

POLICY ISSUE
Notation Vote

November 9, 2015

SECY-15-0143

FOR: The Commissioners

FROM: Victor M. McCree
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SUBJECT: PROJECT AIM AND CENTERS OF EXPERTISE

PURPOSE:

This paper provides the staff's evaluation of and recommendations for pursuing additional Centers of Expertise (COEs) within the U.S. Nuclear Regulatory Commission (NRC).

SUMMARY:

This paper provides the staff response to Staff Requirements Memorandum (SRM) SECY-15-0015, "Project AIM 2020 Report and Recommendations." The staff evaluated existing COEs and concluded that COEs can be a valuable organizational tool, but should only be used in the correct circumstances and only after the establishment of appropriate process and management controls. After balancing the desire to take advantage of the synergy and agility that COEs can provide while avoiding the potential impacts on productivity and effectiveness that poorly executed COEs could produce, the staff recommends pursuing COEs in four specific areas: rulemaking, allegations, external hazards evaluations, and technical specifications. For the areas recommended, the challenges associated with establishing COEs are or will be mitigated by standardized processes, appropriately developed and implemented priority and decision making processes, and integrated work planning.

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BACKGROUND:

SRM SECY-15-0015 "Project AIM 2020 Report and Recommendations" approved the staff's recommendation to "explore greater reliance on centers of expertise to provide leadership, best practices, research, and support in particular focus areas across the agency." As noted in the NRC's Project Aim 2020 report (Agencywide Document Access and Management System (ADAMS) Accession No. ML15023A558), the staff recommended more extensive use of COEs as a way to yield improvements in workload distribution, knowledge transfer, and agility and collaboration across the agency.

The COE organizational model relates to the centralization of functions and management of an area of expertise within one part of the organization while ensuring effective and efficient use of agency resources in executing the mission. As described in the Project Aim 2020 report, the NRC currently uses the COE model across certain business lines in areas such as vendor inspection, electrical engineering, and allegations. Similarly, the agency previously centralized materials inspection for Region I and Region II within Region I, and both the fuel cycle facility and the new construction inspections within Region II.

In SRM-SECY-2015-0015, the Commission directed the staff to conduct an evaluation of the effectiveness of existing COEs to determine whether expansion of this organizational model will lead to greater effectiveness and efficiency in accomplishing the agency's mission. The SRM directed that the staff provide the Commission, for its review and approval, an evaluation and recommendations related to COEs. The SRM directed that the staff's evaluation address the following:

- What additional specific COEs the staff recommends, if any, and what office would house each center, the appropriate balance between staff, contractors, and Department of Energy [DOE] laboratories, as well as other outside laboratory or academic institutions, and what efficiencies should be expected from the establishment of these COEs.
- How these centers would avoid the "stove-piping" that the report identifies as a concern with the existing office structure.
- How the agency would avoid organizational complexity and confusion with the creation of additional COEs.
- Use the lessons learned from the Transforming Assets into Business Solutions (TABS), including National Treasury Employees Union (NTEU) observations, the Office of Nuclear Materials Safety and Safeguards (NMSS)/Office of Federal and State Materials and Environmental Management Programs (FSME) merger, and existing COEs in its evaluation.

Following issuance of the SRM, the staff formed a working group (WG) with representatives from the Office of Nuclear Reactor Regulation (NRR), the Office of New Reactors (NRO), NMSS, the Office of Nuclear Regulatory Research (RES), the Office of Nuclear Security and Incident Response (NSIR), the Office of Enforcement (OE), the Office of The Chief Human Capital Officer (OCHCO), and the regions. NTEU was also represented on the WG. The evaluations and recommendations presented in this paper were coordinated with other impacted internal stakeholders such as the Office of Administration (ADM) and the Office of the

General Counsel (OGC). In addition, the WG interviewed management and members of the staff from potentially impacted organizations to gather insights on each of the proposed COEs. The WG considered the Project Aim 2020 report recommendations for additional COEs in the areas listed below.

1. Decommissioning.
2. Security (transfer radiation source security and security for research and test reactors back to NSIR.)
3. Seismic and flooding evaluations. (The WG added meteorology reviews and renamed this focus area as “external hazards evaluations.”)
4. Environmental reviews.
5. Rulemaking.
6. Operating experience and generic communications.
7. Criticality safety evaluations.
8. Advanced reactor technology.
9. Technical specifications.
10. Human factors.
11. Allegations.

DISCUSSION:

The Project Aim 2020 report recommendation for considering expanded reliance on COEs is intended to improve agility by relying on organizational structures that promote a more efficient response to unexpected changes in the nuclear industry. The WG developed the following definition of a COE:

A Center of Expertise is defined as an organization that provides agencywide centralized services, leadership, best practices, processes, support, mentoring, training, and knowledge management for a specific focus area in accordance with established priorities.

