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United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

RYAN JACKSON, MAJORITY STAFF DIRECTOR
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December 21, 2016

The Honorable Stephen Burns, Chairman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Burns:

Chairman Inhofe received your letter dated September 26, 2016, regarding the Nuclear Regulatory Commission's public meeting with stakeholders on July 26, 2016, and conveying SECY 16-0105: "Staff Assessment of Issues Raised in Commission Meeting with Stakeholders". In that paper, the NRC staff concluded that "*...the issues and areas for improvement raised by stakeholders were consistent with ongoing efforts...*" You noted in your letter that: "*...the NRC staff did not identify any substantive issues or recommendations raised by stakeholders that would require new plans for additional NRC action.*" The conclusion that the NRC staff has matters well-in-hand and needs to take no further action does not comport with the results of our oversight. This assertion also stands in contrast the NRC values of Service and Excellence which advocate that employees should strive to be proactive, self-aware, and continuously improving.¹

In 1998, then-NRC Chairman Shirley Jackson conducted a meeting with stakeholders and promptly tasked the NRC's Executive Director with developing actions to address the concerns raised in the meeting and during congressional oversight. In the April 6, 2016, hearing before this Committee, Chairman Inhofe sought and received a two-fold commitment from you. The first was to conduct a meeting with NRC stakeholders similar to Chairman Jackson, which you have done. The second was to task the NRC Executive Director and report to the Committee:

"Chairman Burns, would you commit to task your executive director and report your progress to this Committee let's just say every couple months?"

¹ U.S. Nuclear Regulatory Commission Values: <http://www.nrc.gov/about-nrc/values.htm>.

*Mr. Burns. Yes, I would do that.*²

In seeking your commitment to conduct a meeting with stakeholders and to task your staff with corrective actions, Chairman Inhofe noted several problems uncovered during oversight in the late 1990's that are recurring.

However, your September 26th letter appears to indicate you accept the status quo as sufficient in addressing these concerns, stating: *"I have reviewed the staff's assessment and agree with the staff's conclusions. As such, I do not intend to take any further action aside from continuing to oversee the staff's ongoing efforts described in the paper."* For the reasons discussed below, members of this Committee do not share your view that the status quo is sufficient in resolving stakeholder concerns. In choosing not to task your Executive Director with any additional corrective actions, you appear also to reject the Committee's desire for a routine report. This is not acceptable.

We are surprised and disappointed that you have decided not to adopt Chairman Jackson's forthright and proactive strategy, particularly given the similarities to the concerns currently raised with regard to the NRC's effectiveness and efficiency. During the oversight work done by this Committee, each of us have raised issues that warrant further action. In this letter we will revisit several of these issues, which oftentimes appear inconsistent with the NRC's Principles of Good Regulation. We will also set out our expectations for the NRC to report routinely to the Committee on actions to correct these and other problems.

The Backfit Rule

On July 17th, 1998, the Commission met with a group of stakeholders. One of the concerns raised was the need for "stricter application of the Backfit Rule."³ Strict application of and adherence to the Backfit Rule is necessary to maintain the NRC's Reliability Principle of Good Regulation which states:

"Once established, regulation should be perceived to be reliable and not unjustifiably in a state of transition. Regulatory actions should always be fully consistent with written regulations and should be promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes."

The concern raised in 1998 has re-emerged in recent years as evidenced through ongoing oversight by this Committee and by a recent decision by the Executive Director regarding an industry appeal of a backfit which was not consistent with written regulations. While it is important for the NRC to have a process for the industry to appeal decisions, this example is inconsistent with the Reliability Principle as stated above. We question why this problem was

² Transcript of Committee on Environment and Public Works hearing: *Oversight of the FY 2017 Budget Request for the Nuclear Regulatory Commission*; April 6, 2016.

³ NRC Memorandum: "Staff Requirements: Public Meeting on Stakeholder Concerns"; July 17, 1998.

not resolved earlier in the process and how many other issues currently under consideration may be proceeding down a similarly tortured path without being fully consistent with written regulations.

We acknowledge that the agency is taking steps to reinvigorate its Committee to Review Generic Requirements (CRGR) to improve adherence to the Backfit Rule. While this is a step in the right direction, it may not be adequate to restore disciplined adherence to agency procedures considering the chain of events revealed through our oversight over the last several years.

