NRC's Strategic Plan Development for
Fiscal Year 2018 through 2022
Stakeholder Questions

The NRC is in the early stages of developing our next strategic plan which will cover Fiscal Years 2018 through 2022. This plan will identify the agency's strategic goals, long-term strategies, and key challenges, and provide the basis for the agency's annual budget and performance plan. The July 27th public meeting is the first opportunity for NRC to obtain stakeholder input on the strategic plan.

Please feel free provide your comments to NRC staff supporting the public meeting by August 5th to support incorporation into the strategic planning process and associated meeting summary.

Name/title: __Melinda Krahenbuhl__Organization: __Reed College_____
Work Phone: ___503 517 7748_____ Email: _mkrahenb@reed.edu__

As a long-term strategy the agency needs to adjust its accomplishment lens, and focus on safety and security related issues. Some insignificant, non-safety related issues appear to be driving the NRC's interactions with the licensees. The following are some examples of off mission activities that if eliminated could streamline and strengthen the NRC.

The NRC routinely collects information that is not relevant to the safe operation of reactors. For example Form 348 has the following "required" information. If the NRC is tracking any of this information and using it for something, I would like to have access to it. I however do not believe the data is used, entered into a database, or safety related.

1) Check boxes for MR., MRS. and MS. The NRC states it does not track gender information, however it does gather it. Is gender an important parameter for operation?
2) Check box for both position at the facility and a table for experience details. Is the title of the position important? Are experience details relevant? Does the NRC really need both to determine if the candidate is worthy to be tested?
3) Completion of training program (a-e) and recording power changes? Is this relevant if the training coordinator and/ senior management is required to sign that the candidate is ready and has completed the training program? If the signatures are not trusted why would the training specifics and categorizations be trusted or be important?

A second example of NRC required information is the annual reports, which includes number of SCRAMS, Criticalities, and operating hours. If the NRC is interested in the simple operating statistic, a fillable form may be a better alternative than a report.

Proposed strategy. Eliminate redundant, non-mission related information from forms. Convert forms to user- friendly formats. An example is a Google form which auto fills a spreadsheet to collect needed parameters. Create instructions that are meaningful, do not expect the licensee to have to read the NRC's internal guidance for instructions.

The NRC in now requesting to pre-approve the installation of Digital I & C. There is already a mechanism for a licensee to make changes to the facility. This mechanism is described in 10 CFR 50.59. This internal activity of reviewing changes has been

accepted and it is codified. If the change requires NRC approval, the facility will forward the appropriate information. The NRC is attempting to circumvent the current regulation. The public comment periods and on-going discussion regarding Digital I&C installation is a significant drain on both the NRC and licensees resources.

A second example is the requests for a new thermo hydraulic model or updated neutron core characteristics in support of relicensing for licensees not requesting an increase in steady-state power. These cores have been in operations for many decades with no releases, accidents resulting from loss of coolant or unexplained changes in flux characteristics. Although the results are operationally interesting, the results actually serve no regulatory purpose. The number of RAI's issued for these calculations created work but no value.

Proposed strategy – The NRC should stop requesting information that is interesting for operations, but not regulation.

Part of the any long-term strategy is improving communication. I am going to share several examples of communication failures. Recently a phone meeting was set up for a pre-hearing conference call with the petitioner and the NRC. When the call-in time came, the phone number was non-operational. We sent multiple emails and phone calls into the organizer and other known NRC employees. There was no response from the NRC organizers or other NRC employees to these calls and emails until the allocated meeting time was over. There were no attempts from the NRC organizer to contact us during the meeting regarding our absence. Since all of the required parties were not on the line, it seems unlikely that the agency was unaware of the problem. After the time allocated for the meeting had passed, the NRC acknowledged the phone line was not functioning. In a subsequent meeting, we were told, "No damage was done. " This is single extreme example of communication failure by the NRC. While single point mechanical failures do happen, the NRC did nothing to fix the issue. Further damage was done when the NRC circulated the meeting minutes.

The NRC currently refuses to officially accept training materials electronically.

The NRC sends notifications with required deadlines through the mail. The clock for the deadline is linked to a date on the material. Mail issued from headquarters may reach Portland in 7-10 days. So a 30-day turn around time has already been reduced by a third. Additionally, many of these deadlines are arbitrarily short. For example, is it reasonable to issue a request for additional information with 63 multi-parted questions and expect a response in 30 days? I have personally received NRC notifications with the required deadlines that have already passed. I cannot be the only facility receiving dated information with shortened or expired timelines.

