

**Becoming and Being a Regulator
Remarks of Commissioner Stephen G. Burns
2017 Regulatory Information Conference
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First, I want to offer my congratulations to Kristine Svinicki on her designation as Chairman in January. I have worked with her in several different capacities throughout her time on the Commission, and have always appreciated her sharp mind, quick wit, and strategic viewpoint. We had a good transition under challenging circumstances back in January, but I think our staffs worked well together in ensuring there was little to no disruption to the agency during this time. I look forward to working with her going into the future.

I should also take this opportunity to express my gratitude to the senior management of the agency for their support to me while I was Chairman. Although I will continue to work with all of them, the nature of our relationship is now different. I would be remiss if I did not acknowledge the strong support I received from each and every one of the senior management team. Thank you.

To the NRC staff, I had many opportunities to visit and engage with you as Chairman, and I greatly appreciate your support as well.

Appreciation

I also want to acknowledge the contributions of my personal staff. As this audience may not be aware, the Chairman's office is often larger than other Commissioners' offices due to the extra responsibilities of the Chairman to oversee the NRC staff, present the budget, and be the spokesperson to the public and to the Congress. Historically, this staffing has often included fourteen or more staff. Fortunately, because the staff working directly for me were so extraordinary, we were able to effectively run the office with far fewer – in fact nine staff members in my office, including one part-time staffer.

In moving back to a Commission office, I kept the majority of my staff, but several staff members did not come with us, and I want to acknowledge them now. My budget and personnel expert, Clare Kasputys, is continuing in Chairman Svinicki's office, which I believe makes this her 8th Chairman. I once described her as kind of a "national asset" because she possess an unparalleled wealth of institutional knowledge about the budget, administrative and personnel issues that the agency needs to work through. Thank you Clare.

Holly Harrington was our "part-time" speech writer, but did the work of a full time person. The speed and skill with which she churned out remarks for me was remarkable, and I thank her for that. I don't give as many speeches these days, but her presence and abilities are greatly missed for the few that I do. Holly has resumed her duties in the Office of Public Affairs. Thank you Holly.

Lastly, Johari Moore was my technical assistant for materials. Johari definitely had one of the sharpest minds in my office, and her advice on a vast array of issues was highly valued. She was also a pleasure to work with and has a dry sharp sense of humor. Johari has found a home in the Office of Nuclear Security and Incident Response, and she will also be greatly missed. Thank you Johari.

For the staff that came back with me to the 18th floor, I also appreciate all of the incredibly hard work you did in the Chairman's office: Jason Zorn who I lured back to the NRC to fill the key role of Chief of Staff; Steve Baggett who acted as Deputy Chief of Staff; Nan Valliere who covered reactor issues; Tracey Stokes who provided legal counsel; and my administrative assistants Kathleen Blake and Sandy Cianci. As you all know, the work of the Chairman's office is intense and often of an entirely different nature than what is found in other Commission offices. I'm thankful and honored that they served me so well and faithfully for those two years. Thank you all.

Building the Regulatory Craft

Now to the substance of my remarks today. When I reflected on what to talk about today, I recalled that it was forty years ago that I had applied for a job at the NRC when I was entering my third year of law school. At the time, I was a member of the George Washington Law Review, and I wrote an article for the law review on *Congress and the Office of Technology Assessment*, 45 Geo. Wash. L. Rev. 1123 (1977). The idea behind the Office of Technology Assessment was to improve policymakers' understanding of science and technology and make more effective the consideration of scientific principles that might bear on the public policymaking process. In reflecting on my article, I realized that I've been thinking about and working at this intersection of law and technology since my law school days. This was not something I really thought I would get into – after all, I was German major in college and not really very interested in the hard sciences. But, how one achieves effective regulation – what I described as the regulatory craft in my speech at the RIC last year – is a question with which I certainly have wrestled, not only since coming back to the agency after my tenure at the OECD Nuclear Energy Agency in Paris, but also during those many preceding years as an agency lawyer working with the technical staff at both a junior and a management level.