On February 4, 2013, several members of this Committee wrote to the NRC raising concerns about a staff proposal to require the addition of “filtered vents” at some U.S. nuclear plants and the need for disciplined cost-benefit analysis:

“We respectfully urge the NRC to take its time to make the correct regulatory changes that follow a responsible and thorough approach to ensure plant safety and that any new requirements established for the U.S. commercial nuclear reactor fleet are justified by the law, supported by sound data, and warranted by a robust cost-benefit analysis.”

Subsequently, on May 23, 2013, Sen. Vitter and House Energy and Commerce Committee Chairman Upton requested the Government Accountability Office (GAO) review the NRC’s cost-estimating methods since accurate cost estimates are “...particularly important when rules or requirements add marginal enhancements to existing nuclear power reactor safety – cases in which safety benefits may not be significant enough to warrant the addition costs” and reflecting concerns that “...the NRC has a track record of producing cost estimates for its requirements on nuclear power reactors that can be egregiously off target from the actual costs of implementing the requirements.” GAO assessed the NRC cost-estimating procedures and found that they “...do not adequately support the creation of reliable cost estimates.”⁴ The NRC staff agreed to improve its procedures but, nearly two years later, those efforts have not been completed.

In the wake of criticism for the accuracy of its cost-estimates, the NRC staff sought to justify the imposition of regulatory changes by citing subjective, qualitative factors as several members of this Committee noted in a letter to the Commission on March 4, 2015. In this letter, the senators stressed: “*The rigorous, quantitative technical and cost-benefit analyses inherent in the Backfit Rule are also essential to observing the NRC’s Principles of Good Regulation: Efficiency, Clarity, and Reliability.*” The Commission directed the staff to “...use qualitative factors to inform decision making, in limited cases, when quantitative analyses are not possible or practical” and to provide a draft of revised guidance to the Commission.⁵

⁴ Government Accountability Office Report 15-98: *NRC Needs to Improve Its Cost Estimates by Incorporating Best Practices*; December 2014.

⁵ NRC SECY 14-0087: *Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses*; March 4, 2015.

On July 15, 2015, Committee members were compelled once again to write the Commission, this time noting how the NRC staff apparently ignored the Commission's direction regarding the use of qualitative factors:

"We agree with the Commission's direction that the use of qualitative factors, which are subjective by their very nature, should be limited and the Commission should be the sole arbiter regarding the application of qualitative factors in decision-making. However, in spite of this clear direction from the Commission, the NRC staff justifies regulatory requirements in both the Mitigating Strategies and Containment Protection papers by using qualitative factors to supersede insufficient cost justifications."

In the absence of revised guidance, the NRC staff continued to cite qualitative factors as a justification. We understand that the draft revised guidance regarding the use of qualitative factors, in part, will be provided to the Commission for its review and approval.

It now appears that the NRC staff has expanded their use of the Backfit Rule's compliance exception to justify regulatory changes that may not be consistent with written regulations, established agency precedent, or withstand the scrutiny of a robust technical and cost-benefit analysis. This issue was at the center of the backfit appeal mentioned above. There are clear policy implications arising from the Executive Director's recent decision on the backfit appeal. The Committee expects that NRC will, as a minimum, review the inventory of in-process regulatory actions to ensure that they are consistent with the policy position implicit in the Executive Director's decision.

The NRC backfitting guidelines state:

"Backfitting is expected to occur and is an inherent part of the regulatory process. However, it is to be done only after formal, systematic review to ensure that changes are properly justified and suitably defined. The requirements of this process are intended to ensure order, discipline, and predictability and to enhance optimal use of NRC staff and licensee resources."

We agree. Strict adherence to the Backfit Rule is necessary to discriminate between proposals that are safety-significant and cost-justified from those that would impose an unnecessary and unjustified regulatory burden. This is crucial to ensuring NRC and licensee resources are focused on the items with the greatest safety benefit. When proposals are likely to fail a cost-benefit analysis or are inconsistent with written regulations, regulators should strictly adhere to established policy.

