NRC NEWS

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"What's Communication Got to Do With It?"[1]

The Honorable Jeffrey S. Merrifield
Commissioner
U.S. Nuclear Regulatory Commission

at the

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In almost every speech I deliver, I touch on the need to effectively communicate with the public, our stakeholders, and Congress. Now more than ever, we need to enhance our communication efforts. Whether we like it or not, in the wake of September 11th, the security of nuclear power plants has become a national concern and journalists across the world have looked at nuclear technologies with renewed interest. The NRC must be an effective voice in this dialogue. Elevated threats of terrorism continue to raise the concerns of citizens in the communities surrounding nuclear power facilities. The war in Iraq has understandably heightened these concerns.

In New York, a state hard hit by the events of September 11th, nuclear power is facing substantial challenges. Questions about emergency planning and security at Indian Point are frequent topics for local news stories. Let me be clear. The NRC has tried to address these concerns by holding meetings in New York communities, answering Congressional questions, and interacting with local officials. Despite the best of intentions, these efforts, for the most part have been met with criticism. In response to these difficulties, there are some who will say, you can never reach a

[1] With my apologies to Ms. Tina Turner

community that is not listening. I for one am more optimistic. I think that there is a "silent majority" in these communities that is willing to listen. We just have not found the best way to reach them.

We simply cannot allow confusion about safety and security at nuclear power plants to continue. It's absolutely not our responsibility to promote nuclear power, but I absolutely believe we have a responsibility to promote the role of the NRC. We work every day in communities across the nation to ensure protection of health, safety and the environment at nuclear facilities. The American people need to know this. Our efforts are especially important for communities like those in New York that remain particularly sensitive to the terrorist threat we face.

I have been searching for examples of best Communication practices for some time. Last summer you might remember I had a five-week hiatus between my appointments to the Commission. During that time I had the opportunity to interview representatives from private and public organizations to discuss various Communication methods. For example, canvassing local communities has been an effective tool for grass-roots organizations. While I think it might be downright frightening if governmental officials were to begin going door-to-door, I believe we can learn from these organizations. They deliver simple, effective messages to large and diverse community groups. It would be a tremendous public service if we could do the same.

I can identify unique communication challenges with almost every significant initiative that the NRC is facing in the near future and I am not only referring to external communication issues. Achieving effective internal communication poses equally difficult challenges for our agency. The Davis-Besse head degradation issue, for example, has raised questions about how well we communicate technical information within the Agency.

Davis-Besse

At this point, I'd like to focus on the Davis-Besse degradation issue. It has received a lot of attention already at this conference and certainly has had a major impact on the industry, the public, and the NRC in various ways. I believe this incident raises one of the most serious safety issues that we have faced in recent memory. In the 13 months since the discovery of the cavity in the reactor vessel head at Davis-Besse, the NRC and the industry have done some significant soul-searching to understand how this incident could have occurred. While a lot of attention, understandably, continues to be focused on the technical issues, today I want to focus more on the organizational breakdowns - communications and oversight.

The NRC employs the leading safety experts in the field, but technical knowledge alone will not overcome our inability to effectively communicate within our organization and with external stakeholders. I believe the cross-communication lapses associated with Davis-Besse were a failure of our organization and not an individual. During the months and years leading up to the discovery of the cavity, various elements of the NRC staff were working hard to monitor their piece of the regulatory program puzzle. The regional staff was overseeing the inspection activities and reviewing the licensee's performance at Davis-Besse, but they were challenged due to the increased focus on other problem plants that diverted their attention. The resident

inspectors were continuously monitoring the licensee's activities in accordance with the baseline inspection program, and headquarters staff was focused on supporting the licensing process activities. Each organization was doing its part, but in hindsight, without effectively engaging the other.

Our reviews tell us that the signs were all there: there was relevant foreign and domestic operational experience, symptoms and indications of reactor coolant system leakage from containment air coolers and containment radiation monitor filter element fouling, and results of specific NRC inspections, however, we failed to integrate all of this information. These were missed opportunities that have left the citizens of Ohio and Members of Congress questioning the NRC's oversight activities and capabilities.