I'm not going to repeat my speech from last year, but perhaps I can build upon it in some small way. We've talked a lot this morning about the pivot point that we seem to be at as an agency, having now gone through the particular tasks set through the Project Aim process. I compliment the senior staff, Chairman MacFarlane and the other Commissioners for jump-starting Project Aim before my return to the agency in late 2014 in order to take the destiny of the agency into our own hands as best as we can.

We've gone a long way with Project Aim. But are we done? From my perspective, there are always additional efficiencies to gain, and we should never stop seeking continuous improvement in the performance of our mission. That said, I see the agency starting to level out from a budget and FTE perspective over the next year or two, while continuing to refine its processes and gain additional efficiencies in getting its work done.

So where should we look to continue to sustain the momentum begun by Project Aim? In my vote on the Project Aim paper, I emphasized the need for this agency to go back to basics and to take a hard look at itself in terms of what areas we're regulating. We did this to a certain extent, but I'm not certain we got to the heart of the issue. The heart of the issue, you see, is not new or redesigned processes, or cutting back on travel, or reducing the use of toner cartridges. It's about people and, more specifically, about engaging our people to think about what it truly means to be a regulator.

When I refer to the regulatory craft, I'm thinking about how our people understand and work through the regulatory process. Even the best and most comprehensive policies, procedures, and practices must be implemented by humans. Our work is done by highly trained, qualified and dedicated people from a diverse professional and personal background. The effective implementation of the regulatory craft is to ensure that those people, when they join and are integrated into a regulatory agency and as they do their work, truly understand what it means to be a regulator. This is no easy task.

We don't just walk into our buildings and automatically become effective regulators. We come to the agency from different disciplines and with different experience: engineering school, the Nuclear Navy, law school, industry. We can't just sit our new employees fresh at their desks and declare, "You're now a regulator. Do it!" It's not just about showing up, but being inculcated in what the dynamic is, what your role is, what the job entails, how we regulate, and how we can do it well.

Regulating Technology in Our Legal Framework

Before I focus on what we can do to make our people become and be effective regulators, I want to emphasize the importance of the framework within which we work when we come to the agency. This is where law and technology intersect. It's about the integration of science and engineering into the institutional and legal framework within which we work. Understanding this concept – and ensuring new folk at the NRC understand it -- is very important.

The anchor point for our framework, of course, is the Atomic Energy Act of 1954, as amended. And while we have interesting debates about what it means, we ultimately come back to the central concept in the Act that is described in that deceptively simple phrase "adequate protection" and what it means in the particular context in which we regulate. In seeking that understanding, of course, we are going to have healthy debates, for example, about whether we have gone too far or not far enough in achieving the regulatory objective. What common sense dictates and what the Act embodies is the principle that there is no real thing as "zero" risk, and that's not what we should attend to as regulators or attempt to set as an unobtainable goal. We have to infuse that mentality in those with whom we work and to convey that understanding to those whom we are charged with protecting through our regulatory program, the American people.

How do you instill the notion of acceptable risk, while not discouraging employees from doing their best, and being diligent and dedicated in performing their critical responsibilities to the public? This is a significant and never ending challenge, but today I'd like to offer some of my thoughts on what it means to be a regulator based on my nearly 40 years in this field.

But before I do that, I want to be clear on one point. A strong nuclear safety culture is essential to the success of the industry and the regulator. No endeavor in this field can succeed without a mastery of the fundamentals of safety culture. As you know, among those fundamentals are fostering an environment in which employees are free to raise concerns and adopt a questioning attitude. These fundamentals are designed to guard against the attitude of "that's the way we've always done it."

