety culture issues and shares lessons learned. NSIR's interaction with these working groups and associated industry forums is an effective conduit for dissemination of safety culture awareness and initiatives in the areas of security and emergency preparedness.

On January 26, 2012, NSIR will conduct an Information Security workshop for classified fuel cycle licensees at NRC headquarters. The focus of the workshop will be on recent information security events involving classified matters at fuel cycle facilities, the impact on facility operations, and preventative measures. NSIR will also pursue the safety culture aspects of the events.

Further, NSIR supports several bilateral initiatives per year with the U.S. Department of Energy (DOE) and a foreign entity. Through this effort, safety culture awareness is elevated with a Federal partner and the host country. Also, NSIR has participated in IAEA-hosted conferences with safety culture as a focal point. Through support of DOE's bilateral program and IAEA initiatives, NSIR will take every opportunity to keep safety culture in the forefront of the international nuclear community.