Similarly, strict adherence to the Backfit Rule is a necessary step toward mitigating the cumulative effects of regulation. We agree with the NRC staff's previous warning that the cumulative effects of regulation "...can potentially distract licensee or entity staff from executing

other primary duties that ensure safety or security.”⁶ We believe that the disciplined use of the backfit process does, in fact, optimize the use of NRC and licensee resources.

The chain of events we have recounted here emphasizes the need for increased attention to ensuring stricter adherence to the Backfit Rule in practice and in spirit. The environment that led to this situation has developed over a long period of time. While the Commission and senior management appear to be taking steps to improve adherence to the Backfit Rule, this problem will not be remedied without greater involvement and sustained vigilance by senior agency leadership. The NRC holds its licensees to a very high-standard with regard to procedural adherence. The agency should expect no less from its own staff in adhering to NRC’s policies and internal procedures governing regulatory changes.

Reactor Oversight Program

In the Committee’s view, the single most significant reform that grew out of Chairman Jackson’s improvement efforts in the NRC in the late 1990’s was the establishment of the revised Reactor Oversight Process (ROP). This reform was intended to replace fairly subjective assessments with an objective, risk-informed, and transparent system based on measureable performance indicators. Its predecessor program, the Systematic Assessment of Licensee Performance, had been widely criticized for yielding inconsistent results due to an over reliance on subjective judgements by the NRC staff.

One key aspect of the ROP is the Significance Determination Process (SDP) which is used to determine the safety significance of inspection findings. We understand the NRC staff is advocating the increased use of subjective (or qualitative) factors in the SDP to save time and resources: “NRC is taking too long and using too many resources to determine the significance of greater than Green (GTG) inspection findings for the reactor safety cornerstones.”⁷ Seeking to improve efficiency is a laudable goal that we normally support. However, increasing subjectivity in a key aspect of the ROP runs counter to the purpose of its inception: to establish an objective, transparent, predictable, and repeatable process.

Furthermore, questions have been raised about whether the assertion that the SDP is too time and resource intensive is accurate. In the NRC’s Regulatory Information Conference for 2016, David Lochbaum of the Union of Concerned Scientists presented his analysis that the SDP consumes “*about 6.1% of the inspection-related resources*” on the more safety-significant inspection findings which comprise 2.1% of the total inspection findings.⁸ He observed that:

- “Brain surgeries take more resources than wart removals”;

⁶ Nuclear Regulatory Commission [SECY 11-0032: Consideration of the Cumulative Effects of Regulation in the Rulemaking Process](#); March 2, 2011.

⁷ Nuclear Regulatory Commission Reactor Oversight Program Working Group Public Meeting, November 17, 2015.

⁸ Nuclear Regulatory Commission Regulatory Information Conference: “To Be Fast or Not to Be Fast: That’s the SDP Question”; David Lochbaum, Union of Concerned Scientists; March 10, 2016.

- “Annual ROP metrics indicate that untimely SDP outcomes are the rare exception to an otherwise timely rule”;
- “If it ain’t broke, don’t break it.”

The NRC Inspector General recently concluded an audit of the SDP and concluded:

NRC needs to establish, communicate, and document clear and consistent expectations for staff and managers to complete their roles in the SDP; clarify more-than-minor screening questions; and implement controls to ensure independent audits of greater than Green inspection findings are performed and documented....NRC does not know the amount of resources used by staff and managers to complete various steps in the SDP.

NRC does not know the extent of resources used to complete each SDP step, and staff and managers do not know how much time they have to complete each SDP step. This is because NRC has not evaluated the resources used to complete each SDP step, nor has it established or communicated clear and consistent expectations for how long staff and managers should spend completing each step. As a result, NRC (1) does not have a complete view of how resources are used, (2) may undertake unnecessary changes to improve timeliness, and (3) cannot compare actual performance to planned performance. Additionally, without clear and consistent expectations, step completion time is driven by individual staff and manager priorities.

Additionally, inspectors and managers explained that nearly any performance deficiency can be presented to adversely affect the associated cornerstone objective because the cornerstone objectives are broad.⁹

The assessments by the Inspector General and Mr. Lochbaum suggest the desire to accelerate SDP decisions is misplaced. Expanding the use of qualitative factors does not appear justified. We appreciate the Commission’s engagement on this issue including the direction to the NRC staff to provide all proposed changes related to the ROP “...*accompanied by thorough, data-driven analysis that clearly identify the program performance issues that need to be addressed.*”¹⁰ The integrity of the Reactor Oversight Process is vital. Any changes should be thoroughly scrutinized to ensure that the program’s objectivity, risk-informed basis, understandability, and predictability are preserved to the maximum extent.