An organization (e.g., office, division, or branch) may provide some or most of the functions and benefits of a COE at a level other than agencywide (e.g., the organization may serve several business lines but not all business lines). For the purposes of this paper they are referred to as limited scope COEs.

Based on the WG’s review of NRC experience, benefits of a COE have included enhanced ability to shift resources or work assignments to meet the demands of a changing environment, increased organizational capacity without increases in resources, and more effective knowledge management and maintenance of critical skill sets. Effective COEs also enhance decision-making, provide cross-office standardization, and expand employee knowledge sharing and experience in each selected area. The expectation is that efficiencies gained through the establishment of a COE will result in an organization that is optimally resourced to function more effectively and efficiently while meeting the needs of offices across the agency in carrying out the Agency’s mission.

Summary of Evaluations for Potential Additional COEs

The WG developed a set of questions to guide its evaluation on the feasibility of pursuing COEs for the 11 specific areas discussed in the Project Aim report. The WG conducted interviews with potentially impacted staff and management to discuss the pros and cons of pursuing COEs in these areas. These questions focused on key considerations including: functions, resources, organization, infrastructure, potential benefits, and the cost of creating a COE. The WG considered items that have historically created challenges, including: alignment on processes, procedures, guidance, and regulations; the degree of alignment on training and qualification programs; lack of alignment on roles and responsibility, including identification of the decision making authority; and work planning and prioritization processes for the current organization and for the proposed COE. The WG also considered the current and projected future workload of each organization, important and high risk projects that could affect the timing of COE implementation, potential impacts on the remaining organization, as well as the clarity of roles and responsibilities of the current organizations and the proposed COE. The detailed evaluation of each area may be found in the WG's report "Summary of Evaluated Areas for Centers of Expertise" (ADAMS Accession No. ML15334A192).

The WG concluded that 2 of the 11 areas - generic communications and advanced reactor technology – already exist as COEs. For the remaining areas, the WG found that in most cases, the benefits of creating additional COEs were not readily evident. However, the WG did recommend pursuing COEs in four specific areas because the formation of COEs would provide an opportunity to improve the agency's ability to respond to changing workloads, increase readiness for the potential merger of NRR and NRO, and enhance knowledge management and agencywide standardization. For the areas recommended, the challenges associated with establishing COEs will be mitigated by either existing infrastructure, tools and processes, or by developing new infrastructure such as common processes, priority schemes, clear decision making responsibility, and integrated work planning.

Based on these evaluations, the staff recommends that an agencywide COE be pursued in the area of rulemaking and limited scope COEs be established for allegations, external hazards, and technical specifications. With respect to rulemaking, one benefit of a rulemaking COE is that this area has significant alignment on regulations, processes, procedures, training, and an agencywide prioritization scheme. In addition, a COE would help to position the agency to maximize effectiveness and efficiency as the workload in this area declines in the next several years. The WG considered several locations including NRR, NRO, NMSS, RES, and ADM and concluded that establishing a COE in any of these offices provided both benefits and risks. These risks are mitigated by existing processes for managing rulemaking activities including the rulemaking coordination committee, the rulemaking activity plan, and periodic reports on the status of rulemaking activities. These reports will continue to ensure that rulemakings are adequately prioritized and efficiently completed.

The WG acknowledged that a rulemaking COE in ADM would benefit from the existing experience that ADM has in working across business lines to prioritize and coordinate rulemaking activities as well as ADM's established relationships with external stakeholders involved in the rulemaking process such as the Office of the Federal Register and the Office of Management and Budget. However, the WG identified that the technical and policy development aspects of rulemaking should be led by a program office that conducts licensing

activities to ensure that rulemakings will directly and effectively support the safety, security, and environmental reviews for which program offices have lead responsibility. The WG concluded that NMSS would be the best location for the COE because it has extensive experience coordinating diverse (e.g., fuel facility, security, materials) rulemakings across multiple business lines. The WG also determined that moving rulemaking out of the reactor offices would facilitate a potential future merger between NRR and NRO. This COE would house project managers and regulatory analysis staff from the existing rulemaking branches in NRR, NRO, and NMSS. Technical basis development for rulemakings would continue to be an ancillary duty of technical staff in each program office and would continue to be part of the office budgets. OGC, ADM, and RES would retain their current responsibilities (i.e., legal, administrative, and regulatory guide development support) in this area. With respect to potential resource savings, the recommendation to establish an agencywide rulemaking COE came late in the development of this paper. Additional implementation work will be required to assure that the staff objective of a reduction in supervisory staff is realistic. Additionally, the ultimate organizational structure and size of the rulemaking COE may be impacted by the results of the Project Aim 2020 re-baselining effort.

