

# Office of Science Risk Management

*November 4, 2009*

Ray Won

Office of Project Assessment

Office of Science, U.S. Department of Energy

<http://www.science.doe.gov/opa/>

**Wednesday, November 4, 2009, Building 2714, Oak Ridge**

**2:15 p.m. Introduction to SC Risk Management**

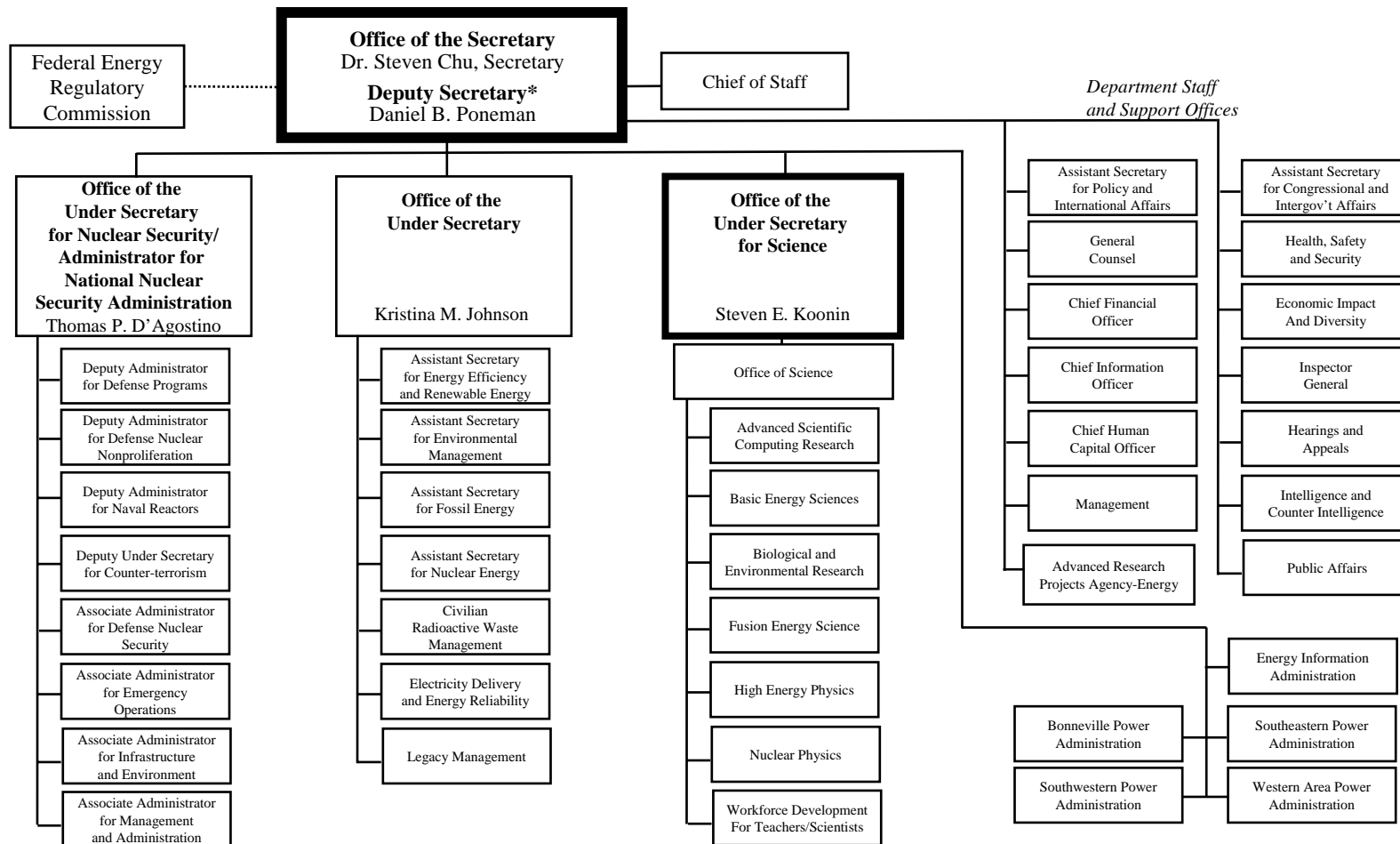
**2:25 p.m. Spallation Neutron Source**

**2:40 p.m. ORNL Risk Management Process**

**2:55 p.m. National Synchrotron Light Source II**

**3:10 p.m. Questions**

**3:30 p.m. End**



\*The Deputy Secretary also serves as the Chief Operating Officer.