Further complicating the issues surrounding Davis-Besse was the NRC's untimely documentation of its technical basis for allowing continued operation of the reactor until February 2002. It took the Commission staff a full year to document this decision. This left the Commission and the staff open to "Monday morning quarter-backing" by some external stakeholders and the media. Never mind the fact that the staff's decision, based on the available information at the time, about the extent of control rod drive cracking and its safety implications, was validated by the inspection results. The harm was already done and the staff was forced once again into a more reactive communications posture. The NRC must be more responsive and improve its ability to communicate agency decisions to external stakeholders. The unexpected and unprecedented discovery of the cavity in the Davis-Besse head and the NRC's untimely communication efforts prompted accusations that the NRC had caved in to the very industry it was responsible for regulating. This left the impression that economics had won out over safety. Nothing could be further from the truth and that is certainly not the message that should be sent to the American people. I assure you - safety always comes first.

As many of you are aware, the NRC formed a nine-person, lessons-learned task force that spent more than 7000 hours reviewing the NRC's regulatory processes and activities, and provided specific recommendations for areas of improvement which we plan to address. Not surprisingly, one-third of the task force recommendations are associated with improvements to inspection procedures and guidance. Although I believe the reactor oversight program is a significant improvement to its predecessor, this experience has shown that it is a living program that will continue to evolve and be enhanced. Clearly, it deserves further refinement and the Commission will devote the time and effort necessary to ensure that the communications and inspection process gaps that contributed to the unidentified multi-year degradation of the vessel head at Davis-Besse are thoroughly evaluated and corrected in a timely manner. As with most industries, there will always be new technical issues that may surface and need to be addressed. However, it is unacceptable to have all the signs yet not be able to read the writing on the wall.

Similarly, the industry must reflect on this experience and learn from it. The industry needs to review their own operating experience and communication processes to ensure these types of issues do not surface again. A single failure among the fleet can impact the entire industry and complacency due to success in past or current operating performance has no place in this business.

Many of you have heard me speak about complacency during my all hands meetings at the sites I visit. In this case, I believe complacency played a part in the incident at Davis-Besse. Davis-Besse for many years was a good operating plant, but that success led to overconfidence. In addition, somewhere along the way many of the people who worked at the plant were left with the impression that economic considerations overshadowed safety decisions. That is clearly the wrong focus and message to send.

Communications and oversight breakdowns have a devastating impact on public confidence in both the industry and the NRC. Thus, I challenge both the NRC staff as well as the Nuclear Energy Institute and its members to learn from this experience. We must ensure that we fully identify and fix the weaknesses identified in our programs and commit ourselves to institutionalizing these improvements so we do not repeat the very same mistakes in the future. It is my hope that this will not only result in a safety culture with a more questioning attitude, but also spur us to enhance the lines of communication within our organizations and more importantly with those outside. Our response and our actions to correct these failures and effectively communicate with the public will help to foster public confidence in the industry as operators and the NRC as a regulator. These are key to us moving forward.

Risk-informed Regulation

I believe another key to us moving forward is improving our ability to communicate with external stakeholders, namely the public, about our risk-informed initiatives. We have spent a significant amount of time and resources on these initiatives, to better align our work and our regulatory structure with those aspects that are more safety significant. I believe we need to continue with these initiatives and continue to look for ways to incorporate them further into our regulatory programs. However, when speaking about them we must be sensitive to how they are perceived. The public is left with the impression that these efforts are intended to deregulate and that safety is taking a back seat to cost. We need to take a step back and assess how we communicate safety and risk to the public that we serve.

All to often when we speak of risk-informing our regulations or our processes, it is inevitably tied to reducing unnecessary regulatory burden. While this certainly may be a result, it is not our primary objective. Unfortunately, our principal objective gets lost in the translation because our stakeholders focus on the words “reducing burden” which leaves the impression that we are reducing regulatory effectiveness. This is not the case. The fact is, our efforts to risk-inform our regulations have enhanced safety because they have allowed the NRC and our licensees to focus their resources on the most safety significant issues. A significant example which comes to mind is configuration management as a result of implementing the maintenance rule. I believe this has enhanced safety because it requires a licensee to assess and manage the increase in risk that may result from their planned maintenance activities prior to performing them. What we need to do is find better ways to communicate our objective and its result, which is to enhance safety.