That said, it is one thing to push back against the "that's the way we've always done it" attitude, but it's quite another thing to ensure that every single person who enters into this field has some grounding in the history, fundamentals, and framework that has led us here today. Nuclear safety culture is among these, but it is no more or less important in my view than understanding

the basic legal framework of the Atomic Energy Act. So, in my view, a continued emphasis on those basics or fundamentals is not therefore contrary to things such as a questioning attitude – it’s entirely complementary to remind ourselves frequently and consistently what it means to be a regulator.

With that in mind, I will ask your indulgence to consider some fundamental principles of law. The starting point for us, even here at the Nuclear Regulatory Commission, and particularly because we are a federal agency, is the U.S. Constitution. Why do I want to talk about the Constitution? What does that have to do with nuclear safety? A lot, as it turns out.

James Madison wrote in Federalist Paper No. 51, “In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and *in the next place oblige it to control itself.*” Madison identifies this important dynamic as a key argument to advocate for the Constitution.

Madison’s statement outlines in broad terms what the Supreme Court later articulated as the limited powers of the Federal government under the Constitution. The Court recently described this construct: “The Federal Government ‘is acknowledged by all to be one of enumerated powers.’ That is, rather than granting general authority to perform all the conceivable functions of government, the Constitution lists, or enumerates, the Federal Government’s powers.... The Constitution’s express conferral of some powers makes clear that it does not grant others. And the Federal Government ‘can exercise only the powers granted to it.’” *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566, 2577 (2012) (quoting *McCulloch v. Maryland*, 17 U.S. 316, 405 (1819)).

Looking at this construct a slightly different way, a basic premise of our entire system of government is that citizens or associations of citizens or the organizations that they create get the benefit of the doubt when it comes to government action. Such a notion is reflected, for example, in the NRC’s backfit rule, which prescribes that the agency must undertake an analytical process and justify its position before imposing new requirements on the regulated. It’s also reflected in the legal structure of our government; the Administrative Procedure Act, for example, subjects agencies to specific procedural standards before new burdens are imposed on society.

Sometimes this framework can seem like an onerous impediment to agency action. However, truth be told, it is intended to be an impediment and sometimes difficult by design. As individual citizens, we recognize the value of this “impediment” when it comes to things like the basic right under the Fifth Amendment not to have your property seized arbitrarily by the government, or in the limits of the taxation authority of the IRS, or the right to not be detained by the police without just cause. It’s sometimes harder to keep these limitations in mind when you’re coming from the perspective of civil authorities and particularly the government regulator, but again it is necessary to remind ourselves of them from time to time.

This leads us of course to the specific authorities of the NRC. The Supreme Court has explained time and time again that a regulatory agency operates solely within the authorities given to it by Congress. For the NRC, of course, this authority lies primarily in the Atomic Energy Act, although a few other important pieces of legislation such as the Energy Reorganization Act of 1974 that created the NRC itself are also important. Although the NRC’s authority under statute is broad and NRC is allowed to exercise significant discretion, such discretion is not unbounded.

As I suggested earlier, the starting point of all of this inquiry is the AEA's mandate that the NRC provide reasonable assurance of adequate protection. This is not absolute assurance of protection or an expectation of 100% risk free. Why is this important when it comes to understanding how to be a regulator? Well, every decision that the regulator makes must be viewed through this lens. An essential function of the NRC is to determine how much risk is acceptable when establishing its regulatory requirements.

When it adopted the Atomic Energy Act, the Congress was trying to strike a balance between establishing a strong regulatory framework for an emerging industry with using a novel technology while at the same time not stifling its development. The world has evolved since then, and the promotional and regulatory organizations within the Atomic Energy Commission were broken apart for good reason, but it is important to remind ourselves that the peaceful uses of atomic energy for the "maximum contribution to the general welfare" continues to be the policy of the United States as expressed in the Atomic Energy Act.