The staff acknowledges additional changes in rulemaking processes may be pursued as described in SECY-15-0129, "Commission Involvement in Early Stages of Rulemaking." In addition, the staff is considering a proposal to increase OGC's role in the rulemaking process. Under this proposal, OGC would take responsibility for the initial draft of most of the material published in the Federal Register based on the regulatory basis and regulatory analysis prepared by technical staff. OGC and the Office of the Chief Financial Officer (OCFO) have agreed to pilot this approach for the 2016 fee rule, and OGC is working with the technical program offices to explore an additional pilot opportunity. Neither of these efforts is expected to impact the recommendation that a COE for rulemaking be established within NMSS.

The staff recommends that the current limited scope COE for Allegations in OE be expanded to include the consolidation of the Office Allegation Coordinator functions for all program offices (NRR, NRO, NSIR, NMSS, and the Office of International Programs) in headquarters. This change offers resource savings (estimated at one full-time equivalent (FTE)), and improves organizational agility and consistency across the agency with low risk of negative side effects. The WG discussed full expansion to an agencywide Allegations COE to include the regional functions. However, the WG acknowledged that the benefits of centralizing the regional allegation coordinator functions in OE may not outweigh the potential risks of implementing a new organizational model. Thus, the staff recommends maintaining the *status quo* for the regions.

The staff also recommends pursuing limited scope COEs in the areas of external hazards evaluations and technical specifications in support of the new and operating reactor business lines. The staff recommends that external hazards evaluations for natural phenomena be centralized in NRO, and technical specifications for new and operating reactors be centralized in NRR. In the area of external hazards evaluations, an unofficial COE essentially exists at this time, and the staff has already implemented work process controls and priority management to ensure the effectiveness and efficiency of work in both business lines. A major benefit of centralizing these functions at this time is that it would normalize the workload and support a potential merger of NRR and NRO, if approved by the Commission. The staff does not recommend further consolidation of other business lines into agencywide COEs in these areas at this time due to potential disruption or negative impacts on significant work currently

underway, and the differences in standards, regulations, and approaches between the reactors and other regulated facilities. Agencywide COEs in these focus areas could be considered further after evaluating the lessons learned from centralization of external hazards evaluations and technical specifications in the reactor business lines.

In summary, the staff recommends pursuing additional COEs in the areas of rulemaking, allegations, external hazards evaluations, and technical specifications. The balance between staff, contractors, and DOE laboratories, as well as other outside laboratory or academic institutions, is not expected to change with implementation of a COE in the near term. Although the balance is influenced by the technical capabilities of the COE staff, it is primarily driven by the work characteristics (e.g., routine versus novel, short term versus long term, sporadic versus steady). Efficiencies in the short term are not significant, being limited to one or two FTE per year (prior to re-baselining decisions). Additionally, there are costs associated with establishing these COEs. These costs include establishing and documenting roles and responsibilities and the standardization of procedures, work management tools, and prioritization schemes as well as the expense of physical moves to co-locate people. The work to implement change is generally performed by the people being consolidated, and will be managed to avoid any scheduler impacts on core mission work. However, additional efficiencies and increased capacities may be realized in the long term to increase the payback on the investment in setting up the COEs. In terms of timing, the staff's recommendations have been prioritized to reflect which COEs could be implemented in the near term. The timing for the establishment of a COE reflects the level of complexity that is involved and the agency's plans for a future potential merger, should the Commission approve, of NRR and NRO.

Other Considerations

In the SRM, the Commission also directed the staff to address how these COEs would avoid "stove-piping;" to explain how the agency would avoid organizational complexity and confusion with the creation of additional COEs; and to use the lessons learned from TABS including NTEU observations, the NMSS and FSME merger, and existing COEs.

Effective communications and shared expectations are required to prevent negative impacts from office interdependency. When communications are not effective and priorities are not in alignment, then "stove-piping" leads to poor performance and results. For the COEs proposed in this paper, the infrastructure already exists or will be developed to prevent "stove-piping."

With respect to organizational complexity, the staff has included detailed strategies to address this concern through the development of draft guidance for the evaluation and implementation for COEs. This guidance was initially developed by NRR and NRO to support the potential NRR-NRO merger. These strategies include developing and documenting high-level principles and ground rules for COEs that address areas such as work prioritization, reporting structures, decision-making processes, and communications. The draft guidance includes direction for COEs on initiating routine briefings for the management in supported offices to ensure shared understanding of key issues and an agreement on priorities, milestones, schedules, and deliverables. The guidance document also specifies that a process is needed for evaluation of customer needs and translation of those needs into requirements of the COE.