This seems to be a recurring theme, but I will repeat the main message of what I said at the 27th Water Reactor Safety Information Meeting in 1999 and the 2002 International Topical Meeting on Probabilistic Safety Assessment, as I believe it continues to be relevant:

"We can have the most advanced risk insights, the best science, the leading experts in the field, but if we do not have an effective communication plan, we will fail. The only way the NRC and the nuclear industry will succeed in their efforts to risk-inform our regulations and use risk insights to reduce unnecessary burden is by learning to effectively communicate with the public and our other stakeholders about risk and its consequences. For most of our stakeholders and even some of our staff, risk is an unknown, a black box. Like many issues in science and technology, uncertainty by the public breeds apprehension, and apprehension breeds fear. Other stakeholders including some public interest groups and some members of Congress view our efforts to risk-inform our regulations with skepticism. They see these risk initiatives as just another ploy by the industry and the NRC to reduce regulatory requirements. Nothing could be further from the truth."

My message to you is simple and in plain English. Effective risk communication or should I say "safety communication" is vital. It is imperative that the NRC and industry discuss risk in a manner that brings greater understanding and confidence to our community of stakeholders. The cumulative effect of failures to communicate clearly will lead to a decrease in public confidence. We cannot take shortcuts in the area of communications.

Security Issues

The topic of security raises a whole host of other unique communication challenges for the agency. For security matters, there is no shortage of communications. Just to give you an indication of the extent of these communication efforts let me name some of the entities who have inquired about our work in this area: The United States House and Senate, the White House, the FBI, CIA, DIA, FEMA, Transportation Security Administration, Homeland Security Council, Department of Homeland Security, the Coast Guard, the Customs Service, the Department of Defense, the Department of Justice, the Department of Transportation as well as more state and local government agencies than I could list. Industry for their part will tell you we are not consulting with them as much as we should and the public, which is receiving even less information about the specifics, is even more dissatisfied.

For nuclear safety matters, the Commission is unquestionably the leading expert and voice for the Federal government. From root cause analysis to corrective action, there is scant interaction with other agencies. But, security issues are far different. Other Federal agencies have some interest in this area.

In fact, everybody seems to be an expert in the area of security. From the man on the street to the halls of Congress we have received a variety of suggestions on how to better secure civilian nuclear facilities. We typically never receive this type of advice on technical issues. For example, we had only three comments from public citizens on our rulemaking on Combustible Gas Control in Containment.

Unfortunately, while there is significantly more interest, we cannot inform the public of the details of our efforts to develop defensive strategies. So we are in a "trust me" mode and this certainly is met with skepticism. However, recent examples of security force responses to supposed threats should also serve to enhance public confidence. One recent example comes to mind. I am referring to the recent incident at Seabrook, involving a wayward wild turkey which triggered the plant's intrusion detection system and set off a series of security response actions. What's important to note is that off-site law enforcement and the on-site security force responded in a rapid and massive fashion to the unidentified intruder. This response should serve as a positive example to the American people that there is close coordination between licensees, local, State and Federal authorities and that they are committed to appropriately monitor and respond to security-related issues.

The challenge for this agency has been to effectively keep all of our Federal family in touch, the industry consulted, and the public informed. The most significant issue on everyone's mind is what is the appropriate level of security for a civilian nuclear power facility. I want to make one point clear. While unmistakably, the threat environment changed dramatically after September 11th, the Federal responsiveness to such threats and our ability to identify them have changed just as dramatically. The Federal government has taken a substantial role in protecting all of the nation's critical infrastructure. As a result, when we make our decision on the threat for which our licensees will be responsible, the so-called design basis threat, it will be with the full knowledge of the Federal government's efforts to prevent further acts of terror, including its efforts to prevent terrorists from entering the country, obtaining illegal weaponry, and commandeering commercial jetliners. From where I sit and given the intelligence information that I receive, I can say without hesitation that our nation is much more prepared to identify and address individuals who may wish to do us harm than we were a year and a half ago. These activities have most certainly reduced the likelihood of a terrorist act. The ability to respond to a terrorist action has also been enhanced by Federal actions to coordinate law enforcement efforts, such as those demonstrated at Seabrook.