Project Aim 2020

The Committee acknowledges the progress to-date made by the NRC under Project Aim 2020 to improve the agency's ability to plan and execute its mission, with a goal of transforming

⁹ NRC Office of the Inspector General: *Audit of the NRC’s Significance Determination Process for Reactor Safety*; September 26, 2016.

¹⁰ U.S. Senate Committee on Environment and Public Works hearing: *The President’s FY 2017 Budget Request for the Nuclear Regulatory Commission*; Questions for the Record; April 6, 2016.

the agency over the next four years to improve the effectiveness, efficiency, and agility of the NRC. However, we believe there is much work left to be done. In recent years, six reactors have closed prematurely and another 5 have announced plans to close. There are reports that 15 to 20 additional reactors may be at risk of premature closure and up to 55GW of nuclear capacity is facing sustained operating losses.¹¹ While the size of the NRC may not follow the industry's decline precisely, the agency must consider more fully how its size and structure should adapt for various scenarios of a smaller industry.

For example, the NRC would be well served to better understand how changes in the number of operating reactors impact the number and functional alignment of NRC regional offices. In 1994, the NRC reduced the number of its regions from five to four leaving an average of 27 operating reactors per region. Accounting for the planned shutdowns and the four new reactors likely to begin operations, there would be 100 reactors – at most – operating in 2020. Reducing the number of regional offices to three would result in a maximum of approximately 34 reactors per region but quite likely fewer given the economic challenges currently facing the industry. We question whether the additional corporate support costs of maintaining four regional offices is appropriate given the advances in communication and information technologies since 1994.

Similarly, given the stability and maturity of the NRC's security program fifteen years after the September 11, 2001 terrorist attacks, consolidation of the Office of Nuclear Security and Emergency Response within the program offices should also be examined. Organizational efficiencies and lessons learned from the recent merger of the Office of Nuclear Materials and Safeguards (NMSS) with the Office of Federal and State Materials and Environmental Management Programs (FSME) and the pending merger of the Office of New Reactors (NRO) and the Office of Nuclear Reactor Regulation (NRR) should readily inform this review.

The NRC's workload in reactor oversight, licensing actions, and new reactor reviews has decreased from that of ten years ago, yet the NRC's workforce and resources remain higher. Members of the Committee have urged the Commission to correct this discrepancy and to find additional cost savings within its corporate support spending, to prioritize research projects by safety significance, and to reestablish previous levels of efficient and timely decision-making. To these ends, we expect that the NRC will consider Project Aim to be a continuous forward-looking planning process that is fully integrated into the NRC's strategic planning efforts.

Timely Decision-making

The Atomic Energy Act, as amended, provides for both the development and the regulation of the uses of nuclear materials and facilities in the United States, declaring the policy

¹¹ Bloomberg New Energy Finance: *Reactors in the Red: Financial Health of the US Nuclear Fleet*; July 7, 2016.

that "the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." The Act requires that civilian uses of nuclear materials and facilities be licensed, and it empowers the NRC to establish by rule or order, and to enforce, such standards to govern these uses as "the Commission may deem necessary or desirable in order to protect health and safety and minimize danger to life or property." As the sole licensing authority in the United States, it is incumbent upon the NRC to service the licenses it issues in a timely manner. This was a concern in 1998 and has also reemerged in recent years.

Consistent with the NRC's Principles of Good Regulation, timely and efficient decision-making is a core value. However, the committee is aware of stakeholders' concerns with the timeliness of some NRC actions, including efficient and cost-effective review of licensing actions for current licenses as well as applicants for new licenses, design certifications, and early site permits.

A common theme among stakeholders is the lack of discipline in the request for additional information (or RAIs) issued by NRC reviewers to licensees and applicants to supplement the original application with information necessary to make a final safety determination. In this Committee's oversight hearing on April 6, 2016, Senator Barrasso highlighted one case involving the United States Geological Survey where some RAIs were wholly unnecessary and unwarranted. It is our understanding that the NRC is unable to readily report the numbers and/or rounds of RAIs that it issues which suggests a lack of management oversight.