So let's turn back to what it means to be a regulator. Within the general principles I've just articulated in mind, I believe there are three main areas of focus when confronting this question: training and development; management leadership and oversight; and stakeholder engagement. These are areas in which we are engaged as an agency and on which we need to continue to focus. Let me briefly address each in turn.

Training and Development

Our technical staff generally come from three pipelines – the nuclear Navy, the industry and the university. They come in our doors knowing principles of engineering and science, understanding the language of technical concepts, or they come in trained in or with experience in law or other disciplines that we need to function effectively. Some have the advantage of bringing operational knowledge.

But we don't necessarily know how to be a regulator. Even a reactor operator with significant experience may not fully appreciate the unique role of the regulator in our constitutional democracy. From our point of view, for example, not all problems are regulatory problems. So how do we ensure that our staff members are exercising due diligence and are performing their duties with excellence, yet with the mindfulness that the regulatory goal is reasonable assurance of adequate protection, not absolute protection?

Of course, the challenge is that you don't want to create the impression with new employees that they shouldn't do the best job they can do, or that they should be satisfied with mediocre performance. Nor should we discourage them in any way from internalizing and practicing the principles of nuclear safety. But it is critical at the outset for each and every employee of this agency to understand the basic legal framework under which the NRC operates, that the NRC does not regulate to zero risk, and to recognize that the NRC's authority is not unbounded.

Part of our task as senior officials in the agency, as managers, as experienced staff, is to help that process of education and indoctrination along. Some of it is done by formalized training – if you will, the transmission of processes and procedures -- but it also involves sharing the agency's culture and "tribal lore." Some of it is set by our example: the example set by us Commissioners, by senior executives, by peers of the new staffer, by the informal and informal support groups within the workforce. It involves a willingness to look and interact across disciplines. It is about developing camaraderie among ourselves and developing a mutual

support system. These are all important. The EDO touched on some of these matters in his presentation: e.g. the importance on seriously considering the feedback that we receive from the periodic evaluations of employee sentiment that help us adjust and thereby build a better and more tightly knit organization.

By setting good examples and by coaching, we can help move along the path to finding that sweet spot in developing and establishing good effective regulation. It's a process of defining the problem, teasing out the issues, identifying solutions – if there need be one – and ultimately making a decision. Over time, through training both formal and informal and the experience of working through regulatory issues, the basic principles I've talked about must be internalized and become second nature to each and every regulator.

Management Oversight

It goes without saying that the senior leadership of the agency at the Commission level, as well as career senior executives and first line supervisors (who often have the toughest jobs in the agency) have the responsibility of inculcating that culture that presses us to ask ourselves how we find the optimal solutions to regulatory challenges. How do we ensure that we tease out what is most important from what may be merely a distraction in the safety and security issues that confront us?

Employees should be trained to spot issues and bring them to the attention of the organization. Therefore, it is critical that when supervisors at every level of the organization are brought potential regulatory problems, they ask the right questions that pull out answers to the key regulatory questions that present themselves. At the risk of quoting myself, I observed in my vote on the staff's Project Aim 2020 proposals that the NRC has a tendency to "always achieve the 'gold standard' which can result in expending more effort than required." I suggested that "the NRC should always seek to achieve the highest standards of performance, but it must do so with a balanced perspective of the significance of the activity in the overall context of our regulatory responsibility and with the overarching objective to be focused on the right things." This is indeed an ongoing journey.

Management can reinforce these principles through their day to day oversight and engagement with the staff as well as through engagement with those outside of the agency who have an interest in our work – whether it be licensees, other government officials, NGOs, the general public, the media. And we have to do it not just by proclamation but by practice. That's where management carries the burden. The NRC cannot and should not try to address every possible problem. This is not only entirely impractical and inefficient, but is inconsistent with our legal mandate. We are all good at spotting problems. What defines an exceptional regulator is the ability to identify the problems that need to be addressed from a regulatory perspective and those that don't.