In determining the design basis threat, we will also need to consider questions about the degree to which we should arm civilian guard forces. The response to certain threats should only be the responsibility of the Federal government, in coordination with state and local law enforcement officials. This is not a new concept. In 1968, the District of Columbia Court of Appeals endorsed the Commission's rationale for making certain actions, so-called acts of "enemies of the United States" not the responsibility of private civilian nuclear power plant operators. The Court set out three considerations in its analysis: "(1) the impracticability, particularly in the case of civilian industry, of anticipating accurately the nature of enemy attack and of designing defenses against it, (2) the settled tradition of looking to the military to deal with this problem, and the consequent sharing of its burdens by all citizens, and (3) the unavailability, through security classification or otherwise, of relevant information and the undesirability of ventilating what is available in public proceedings."[2] These principles still hold true today.

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[2] Siegel v. AEC, 400 F.2d 778, 782 (D.C.Cir. 1968)(referred to as the Turkey Point decision, for the power plant proceeding in which the security issues were raised.)

Although in more recent years, the Commission has developed the design basis threat by focusing on those acts for which there is domestic capability and whether it would be practical for a licensee to protect against such acts, it never ignored the role of the Federal government. The level of previous Federal government involvement in national security matters was significantly different. The events of September 11th have prompted the Federal government to assume a significantly greater role in national security. Consequently, even where there might be domestic capability, we need to take a more sophisticated approach to these issues. Relying on the principles of the Turkey Point decision, we must recognize that certain security activities are now understood to be the responsibility of the defense establishment or agencies with internal security functions.

Force-on-force Exercises

The second security issue I would like to discuss today is force-on-force security exercises. Previously we conducted these exercises on a seven-year interval at each of our major licensed facilities. When the events of September 11th occurred, we required all of our facilities to go to an enhanced security posture and suspended force-on-force testing so that there would be no distraction from the ongoing security effort. Toward the middle of 2002, we initiated limited table top exercises as a means to evaluate security under the enhanced security requirements. Starting in February of 2003, the Commission authorized pilot force-on-force exercises utilizing enhanced security requirements. The intent of the Commission, once the design basis threat is redefined in the very near future, is to institute force-on-force exercises at each of our major facilities on a three-year basis with a requirement that licensees conduct their own drills on a yearly basis.

Since September 11, 2001, the Commission realized that our previous methods of conducting force-on-force drills were causing licensees to focus more on specific scenarios rather than a flexible defense, able to respond to an evolving threat. We are using the pilot programs to address methods to allow more flexibility on the part of the licensee to defend against a variety of attacks. The force-on-force exercises should be a test of the licensee's ability to defend its facilities and should push the envelope to probe for weaknesses. However, if enforcement will result after such exercises, I can understand a licensee's reluctance to participate in such a project. Before the Commission reinstates the full force-on-force exercises, the Commission should take a focused review of the regulatory aspects of these drills. The purpose of this exercise is to validate the security at the plants, not to issue a report card.

There is precedent for such action. The Department of Defense and the Department of Energy also conduct force-on-force exercises at selected facilities. The end result of these force-on-force exercises is not a regulatory enforcement decision but rather an identification of weaknesses and a schedule for corrective actions. In my personal view, when the NRC conducts force-on-force exercises, we should follow the lead of our fellow agencies and use the exercises to probe for weaknesses and not regulatory compliance.

I do support appropriate enforcement as related to our normal security reviews against the requirements in the regulations. But for force-on-force drills, a more appropriate action may be

to identify weaknesses and then put the solution in the corrective action program. As long as a licensee is satisfactorily addressing the issues in its corrective action program, there should be no need for enforcement action.

This is an issue which the Commission will need to address, one way or the other, when a final decision is reached on the force-on-force program.

Safety Culture

Much has been made of the importance of the commitment to safety at all levels of an organization. We all know that the concept of safety culture is very important to the safe and successful operation of nuclear power plants. The situation at Davis-Besse is yet another reminder of the importance of safety culture in nuclear power plant operations. A recurrent root cause finding of plants in difficulty is a breakdown or failure in the safety culture of the organization. The Commission, has chosen, and I think rightly so, not to directly regulate safety culture. This is something best left for each licensee to develop and implement. This is not intended to downplay, however, the importance that the Commission places on the regulated community to instill a safety culture at all levels of the organization or to suggest that NRC will not intervene, as appropriate. For example, the NRC is currently conducting a special inspection to evaluate the processes used at Davis-Besse to assess safety culture improvements.