The NRC is not capable of making electronic changes to Technical Specifications (TS). Requesting a change to the TS requires a pen and ink cross out version, the original version, a highlighted new version, and a table with the changes and justifications. These 3 paper documents could be reduced to 1 electronic document that has been electronically "marked-up".

Proposed strategy – Make sure the NRC is communicating in an effective, timely and reasonable way. Adopt current and future technologies that improve communication.

NRC's Strategic Plan Development for
Fiscal Year 2018 through 2022
Stakeholder Questions

The NRC is in the early stages of developing our next strategic plan which will cover Fiscal Years 2018 through 2022. This plan will identify the agency's strategic goals, long-term strategies, and key challenges, and provide the basis for the agency's annual budget and performance plan. The July 27th public meeting is the first opportunity for NRC to obtain stakeholder input on the strategic plan.

Please feel free provide your comments to NRC staff supporting the public meeting by August 5th to support incorporation into the strategic planning process and associated meeting summary.

Name/title: Thomas Newton, Deputy Director

Organization: NIST Center for Neutron Research

Work Phone: (301)975-6260

Email: Thomas.newton@nist.gov

1. What are areas of strength that NRC should continue to build on? What about areas of weakness the NRC should strive to improve in?

Strengths

- Expertise among some NRC staff in research and test reactor (RTR) operations is vital in understanding the issues facing RTRs. This may lessen with upcoming NRC staff retirements.

Weaknesses

- Compliance with the intent of Section 104(c) of the Atomic Energy Act –

  The vast majority of RTRs were built with the purpose of advancing technology and education and to push the state of the art forward through scientific discovery. The value of these reactors were recognized in the Atomic Energy Act that states in Section 104(c) that: *The Commission is directed to impose only such minimum amount of regulation of the licensee as the Commission finds will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public and will permit the conduct of widespread and diverse research and development*.
  Unfortunately, NRC in many cases fail to recognize that instituting over burdensome (i.e. costly) regulations threatens the continued viability of many of these facilities and inhibits technological development for which these facilities were built.
  The NRC should reexamine its approach to regulation of RTRs and should implement a review process for all regulatory activity to verify compliance with the constraints imposed by AEA section 104(c).

- Fee structure

  The current NRC fee structure exempts fees for research reactors used primarily for academic research (10 CFR 171.11(2)) but not for test reactors even if they are used exclusively for research. Imposition of fees on these types of test reactors, such as NCNR, are overly burdensome, discourages communications with NRC, inhibits licensing actions unless absolutely necessary, and does not comply with the intent of

Section 104(c) of the Atomic Energy Act. The NRC should reexamine its fee structure to ensure it does not inhibit research and is compliant with AEA Section 104(c).

2. What opportunities and challenges should the agency be aware of and consider for its Strategic Plan update?

As mentioned above, unique to RTRs under AEA 104(c) is the NRC responsibility to: *"…permit the conduct of widespread and diverse research and development*". Where the term "research and development" (also defined in the AEA) means: *"(1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes*."

There are currently a number of NRC activities that inhibit or discourage the use of digital instrumentation and controls (DI&C) by the imposition of a number of requirements for approval for use in RTRs. Given the low risk presented by RTRs, the RTR community is an ideal environment in which testing and validating new digital technologies can be made.

The NRC should reexamine its approach to the approval of the use of DI&C in RTRs to ensure that RTRs can meet their mission of "widespread and diverse research and development". Digital technologies are capable of providing significant safety benefits such as improved safety margins due to quicker response to operating conditions, increased monitoring capability and reliability of safety systems, and reduction in initiating events.

3. What opportunities exist for the NRC to be more adaptable and flexible (agile) to changes in its environment, both internally and externally? What are potential impediments to realizing those opportunities?

Facility changes made via the 50.59 process are made "at risk," particularly when these changes involve digital instrumentation. Despite clear justification of the adequacy and safety of these proposed changes, an NRC inspector may, through his or her opinion, disagree and find the licensee in violation even if no clear guidance from NRC exists. NRC should provide a mechanism by which a licensee could engage in informal discussions as to an agreed upon approach to ensure a 50.59 change would be found to be adequate. NRC expertise should include knowledge of the relevant state of the art.

4. What factors external to the agency are you aware of (e.g., plans or initiatives from your organization/industry) that we should consider in the update?

The American Nuclear Society Research and Advanced Reactor Consensus Committee is proposing creation of a new standard on RTR Structures, Systems, and Components

(SSC) Classification. The lack of a current consensus standard for classifying RTR SSCs has caused considerable uncertainty in engineering, acquisition, and testing of SSCs, and places an unnecessary burden on both NRC and licensees in having to establish a path to regulatory approval on a case-by-case basis, giving considerable uncertainty as to whether or not implementing a given SSC design is feasible. This is an opportunity to provide clear guidance to licensees and the NRC in establishing a performance-based and risk-informed SSC classification process.