David Lochbaum, the Nuclear Safety Project Director for the Union of Concerned Scientists has also voiced concerns about remedying RAI process deficiencies:

"Prior to the July 26, 2016, Commission meeting with external stakeholders, I had honestly but naively believed that virtually every RAI represented prima facie evidence of a possible 50.9 violation. After all, 50.9 requires that submittals be complete and accurate in all material respects and the NRC staff would not be issuing RAIs for immaterial information. The transcript from that meeting (ADAMS ML16211A314) reveals several industry stakeholders bemoaning RAIs issued without just cause including Mr. Koehl (page 20, lines 11-14), Ms. Schlueter (page 57, lines 8-10), and Mr. Heacock (page 141, lines 6-10). During offline conversations with industry stakeholders that day, I heard recurring themes about new NRC reviewers asking questions that had been asked and answered long ago and other NRC staffers asking questions well outside the scope of the subject licensing action.

"Whereas performance shortcomings on the part of licensees may create the need for RAIs, I heard that performance shortcomings on the part of the NRC staff may create RAIs that are unneeded. With the industry's Delivering the Nuclear Promise initiative

and the NRC's Project AIM effort, there is ample incentive for "Goldilocks" RAIs; only those RAIs absent performance shortfalls by licensees and NRC staff.

"To better inform pathways to "Goldilocks" RAIs, I recommend that the NRC audit all the RAIs issued over a two or three month period. That period would preferably be recent, but sufficiently in the past to permit the bulk of the final agency decisions on the subject licensing actions to be completed. Completion of the licensing actions will assist the audit determine whether RAIs factored into the agency's decision-making process or were outside its scope.

"The results from this audit would likely define a small handful of primary causes for the RAIs. This awareness would shape decisions about resource allocations for optimal movement towards "Goldilocks" RAIs..."¹²

Mr. Lochbaum's recommendation of a two or three month audit is a logical, thoughtful and straightforward one which resonates strongly with Members of this Committee. Such an audit would very consistent with the NRC's Organization Values of Service ("responsive, accountable, proactive") and Excellence ("high quality, continuously improving, self-aware").¹³ However, the NRC rejected Mr. Lochbaum's recommendation:

"We have already taken multiple actions across the NRC to reinforce these expectations and enhance our processes. For example, the Office of Nuclear Reactor Regulation, the Office of New Reactors, and the Office of Nuclear Material Safety and Safeguards have all revised their staff guidance to enhance expectations on RAI and safety evaluation development. In addition, technical reviewers and project managers across the agency receive formal qualification and refresher training on various licensing topics, including RAI development. I am confident that these proactive approaches will enhance the efficiency and effectiveness of our safety and security reviews.

"You also recommended that the NRC audit recently issued RAIs to determine how they were used in agency decision making, developing an awareness that would shape decisions about optimal RAI use in the future. An independent review of the NRC's use of RAIs is currently being conducted by the U.S. Government Accountability Office (GAO), in response to a request from the U.S. Senate Committee on Environment and Public Works. The Senate request indicated that the GAO should complete its report by late 2016 or early 2017 to support hearings in the spring of 2017. These reports are typically

¹² Letter from David Lochbaum, Union of Concerned Scientists, to Victor McCree, Nuclear Regulatory Commission: *Request About Requests for Additional Information*; August 8, 2016.

¹³ NRC Organizational Values.

made publicly available by GAO, so you will be able to review the results and consider them in light of the concerns you raise in your letter.”¹⁴

We were quite surprised by the NRC’s rejection. While the GAO’s pending report may offer a useful overview, it is very unlikely to provide a similar level of detail to that of a forthright NRC audit. One of the clearest mechanisms for continued improvement is to learn from previous mistakes. While we commend the NRC for reinforcing its expectations and enhancing its processes for RAIs, we urge the NRC to pursue an audit in keeping with Mr. Lochbaum’s recommendation. Lessons learned from such an audit would surely improve resource allocation and efficiency, wholly consistent with the trait of “Continuous Learning” embodied in the NRC’s safety culture policy statement.¹⁵

The Committee recognizes the recent concerted effort by the agency into improve the timeliness of its license amendment reviews which had been adversely impacted due to the post-Fukushima actions. The NRC has an established goal of completing 95 percent of the requested license amendments within one year. If 95 percent of the license amendment reviews are expected to be completed within one year, then it can be reasonably expected that a subset of that number could be completed in shorter period. There is room for improvement in the efficiency and predictability of these reviews. To that end, establishing a stretch goal would enable the agency to better manage and monitor improvement.