This is where the agency's management bears the bulk of the burden. Management has the ultimate responsibility for resolving disputes and ensuring that the agency's work is prioritized and resources are effectively used where they are needed most. This is nowhere truer than in the NRC's dealing with risk from a regulatory perspective.

Focusing on the fundamentals is part of the solution. In other words, a question that should be continuously asked by management throughout any such process is whether we are still within the bounds of "reasonable assurance of adequate protection" and not trying to achieve zero

risk. I might also suggest that a further element to this analytical process is considering a given issue not solely within the particular silo in which it exists, but within the totality of the circumstances of the safety of the plant or material. We need to ensure that our analytical processes don't push us to lose sight of the forest for the trees.

Issues that challenge us rarely offer black and white solutions, and with virtually any complex, risk-informed decision, we'll likely have at least one expert who may take a different view or suggest a different approach. This is healthy, and should not be discouraged. But the ultimate decision is not only grounded in the technical aspects, but also in the legal and regulatory construct I have already described. And occasionally, if not often, the final decision is not solely based on technical or legal concerns alone, but on the totality of concerns that a regulator has to account for.

I do think it important to note that in the end, after listening to all sides, evaluating the data and weighing the input of staff who may have a differing opinion, senior management must ultimately make a decision. It may very well be a decision that does not make everyone happy. That is the burden that leadership has to bear. We are responsible, when all is said and done, for making clear decisions that we determine are the best in the circumstances – not necessarily the ones that are the most popular.

Stakeholder Engagement

And finally, we must recognize that carrying out our responsibilities requires engagement with others. A regulator must genuinely and openly engage with its stakeholders. The ability to meaningfully engage with stakeholders is a critical element of being an effective regulator. It's something we have to work at all the time.

The NRC is, of course, an independent regulatory agency. Nonetheless, as I have said over the years, we are independent but not isolated. We must engage with all of our stakeholders and listen to their perspectives. However, I acknowledge that this is often easier said than done.

Frequently, our stakeholders have valuable perspectives on an issue. Much like the NRC serves as the independent voice in the assessment of a licensee's performance, the NRC should be equally open to the idea that it is useful and healthy to hear the views of our stakeholders who can often provide a new perspective on our own actions or performance. The notion of meaningful stakeholder input underlies our administrative legal framework, whether it be the process for developing and issuing regulations or for issuing orders.

My point with respect to stakeholder engagement is that to be a good regulator, not only can't you operate in a vacuum, but you must also actively work against the tendency to operate in a vacuum. Not only will your decisions often times be ill informed, but they also will not be understood or accepted by the stakeholders to whom we are responsible.

Closing

So where does this leave us? I've barely scratched the surface on the question I started with: what does it mean to be a regulator. Nonetheless, I'd like you to walk away from my remarks today with three basic points in mind. First, we must recognize that the NRC doesn't, shouldn't, and cannot operate in a vacuum. This is not only bad practice, but it is not consistent with the law which requires engagement through the rulemaking and licensing processes, for example.

Again, we should not expect that it is simply inherent or natural for people to understand what it means to be a regulator, so we need to constantly work at encouraging and coaching our people. The principles underlying this are not necessarily self-evident, and occasionally find themselves in tension with competing instincts for people to perform with excellence. It is the management that has ultimate and critical responsibility to understand those principles and reinforce them every day to the staff.

And finally, being a regulator is hard, but we should get no sympathy for it being hard. Being a regulator is hard by design, partly because of the framework within which we work. It will continue to be hard work, sometimes more so than others. We need to engage and think thoroughly about what makes sense for safety, security, and the viability of regulatory approaches. Bright and dedicated people can aspire to be good regulators for exactly that reason – that it takes the best and brightest to balance all of the considerations, competing factors, pressures, and tensions in reaching the right decision at the end of the day.

You, our stakeholders, hold us to high standard, as well you should. We owe it to you, to the American people, to judiciously exercise our authority, keeping safety and security at the forefront and first in mind.