5. What actions should the NRC consider to better align its activities, processes, workforce, and other resources to support its strategic goals of safety and security?

NRC personnel and contractors that are unfamiliar with RTRs will frequently default to unreasonably conservative regulatory actions and requests for information that lack any safety basis. This places a large burden on both the licensees and the NRC in getting proper resolution of these issues.

The NRC should evaluate the expertise of personnel involved with RTRs and mandate facility visits for Project Managers and contractors that are sufficient to enhance their understanding of RTRs. NRC participation in RTR community meetings, such as the annual TRTR meeting, should be strongly supported.

NRC's Strategic Plan Development for
Fiscal Year 2018 through 2022
Stakeholder Questions

The NRC is in the early stages of developing our next strategic plan which will cover Fiscal Years 2018 through 2022. This plan will identify the agency's strategic goals, long-term strategies, and key challenges, and provide the basis for the agency's annual budget and performance plan. The July 27th public meeting is the first opportunity for NRC to obtain stakeholder input on the strategic plan.

Please feel free provide your comments to NRC staff supporting the public meeting by August 5th to support incorporation into the strategic planning process and associated meeting summary.

Name/title: Mark A Trump/Asso Director Organization: Breazeale Nuclear Reactor Penn State
Phone: 814 863 2745 Email: mat16@psu.edu

1. What are areas of strength that NRC should continue to build on? What about areas of weakness the NRC should strive to improve in?

Strengths - dedication to ideals of public safety, professionalism, willingness to engage shareholders.
Weaknesses - 1) Complete failure of the NRC to recognize the largest unaddressed public safety risk is ignorance and irrational fear of radiation. NRC policies and statements promote this fear. Failure of the NRC to address this problem through aggressive education programs is failure to meet its responsibilities under the Atomic Energy Act (AEA) and will, during the first dirty bomb event, be laid at the staff's feet. 2) Excessive Risk adversion - no rewards for decision making or risk taking, organization in paralysis , 3) Excessive emphasis on non-scientific concerns and politics. Politics and perception can out weight science in NRC analysis. 4) Mission statement that includes the concept "regardless of the effect on licensees" is inconsistent with the Atomic Energy Act (in my case specifically section 104.c) and the NRC is leading the country towards a third world nuclear status. 5) The Agency is overly focused on making new regulation on a dead/dying industry.

2. What opportunities and challenges should the agency be aware of and consider for its Strategic Plan update?

The challenge will be how to right-size in the face of a dead/dying industry. Who will fund the NRC now? The NRC needs to reconcile with DOE and create an energy future for this country that includes nuclear. Burying your head in the sand and saying it is someone else's problem fits the government agency mold but will not keep your jobs. Strategic plan needs to include a plan to protect America from nuclear terrorism thru education.

3. What opportunities exist for the NRC to be more adaptable and flexible (agile) to changes in its environment, both internally and externally? What are potential impediments to realizing those opportunities?

As mentioned above, the culture is risk adverse to the extreme with no rewards for decision makers. American companies take there nuclear related work and experiments overseas because we cannot get them licensed in America. The NRC has lost sight of what "reasonable Assurance" is.

4. What factors external to the agency are you aware of (e.g., plans or initiatives from your organization/industry) that we should consider in the update?

In 1980 there were 80 research reactors in the United States, now there are 31. 3 to 4 more will move toward decommissioning in the next several years due to a variety of reasons (some the result of NRC policy). This will continue until Congress figures it out. What is the NRC's role? What will you say on capitol hill when congress asks why? This will be the radioisotope issue all over again.

5. What actions should the NRC consider to better align its activities, processes, workforce, and other resources to support its strategic goals of safety and security?

Rethink your mission on public safety and security! First ask yourselves what is your strategic security goals? The NRC has forced the power industry to become the most heavily defended facilities in this country. Incidents at Y12 show that even the nation's nuclear weapons are not as well defended. at what cost benefit? Ask yourselves why there is 100 to 1000 times more money being spent to protect the white flint office building than the HEU reactors still operating in this country. Ask yourselves how the first nuclear attack will go down in the USA. It will be a low level dirty bomb. How well prepared is the NRC to respond? How well prepared is DHS? Do you have the media ready for release as to why the public should not panic? will school kids come home and tell their parents not to worry we learned about the dangers in school and it is ok? or will FOX and MSNBC talking heads stir the nation to panic and people die in the resulting traffic accidents and financial collapse? Perhaps ex-chair Jaczko is available to tell the American public to flee to outside the 200 km zone?