The timely review of new plant applications has long been a focus of our concern. Several Construction and Operating License (COL) application reviews have stretched beyond eight years, twice as long as the original schedule projections. The NRC recently issued an Early Site Permit (ESP) after nearly six years of review, also twice as long as the original schedule projections . In August, Chairman Inhofe and Subcommittee Chairman Capito wrote to the NRC raising concerns about the need for the timely review of Inspections, Tests, and Analyses Acceptance Criteria (ITAAC) to prevent unnecessary delays in the ongoing new reactor construction and the need for licensees to have a transparent means to track their progress.¹⁶ The response we received indicated the availability of an “ITAAC status page” on the NRC’s public website.¹⁷ The information on the status page has not been updated in nearly three months. Furthermore, for ITAAC listed as “verified as complete” the information provided remains incomplete. Clearly this mechanism does not provide a timely and transparent means of

¹⁴ Letter from Victor M. McCree, Nuclear Regulatory Commission, to MR. David Lochbaum, Union of Concerned Scientists; September 14, 2016.

¹⁵ Nuclear Regulatory Commission Final Safety Policy Statement: <https://www.gpo.gov/fdsys/pkg/FR-2011-06-14/pdf/2011-14656.pdf>; June 14, 2011.

¹⁶ Letter from Chairman James M. Inhofe and Subcommittee Chairman Shelley M. Capito to Stephen Burns, Chairman of the Nuclear Regulatory Commission; August 23, 2016.

¹⁷ Letter from Stephen Burns, Chairman of the Nuclear Regulatory Commission, to James M. Inhofe and Shelley M. Capito, Chairman and Subcommittee Chairman of the U.S. Senate Committee on Environment and Public Works; September 19, 2016.

assessing progress. This situation amplifies our concerns regarding the NRC's efficient and transparent management of this process rather than alleviating them.

Conclusion

These concerns developed over time and will only be remedied by consistent management discipline and focus on continuous improvement similar to the approach adopted by former Chairman Shirley Jackson.

In the attachment to this letter, you will note a request for both graphical and narrative information on a monthly basis regarding significant operational and performance concerns facing the NRC. The format and content of the monthly report should be comparable to that imposed by this Committee in 1998. Graphical metrics supplemented by succinct narrative, is an appropriate approach to allow Congress to evaluate ongoing progress at the agency. A shorter report with easy to produce graphics, would also reduce the burden imposed by a more frequent reporting duration. We expect much of this information should be routinely produced and tracked through fundamental management of the agency and should not be overly burdensome to collect and provide.

The Committee considers this monthly report to be a living document. For report items that are completed, it should be noted in the current monthly report and reporting on that item should be discontinued going forward. As new issues arise, Committee members may ask to have them incorporated into the report.

Please provide the first report no later than February 6, 2016, and the first Monday of each following month. Should you have any questions, please contact Annie Caputo of the Committee Staff at 202-224-6176.

