POLICY ISSUE
INFORMATION

April 22, 2008 SECY-08-0057

FOR: The Commissioners

FROM: Luis A. Reyes
Executive Director for Operations

SUBJECT: AGENCY LONG-TERM RESEARCH ACTIVITIES

PURPOSE:

In SECY-07-0192, "Agency Long-Term Research Activities for Fiscal Year 2009," dated October 31, 2007, the staff indicated that it would provide the Commission with FY 2010 exploratory long-term research activities in a February 2008 report, with subsequent reports submitted yearly in December, coincidently with the initiation of the budget formulation process. The purpose of this paper is to provide the Commission with the results of the Fiscal Year (FY) 2010 long-term research activity review. In addition, this paper provides an overview of some of the enhancements that the staff will make to its exploratory long-term research identification process for FY 2011 and beyond. This paper does not address any new commitments.

BACKGROUND:

The U.S. Nuclear Regulatory Commission's (NRC's) Office of Nuclear Regulatory Research (RES) aligns its research strategies with the agency's role as a regulator. For example, if the industry conducts research to establish a safety case, the NRC may conduct confirmatory, independent research to review the industry's research results and applications and assess potentially significant beyond-design basis issues.

CONTACT: Jocelyn Mitchell, RES/DSA
(301) 415-5289

As part of its current processes, the NRC routinely identifies research activities that support current and anticipated near-term (within the next few years) regulatory needs. However, prior to FY 2007, it had no structured program to identify research the agency might need in the longer term (5-10 years).

In SECY-07-0068, "Candidate Agency Long-Term Research Activities for Fiscal Year 2009," dated April 6, 2007, the NRC staff provided the Commission a draft exploratory long-term research report and committed to yearly updates of this plan. In SECY-07-0192, the NRC staff identified those activities to be undertaken in FY 2009, following feedback from internal and external stakeholders and the exploration of collaborative opportunities for leveraging resources.

As stated in SECY-07-0192, the staff will provide the updated plan coincidently with the initiation of the budget formulation process. Therefore, when the new process discussed below is implemented, the staff will update the plan each January, starting with the research plan for the FY 2011 budget.

DISCUSSION:

In December 2007, RES staff solicited input from the program offices, regional offices, and international partners on the exploratory long-term research activities that the agency should consider undertaking in FY 2010. As a result of that solicitation, no new issues were identified. Many identified issues did not meet the criteria for exploratory long-term research and were eliminated from further consideration. The eliminated issues were either duplicate of activities identified in SECY-07-0192, were outside the scope of NRC's responsibility, or were low priority. In addition, no new issues were identified because many of the activities were already addressed in research plans currently underway. That is, NRC's ongoing research program in fact already included a number of activities that meet the definition of long-term research but were not specifically called out as such. For instance, issues related to advanced reactor designs, license renewals beyond 60 years, and wireless digital instrumentation and controls are all part of existing research plans and are already budgeted.

Although no new long term research programs were identified for FY 2010, it does not preclude the identification of new candidate issues in the future, and we will continue with periodic solicitations for candidate topics. However, based on our experience with the current process, RES is proposing some changes to enhance our identification of exploratory long-term research projects. The staff will pilot the process in FY 2009 as part of the FY 2011 budget preparation, and if it is successful, the staff will use this process in succeeding years.

In the pilot, the staff will provide additional clarification on what constitutes exploratory long-term research. The staff will emphasize that exploratory long-term research activities are intended to provide fundamental insights, information addressing potential technical issues, or identified gaps to support anticipated future (>5 years) NRC needs. RES will then request staff and other stakeholders to propose projects that would meet the criteria for exploratory long-term research. A committee comprising a subset of the agency's Senior Level Technical Advisors (SLS) will review all suggested exploratory long-term research activities, and rank each activity. The committee would have expertise that spans the range of agency activities, and these SLS committee members would also contribute their professional stature and strategic thinking skills to provide the best review. RES will consider the committee's prioritization and consult with the

program offices before funding any high-value scoping activities. Providing more clarity regarding the definition of exploratory long-term research will minimize the number of topics that are identified but are rejected, making the process more efficient.

RES will evaluate the results of the exploratory research programs and determine if the agency would benefit from any additional research to support expected future regulatory decisionmaking and who should conduct this additional research (i.e., the NRC or the industry). If RES, in consultation with the program offices, determines that the agency should conduct this additional research, the staff will incorporate this work into an existing research plan and will pursue resources through the Planning, Budgeting and Performance Management (PBPM) process.

In its letter dated March 6, 2008, the Advisory Committee on Reactor Safeguards (ACRS) provided the results of its review and its comments on the NRC reactor safety research program. The ACRS provided recommendations and basis for areas in which the NRC should perform additional exploratory long-term research. In response, the staff agreed with the ACRS comments and recommendations and noted that because of resource limitations, the staff will continue to prioritize their recommendations as part of the budget process and to discuss them further as it interacts with the appropriate subcommittees.

RESOURCES:

The staff can implement changes to the process within its existing full-time equivalents and dollar allocations. Any resources needed to address future issues identified for long-term research will be included as part of the PBPM process.

COORDINATION:

The Office of the General Counsel reviewed this package and has no legal objection. The Chief Financial Officer reviewed this package and has no objection.

/RA/

Luis A. Reyes
Executive Director
for Operations

program offices before funding any high-value scoping activities. Providing more clarity regarding the definition of exploratory long-term research will minimize the number of topics that are identified but are rejected, making the process more efficient.

RES will evaluate the results of the exploratory research programs and determine if the agency would benefit from any additional research to support expected future regulatory decisionmaking and who should conduct this additional research (i.e., the NRC or the industry). If RES, in consultation with the program offices, determines that the agency should conduct this additional research, the staff will incorporate this work into an existing research plan and will pursue resources through the Planning, Budgeting and Performance Management (PBPM) process.

In its letter dated March 6, 2008, the Advisory Committee on Reactor Safeguards (ACRS) provided the results of its review and its comments on the NRC reactor safety research program. The ACRS provided recommendations and basis for areas in which the NRC should perform additional exploratory long-term research. In response, the staff agreed with the ACRS comments and recommendations and noted that because of resource limitations, the staff will continue to prioritize their recommendations as part of the budget process and to discuss them further as it interacts with the appropriate subcommittees.

RESOURCES:

The staff can implement changes to the process within its existing full-time equivalents and dollar allocations. Any resources needed to address future issues identified for long-term research will be included as part of the PBPM process.

COORDINATION:

The Office of the General Counsel reviewed this package and has no legal objection. The Chief Financial Officer reviewed this package and has no objection.

/RA/

Luis A. Reyes
Executive Director
for Operations

ADAMS Accession No.: ML080870353 **WITS 200700129/EDATS: SECY-2008-0172**

OFFICE	DSA	BC:SPB	Sunsi Review	Tech Editor	D:DSA	RES/DRA
NAME	JMitchell	JYerokun	FEltawila	HChang (by email)	FEltawila	CLui
DATE	04/03/08	04/03/08	04/18/08	04/11/08	04/03/08	04/03/08
OFFICE	RES/DE	CFO	NRR	NRO	NSIR	D:NMSS
NAME	JUhle	LBarnett (by email)	MCase (by email)	CAder	WDean	MWeber (by email)
DATE	04/13/08	04/15/08	04/11/08	04/15/08	04/07/08	04/15/08
OFFICE	D:FSME	OGC	D:RES	EDO		
NAME	GPangburn (by email)	MItzkowitz	BSheron (JUhle for)	LReyes		
DATE	04/09/08	04/03/08	04/15/08	04/22/08		

OFFICIAL RECORD COPY