That having been said, NRC must expect of itself what it expects of those whose activities we oversee and regulate. The NRC's Office of the Inspector General's "Safety Culture and Climate" survey of employees revealed that while 74 percent of NRC employees understand the goals and objectives of the NRC as an organization, NRC employees tend to be confused regarding the overall agency mission. The only item which showed a significant decrease from a similar survey conducted in 1998 was: "I believe NRC's commitment to public safety is apparent in what we do on a day-to-day basis." The survey also showed that less than half of NRC employees feel that management style encourages employees to give their best and only 43 percent of NRC employees feel that the NRC is highly regarded by the public. The one category where NRC scored statistically below the U.S. Research and Development Norm was *Continuous Improvement Commitment*, which assessed employee views on NRC's commitment to public safety and whether employees are encouraged to communicate ideas to improve safety/regulations/operations. I will be honest, in the four and a half years I have been on the Commission these were the most surprising and shocking results I have encountered.

I believe that the NRC has an effective regulatory program and the OIG survey overall reflects a workforce that envisions itself as the premier nuclear regulatory agency in the world today. Nevertheless, I am troubled by the survey results which identify that a majority of NRC employees feel that the Agency has not established a climate where traditional ways of doing things can be challenged or that innovative ideas can fail without penalty. I believe that the Commission must clearly articulate a vision for the agency. A vision is something which needs to come from the top, it must be endorsed strongly by the Commission, and it must be clearly stated and communicated to the staff, the regulated community and the public.

I envision the NRC being able to achieve excellence in regulating the safe, smart and secure use of nuclear materials for the public good while setting a standard for others to aspire. What does this mean? I believe that the Commission should set expectations to continually improve our regulatory programs to assure the safe use of nuclear materials, including the use of sound science to develop risk-informed and, where appropriate, performance-based regulations. We should also evaluate and use domestic and international operational experience and events to enhance our decision making. The Commission should foster innovation and empower NRC staff to identify enhancements to our regulatory programs. The Commission should also continue its efforts to create a work environment at the NRC which values differing opinions and rewards safety conscious thinking. We should also be in a position to anticipate challenges and be able to respond quickly to the changing regulatory and technical environment. It is my expectation that adopting these basic principles will instill a renewed vigor within the agency toward the vision of excellence in which all stakeholders will view the NRC as a fair, independent, open and efficient regulator.

An important element of a organization with an effective safety culture is establishing a safety conscious work environment. The Commission recently responded to recommendations from the staff on policy options for revising NRC's process for handling discrimination issues. The staff had established a Discrimination Task Force Group to review NRC's involvement in such matters and had recommended that the Commission pursue rulemaking for the oversight of a safety conscious work environment. The Commission unanimously rejected this proposal, but approved a number of streamlining recommendations proposed by the Discrimination Task Force Group. I am quite pleased that the Commission has endorsed the proposal to pursue alternative dispute resolution in cases of alleged intimidation and harassment. It is my impression that many of these cases result from a miscommunication between an employee and his or her management, which could be resolved satisfactorily through ADR prior to any NRC investigation. The staff will be proposing an ADR pilot program to the Commission. I would urge licensees to participate in the pilot program as way to determine the potential effectiveness of this alternative to resolving these issues. I also urge all interested stakeholders to review the Commission's direction to the staff and to work with the staff in developing guidance that would identify best practices to encourage a safety conscious work environment, including the emphasis for training management as to its obligations under the employee protection regulations and improving internal and external communications.

Conclusion

While I believe that we must meet the challenges of effective communications that face our agency, I am reminded of the old adage, "talk is cheap." Well it may seem cheap to some, but it can be worth measures if it allays concerns of the public, helps to identify a safety issue, or is used to achieve regulatory effectiveness.

Yet, it is clear, that we cannot just communicate our mission and goals, we have to ensure that our daily activities are directed toward efficiently meeting them. Indeed, effective external communication of a plan that is never implemented would be a significant detriment to public confidence.

I want to leave you with this final thought. The NRC's staff is extraordinary. Although it is always challenging for a technical agency to effectively communicate in a non-technical way, I believe that there is no other technical agency that has taken this challenge more seriously. This Regulatory Information Conference is one example of the staff's efforts in this respect. I want to thank them for their efforts, and thank you for allowing me to speak to you today.