Sincerely,



James M. Inhofe
Chairman
Committee on Environment and Public
Works



Shelley Moore Capito
Subcommittee on Clean Air
and Nuclear Safety

Attachment

Graphical Metrics

1. Staffing
 - a. NRC Yearly Staffing (Full-Time Equivalent or “FTE”) budget and actual, since Fiscal Year 2000
 - b. Monthly Staffing (FTE) for preceding twelve months and projections for twelve months going forward for the offices of Nuclear Reactor Regulation, New Reactors, Uranium Recovery, Decommissioning, and for corporate support functions
2. Licensing
 - a. Size and median age of Licensing Action Inventory, monthly for one-year rolling metrics and annually for the past 10 years
 - b. Licensing Actions Performance, Planned vs Actual, monthly for one-year rolling metrics and annually for the past 10 years
 - c. Other Licensing Tasks Performance, Planned vs Actual, monthly for one-year rolling metrics and annually for the past 10 years
 - d. Size and median age of topical report reviews, monthly for one-year rolling metrics and annually for the past 10 years
3. License Renewal Inventory and Age, Planned vs Actual, based on 22 months for uncontested applications and 30 months for contested applications
4. Power Uprates, Planned vs Actual, based on the revised metrics in SECY-13-0070
5. Decommissioning Plant Licensing Action Inventory and Age, monthly for one-year rolling metrics and annually for the past 10 years
6. Uranium Recovery license and licensing action review inventory and average age, monthly for one-year rolling metrics and annually for the past 10 years
7. Design certification, COL, and ESP application review inventory including age and projected completion dates
8. Requests for Additional Information issued by each office including the offices of Nuclear Reactor Regulation, New Reactors, Uranium Recovery, Decommissioning:
 - Number of RAI’s issued during each month for each office;
 - Number of RAI’s completed during each month for each office;
 - Number of RAI’s open at the end of each month for each office;
 - 12-month rolling average number and 3-year rolling average number for each office;
 - Amount of contractor hours charged as Part 170 fees preparing and/or reviewing RAI responses;
 - NRC staff hours charged as Part 170 fees preparing and/or reviewing RAI responses
9. Reactor Oversight Process Findings year-to-date and 3-year rolling metrics, total and by region for green, white, yellow, and red findings
10. Percentage of Final Significance Determinations Made within 90 Days for All Potentially Greater-Than-Green Findings, monthly for one-year rolling metrics and annually for the past 10 years
11. Component Design Basis Inspection (CDBI) duration, fees, and percentage of fees used to reimburse contractors – monthly averages for three-year rolling metrics

12. New reactor licensing and inspection status for Vogtle 3&4 and Summer 2&3 including the percentage of NRC inspections completed and the percentage of ITAAC reviews completed within 30 days
13. Committee for the Review of Generic Requirements (CRGR) – please provide lists of the issues formally and informally reviewed including the CRGR recommendation on each. Please provide 12-month and 3-year rolling Averages for the following metrics:
 - a. For the number of issues reviewed formally: the percentage accepted for imposition on industry and the percentage rejected based on cost-benefit or Backfit concerns; and
 - b. For the number of issues reviewed informally: the percentage accepted for imposition on industry and the percentage rejected based on cost-benefit or Backfit concerns

Narrative Information – Provided in Concise Summary Form

1. Status of License Renewal reviews
2. Status of Subsequent License Renewal (SLR) readiness
3. Status of power uprate application reviews
4. Status of design certification, COL, and ESP application reviews
5. Status of licensing and inspection for Vogtle 3&4 and Summer 2&3 including any challenges to the timely resolution of licensing issues or Part 52 interpretations
6. Status of uranium recovery licensing including projected budget and timeline for both the environmental impact statement and safety evaluation report for each application review
7. Specific actions taken to improve efficiency of reviews conducted for compliance with the National Historic Preservation Act
8. Status of the pilot project on establishing flat fees for uranium recovery licensees
9. Status of specific actions taken or planned to ensure greater discipline and management oversight in the use of the Request for Additional Information (RAI) process associated with a regulatory requirement and limited to those RAIs necessary for make a regulatory decision. These actions should describe management oversight, management accountability, and the training necessary to provide stable and sustainable improvement among the applicable program business lines.
10. Status of specific actions undertaken to reduce corporate overhead costs including the amount of the savings and the timeframe for realizing the cost savings
11. Status of specific actions taken and/or planned to develop metrics for assessing the quality of cost-benefit analyses conducted in association with new requirements, backfit analyses, or rulemaking
12. Status of the revised guidance currently under development to clarify the use of qualitative factors. In addition to this revised guidance, please list and briefly describe any actions taken and/or planned that would maximize the use of quantitative factors in regulatory analyses required for rulemaking, in the regulatory analyses required under the Backfit Rule, and in the Reactor Oversight Process Significance Determination Process.
13. Status of the Committee to Review Generic Requirements (CRGC) review of the application of the Backfit Rule in the licensing and inspection programs across the agency. The review should include the following as a minimum:
 - a. The need for training on the requirements and application of 10 CFR 50.109;