By establishing a standardized process for the creation of a COE, the agency will avoid organizational complexity and confusion. The agency guidance would provide a change

process to define and document necessary activities to be managed during the transition to ensure effective, long-term, and sustainable results after a decision to establish a COE has been made. The change process from the current organizational structure to a new COE would be managed and timed in such a manner to minimize disruptions to existing work. The guidance would define the infrastructure required to be in place prior to establishing a COE, including a charter that identifies a functional statement and mission for the COE, the lead program office, the organizational structure, and the roles and responsibilities of the COE. The process would ensure that outcomes and metrics are included in the guidance for establishing a COE.

With respect to lessons learned, the Enclosure provides a summary of lessons learned from TABS, the NMSS/FSME merger, and existing COEs. The WG found that the existing COEs have been effective (while some similar efforts to work across organizational lines have not been effective). The major benefits resulting from the creation of these COEs include increased productivity, improved technical consistency, timely and higher quality technical input and products to affected business lines, enhanced processes and procedures, streamlined management chains, minimal level of effort to ensure consistent management direction, and enhanced knowledge management. Beyond these benefits and some reduction in supervisory ratios, significant resource savings have not been realized with many of the existing COEs. This is because centralization of functions does not involve fundamental changes in the amount of work completed or the processes for completing the work. Rather, the benefits are reflected as intrinsic savings including increased organizational effectiveness and agility (i.e., cost avoidance). The WG has incorporated the lessons learned from evaluating existing COEs into the draft guidance for establishing and implementing COEs. This guidance will be used in pursuing the COEs recommended in the paper to ensure that the lessons learned from current COEs are applied.

The staff also considered challenges that arose with the implementation of COEs, including the degree of alignment of processes, procedures, guidance and regulations, and work planning and prioritization, among others. These challenges as well as those highlighted during the implementation of the TABS initiative will be addressed in the COE guidance documents to avoid repeating similar shortcomings. Organizational changes associated with the formation of a COE will be coordinated with OCHCO so that personnel management implications can be addressed. The WG members met with potentially impacted staff and informed them of the WG's recommendations for pursuing additional COEs, subject to Commission approval. The NTEU participated in the COE WG meetings for the development of this paper and was invited to the meetings with impacted staff. Some staff expressed concern about ensuring that we address the challenges experienced with previous COEs and that we fully establish a clear case for change for each COE being proposed. However, no "fatal flaws" were identified during discussions with potentially impacted staff. If approved by the Commission, before implementing additional COEs, the team will engage OCHCO and the NTEU in the process and solicit additional input from potentially impacted staff to ensure these concerns as well as any additional staff concerns regarding changes in their work environment are addressed during the implementation process.

Next Steps

If the proposed COEs are approved by the Commission, the staff will ensure that the documentation of the benefits and costs for the recommended COEs is fully developed,

consistent with the draft implementation guidance discussed above, before moving forward with COE implementation. This will provide a clear case for change and will ensure adequate alignment between affected stakeholders, including the staff and the NTEU. It will also serve as a test of the implementation guidance for establishing COEs. If at any stage of the COE implementation process, the staff finds unforeseen safety, security, or management concerns that cannot be reasonably mitigated, the COE will be reevaluated, and a decision will be made regarding whether to move forward with its establishment or maintain the current organizational structure for that area. The Commission will be notified of any such decision. The draft guidance will be used to ensure that all the infrastructure required to ensure the success of a COE is in place prior to implementing the organizational changes. The staff implementation plan will include an effectiveness review of the COE and an assessment of whether additional resource savings can be realized. This review and assessment will be completed within 3 months after the first year anniversary of each COE.

After assessing lessons learned from the COEs recommended above, the staff plans to finalize the COE implementation guidance. With the agency guidance in place, the staff will have the framework necessary to pursue COEs in a consistent manner.

RECOMMENDATIONS:

The NRC staff recommends that the Commission:

1. Approve the proposed recommendations for pursuing an agencywide COE for rulemaking to be housed in NMSS, an expansion of the limited scope COE for Allegations to include the allegation coordination functions for headquarters in OE, and additional limited scope COEs in the areas of external hazards evaluations and technical specifications for new and operating reactors.
2. Approve the proposed recommendation to fully develop and complete agency guidance on identifying, evaluating, and implementing future COEs.

RESOURCES:

The staff estimates two to four FTEs would be needed to complete the guidance development and fully document the evaluation and implementation process for the four COEs identified above over the next two fiscal years. In addition, the cost of co-locating staff is estimated to be on the order of \$95,000. These costs will be addressed during the planning, budgeting, and performance-management process. These initial costs will be offset by efficiencies of at least one to two FTE realized immediately and maintained in the longer term.

The Commissioners

- 9 -

COORDINATION:

This paper has been coordinated with OGC, which has no legal objection. OCFO has reviewed this paper for resource implications and has no objections.

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Enclosure:
Summary of Lessons Learned

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Enclosure:
Summary of Lessons Learned

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