NRC's Strategic Plan Development for
Fiscal Year 2018 through 2022
Stakeholder Questions

The NRC is in the early stages of developing our next strategic plan which will cover Fiscal Years 2018 through 2022. This plan will identify the agency's strategic goals, long-term strategies, and key challenges, and provide the basis for the agency's annual budget and performance plan. The July 27th public meeting is the first opportunity for NRC to obtain stakeholder input on the strategic plan.

Please feel free provide your comments to NRC staff supporting the public meeting by August 5th to support incorporation into the strategic planning process and associated meeting summary.

Name/title: Daniel J. Cronin
Organization: University of Florida Training Reactor
Work Phone: (352) 454-0424 (Cell)
Email: dcronin@ufl.edu

1. What are areas of strength that NRC should continue to build on? What about areas of weakness the NRC should strive to improve in?

Strengths

- Coordination with DOE and NNSA to implement GTRI funded security upgrades / enhancements / fuel conversions at research and test reactor (RTR) facilities.
- Placing a high priority on the implementation of a regulatory structure for domestic medical isotope production.
- Efforts to streamline RTR license renewal as proposed under NRC-2011-0087. If implemented smartly, this effort has the potential to significantly reduce re-licensing burden on both regulator and licensee sometime before the next round of RTR license renewals are set to begin in the 2020 timeframe with no impact on safety whatsoever.

Weakness

- Mission Creep / Compliance with the intent of Section 104(c) of the Atomic Energy Act -

  Nuclear related public education, basic research, and research & development (R&D) are vitally important to the safety and security of the U.S. These functions are the primary mission of many RTRs. Minimally resourced RTRs must be protected from over burdensome regulation that threatens the continued viability of some of these facilities. This protection was enacted into law by Section 104(c) of the Atomic Energy Act which states in part that: *The Commission is directed to impose only such minimum amount of regulation of the licensee as the Commission finds will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public and will permit the conduct of widespread and diverse research and development*.

  Of particular concern is the continued expansion of non-rule based "reasonable assurance" requirements (NUREG-1537, ISGs, RISs, etc) that have no more than a marginal relationship to nuclear safety and have no identifiable process barriers in-place to ensure compliance with AEA Section 104(c). This negatively affects all RTR licensing processes. Licensees are not pursuing digital I&C modifications due to experience with an unstable regulatory framework and implementation challenges that effectively create an impossible regulatory hurdle for minimally resourced RTR facilities.

  The NRC should reexamine its mission statement with respect to RTRs and its strategic approach to RTR regulation. The NRC should create and implement a formal licensing action review process that is designed to verify compliance with the constraints imposed by AEA section 104(c).

2. What opportunities and challenges should the agency be aware of and consider for its Strategic Plan update?

   Unique to RTRs under AEA 104(c) is the NRC responsibility to: *"…permit the conduct of widespread and diverse research and development*". Where the term "research and development" (also defined in the AEA) means: *"(1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes*."

   As the use and complexity of digital technologies continue to expand, the RTR community can play an important role in testing and validating new digital techniques and equipment before they are deployed in large-scale, safety-critical environments.

   The NRC should reexamine its approach to DI&C licensing in RTRs to ensure that "widespread and diverse research and development" of DI&C is in-fact permitted. This type of R&D can result in faster deployments of digital technologies capable of providing significant safety benefits such as improved safety margins due to quicker response to operating conditions, increased monitoring capability and reliability of safety systems, and reduction in initiating events.

3. What opportunities exist for the NRC to be more adaptable and flexible (agile) to changes in its environment, both internally and externally? What are potential impediments to realizing those opportunities?

   Licensing processes needs to be modified to accommodate the use of improved communication technologies such as DropBox and Sharepoint to promote timely informal communications. The numbers of documents that must be formally docketed and tracked over the duration of a significant licensing action has become unmanageable. Licensees and NRC reviewers need to be able to (and should be encouraged to) use informal processes to accommodate basic questions, answers, and information transfers. Only those formal documents vital to a reviewer for purposes of making a safety determination should be formally docketed and tracked. Any informal communications can then be wrapped up and docketed after the fact, if needed.

4. What factors external to the agency are you aware of (e.g., plans or initiatives from your organization/industry) that we should consider in the update?

   The ANS standards group is proposing creation of a new standard on RTR Structures, Systems, and Components (SSC) Classification. The lack of a current consensus standard for classifying RTR SSCs has caused considerable uncertainty in engineering, acquisition, and testing of SSCs, and places unreasonable burden on both NRC and licensees in having to create and navigate an uncertain and unpredictable regulatory path. This is an opportunity to create consensus between the RTR regulators (NRC and DOE) and the licensees in this important area and I'm hopeful the NRC will embrace the opportunity.