- b. The need for a process, training, and/or oversight in addressing inspection issues that may redefine or reinterpret the original licensing basis (e.g. unresolved issues, task interface agreements, disputed violations) to ensure that new requirements are not imposed through the inspection program
 - c. A review of proposed regulatory changes that are currently in process to ensure that regulatory actions are appropriately informed by the requirements of 10 CFR 50.109, in light of the Executive Director's recent decision on the backfit appeal. Examples of such actions could include but are not limited to the following:
 - i. The Draft Regulatory Issue Summary on Service Life addressing the treatment of vendor recommendations within the regulatory framework
 - ii. 10 CFR 50.46(c) rulemaking for which the justification utilizes the adequate protection provisions of the backfit rule to obviate the need to compare the benefits of public health and safety with the cost of compliance for the three major portions of the rule
 - iii. Use of the compliance exception backfit as proposed by the NRC staff to address the "open phase condition (OPC)" issue
 - iv. Possible alteration of the risk reduction credit given for Incipient Fire Protection after the modifications have been installed and received approval from the NRC crediting the technology
 - d. Please report your progress in the monthly report
14. Status of Project Aim Task 19: Operating Reactor Licensing Process Improvements
 15. Status of effort to establish clear schedules and estimated number of reviewer hours for licensing action reviews
 16. Status of any potential changes to the Reactor Oversight Process
 17. Status of effort to provide greater transparency and detail in invoices to applicants and licensees.
 18. Clarity in Operability Determinations. The predictability and stability of the regulatory framework could be improved if there was greater clarity on operability determinations with regard to the entry conditions for triggering a review and the optimum use of risk insights for evaluating operability. Please describe the feasibility of utilizing an industry consensus document as a means of accomplishing predictability and repeatability in operability determinations.
 19. Significance Determination Process. Licensees maintain detailed, plant-specific Probabilistic Risk Assessment (PRA) models that are accessible to the NRC. Please describe the potential to utilize these more detailed models in lieu of the NRC's Standardized Plant Analysis Risk (SPAR) model as a means of reaching quantitative regulatory decisions that are more efficient and timely. Please also describe the actions taken and/or planned to address this opportunity.
 20. On a monthly basis, please report each instance where Inspection Manual Chapter 609 Appendix M, "Significance Determination Process Using Qualitative Criteria," has been applied in the Reactor Oversight Process Significance Determination Process, including the justification for doing so.
 21. Engineering Inspection Programs. In a rolling three year period, the NRC performs multiple inspections of engineering programs (e.g., Component Design Basis Inspection (CDBI), 10 CFR 50.59 and Modifications Inspection, Ultimate Heat Sink (UHS) Inspection, Tri-Annual

Fire Protection Inspection). The CDBI and UHS inspections predominantly look at the original licensing basis information on a recurring basis. This previously NRC-approved design basis information is the least likely to change and, without sufficient management oversight, could be subject to unjustified and post hoc reinterpretation by NRC inspectors and consultants. Please evaluate the potential benefits of utilizing the CDBI and UHS inspections as reactive inspection tools to be used only when issues are identified with current performance. Please provide a summary of your conclusions and any actions planned to address this issue.

22. Please describe the actions planned and/or taken to ensure that the Technical Specifications Task Force (TSTF) process achieves the regulatory efficiencies that were initially projected. Please include progress reports with regard to any TSTF “travelers” adopted by the industry.¹⁸
23. Improving New Plant Application Review Efficiency. Please review new-plant application reviews to identify necessary changes in practices and guidance to ensure the appropriate level of detail for application acceptance and review. Please describe any justifications for increasing the level of detail required beyond that of previous applications such as Vogtle 3 and 4, Summer 2 and 3, and the AP1000.
24. Please provide a list of any unresolved policy issues with regard to the licensing of small modular reactors (SMRs). Please include an approximate date for when each issue was first raised, any plans or actions taken to resolve the issue, and the projected date for resolution.
25. Please describe to progress toward preparing to review non-light water reactor applications.

¹⁸ Nuclear Regulatory Commission’s Technical Specification Task Force (TSTF) Travelers: <http://www.nrc.gov/reactors/operating/licensing/techspecs/post-revision3-sts.html>; April 14, 2016.