5. What actions should the NRC consider to better align its activities, processes, workforce, and other resources to support its strategic goals of safety and security?

   Turnover and contractor usage has resulted in a lack of facility knowledge in some instances. This results in numerous RAIs that lack any regulatory basis other than on-the-job training for the reviewer. This is a very inefficient way to train new licensing reviewers and burdensome for both the NRC and the licensee.

   The NRC should consider a realignment of the RTR group that ensures prospective Program Managers and licensing reviewers have enough training and time at the facilities they will oversee to understand basic systems operations and procedures without the need for formal RAIs.

From: TAPIA JOSEPH [mailto:joseph_tapia@mnes-us.com]
Sent: Tuesday, July 19, 2016 8:22 AM
To: Ward, William <William.Ward@nrc.gov>
Subject: [External_Sender] RE: Email invitation to July 27th public meeting

Thanks Bill. I will probably not attend this high, high-level discussion. I will be there the day before for the stakeholders workshop with the commission.

I think it's time to start talking specific details of how to improve efficiency, cost, etc. Here's one idea: with so many reactors closing in Region IV, serious thought should be given to closing region IV and moving the remaining responsibilities to region III. Just looking at the duplication in overhead justifies such a move. Also, timeliness is a large problem at NRC. What specific actions are needed/will be taken to improve the timeliness of actions/decisions? Need details, not high level goals.

Please send me the chapter status pages you told me about when you get a chance.

Thanks,

Joseph Tapia, P.E.
General Manager – Engineering and Regulatory Services
Mitsubishi Nuclear Energy Systems, Inc.
13860 Ballantyne Corporate Place, Ste. 250
Charlotte, NC 28277
Tel: 704.945.2740

From: Ward, William [mailto:William.Ward@nrc.gov]
Sent: Monday, July 18, 2016 6:16 PM
To: TAPIA JOSEPH
Cc: Williams, Donna
Subject: Email invitation to July 27th public meeting

SUBJECT: Invitation to July 27th public meeting on development of NRC's FY 2018-2022 Strategic Plan

The U.S. Nuclear Regulatory Commission (NRC) would like to invite you, or another representative from your organization, to provide input as we develop the future direction of the agency. The NRC is beginning the process of developing its next Strategic Plan (covering Fiscal Years (FY) 2018 through 2022). The plan will identify key challenges and long-term strategies, establish performance expectations, and provide the basis for the annual agency budget and performance plan.

To support this effort, the agency will be conducting a meeting to seek input from stakeholders and the public at NRC headquarters in Rockville, Maryland on July 27, 2016, from 9 a.m. to 12 p.m. eastern daylight time. A Webinar option will be available for those interested in participating remotely. The meeting details and Webinar information can be found in the public meeting notice.

We would like to invite you or other members of your organization to provide perspectives at this meeting. All participants are requested to RSVP to the contacts listed in the notice. If

you are not able to participate but would still like to provide input, you can request the list of discussion topics from the meeting contacts and provide your input directly to them. There will also be opportunity later on during the development process for the public to review and provide comment on the full draft plan before it is finalized.

For reference, this "Strategic Plan At-A-Glance" brochure provides a helpful overview of the structure and contents of the current NRC Strategic Plan (covering FY 2014-2018). The full plan can be found here.

Please feel free to forward this invitation to other members of your organizations may be knowledgeable about the work of the NRC, especially if you are not able to participate. Thank you for your consideration.

Joe, please feel free to contact me if you have any questions. We are sending this email to all active NRO projects.

Bill

Organization	Comment
Hybrid Power Technologies LLC	By way of an observation, we are of the opinion that strategic planning involving advanced reactors is relatively easily developed by reliance on simply adapting existing regulations. The key is recognizing that advanced reactors are inherently orders of magnitude much safer than existing reactors. That means efforts can be much more highly focused than in the past. In turn, significantly reduced resources are needed (than otherwise might expected) to support advanced reactor licensing. Practically speaking, the key implementation mechanism is simply modifying the existing General Design Criteria (GDC). The needed changes are surprisingly rather mundane with the deliverable being another appendix to the Code of Federal Regulations issued specifically for advanced reactors. While the changes are relatively minor at face value, the practical impact on future NRC resource needs is not. We previously provided specifics (including strategic implications) on our suggested GDC changes in conjunction with an earlier (Spring 2016) NRC request for comments on NRC/DOE proposed GDC changes to support advanced reactors. If there is interest, we can again forward our earlier correspondence.