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- Brookhaven SO  
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*Gerald Boyd*

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Office of Safety, Security and Infra. (SC-31)  
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- Basic Energy Sciences (SC-22)  
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- Biological & Environ. Research (SC-23)  
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- Fusion Energy Sciences (SC-24)  
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- High Energy Physics (SC-25)  
*Dennis Kovar*
- Nuclear Physics (SC-26)  
*Timothy Hallman*

Workforce Development for Teachers/ Scientists (SC-27)  
*Wm. Valdez*

Office of Project Assessment (SC-28)  
*Daniel Lehman*

**Deputy Director for Resource Management (SC-4)**  
*Jeffrey Salmon*

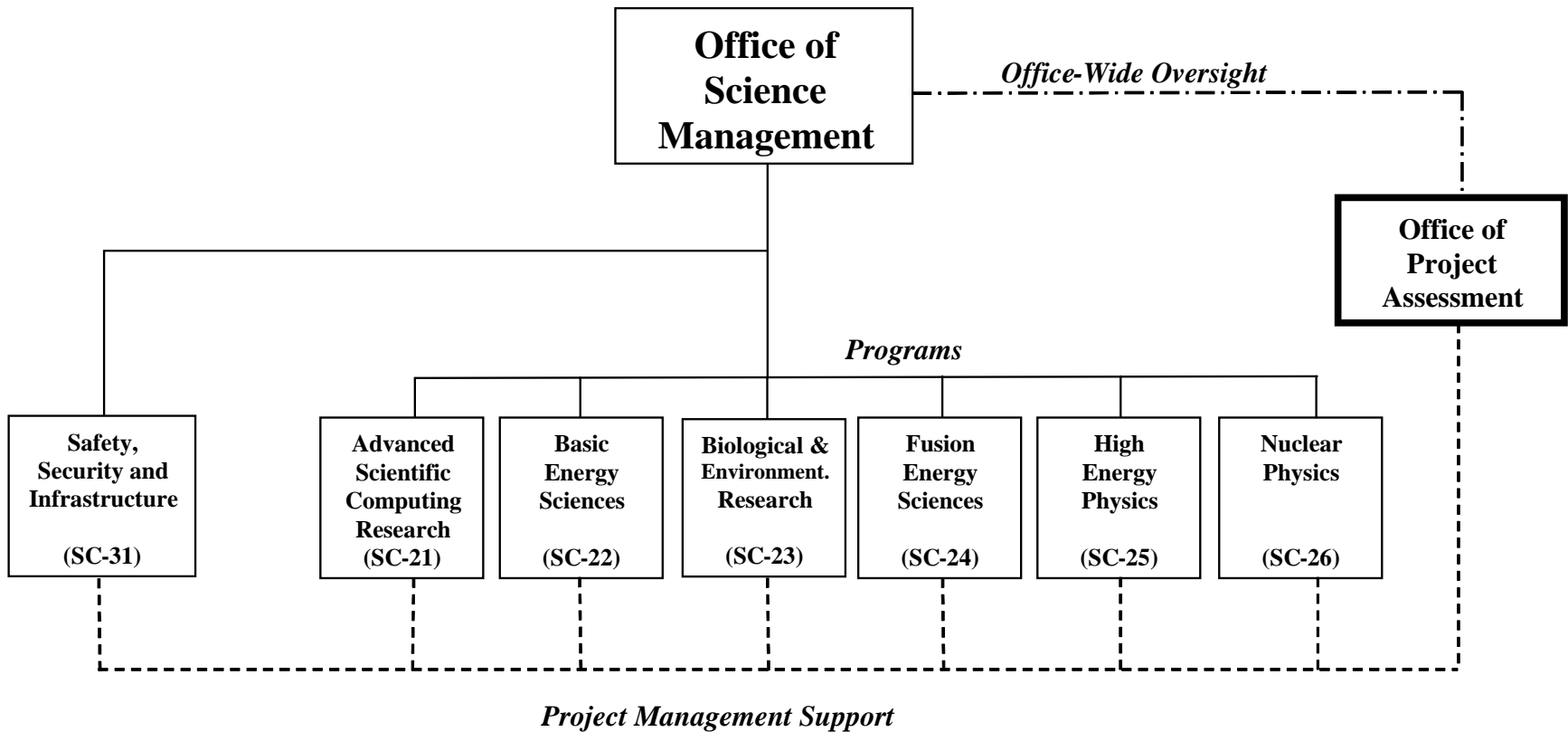
- Office of Budget (SC-41)  
*Kathleen Klausing*
- Office of Grants/ Cont. Support (SC-43)  
*Martin Rubenstein*
- Office of Scientific and Tech. Info. (SC-44)  
*Walt Warnick*
- Office of SC Project Direction (SC-46)  
*Vicki Barden*

Office of Business Policy and Ops (SC-45)  
*Thomas Phan*

Business Mgmt. Sys. & Serv. (SC-45.1)  
*Thomas Phan (A)*

Human Capital Resources (SC-45.2)  
*Karen Dickenson*

(A) Acting



- National Laboratories are non-profit
- Leveraged partnerships
- Customer participation
- R&D is not a project phase
- Internal science & project advisory committees
- Continuous optimization
- Plan for future upgrades
- Builders/Operators
- Peer reviews are standard

# Ten Year Project Performance

	Technical Performance			Cost Performance		
	# of Completed Projects	# of Successful Projects	Success Rate (%)	Initial Baseline TPC (\$M)	Final TPC (\$M)	Success Rate (%)
<b>Total SC Projects</b>	33	31	94%	\$2,688	\$2,800	96%

**SNS – Congressional direction increased project cost**

**NCSX was cancelled on July 2008. Project at closeout was 62% complete and had expended ~\$97M.**



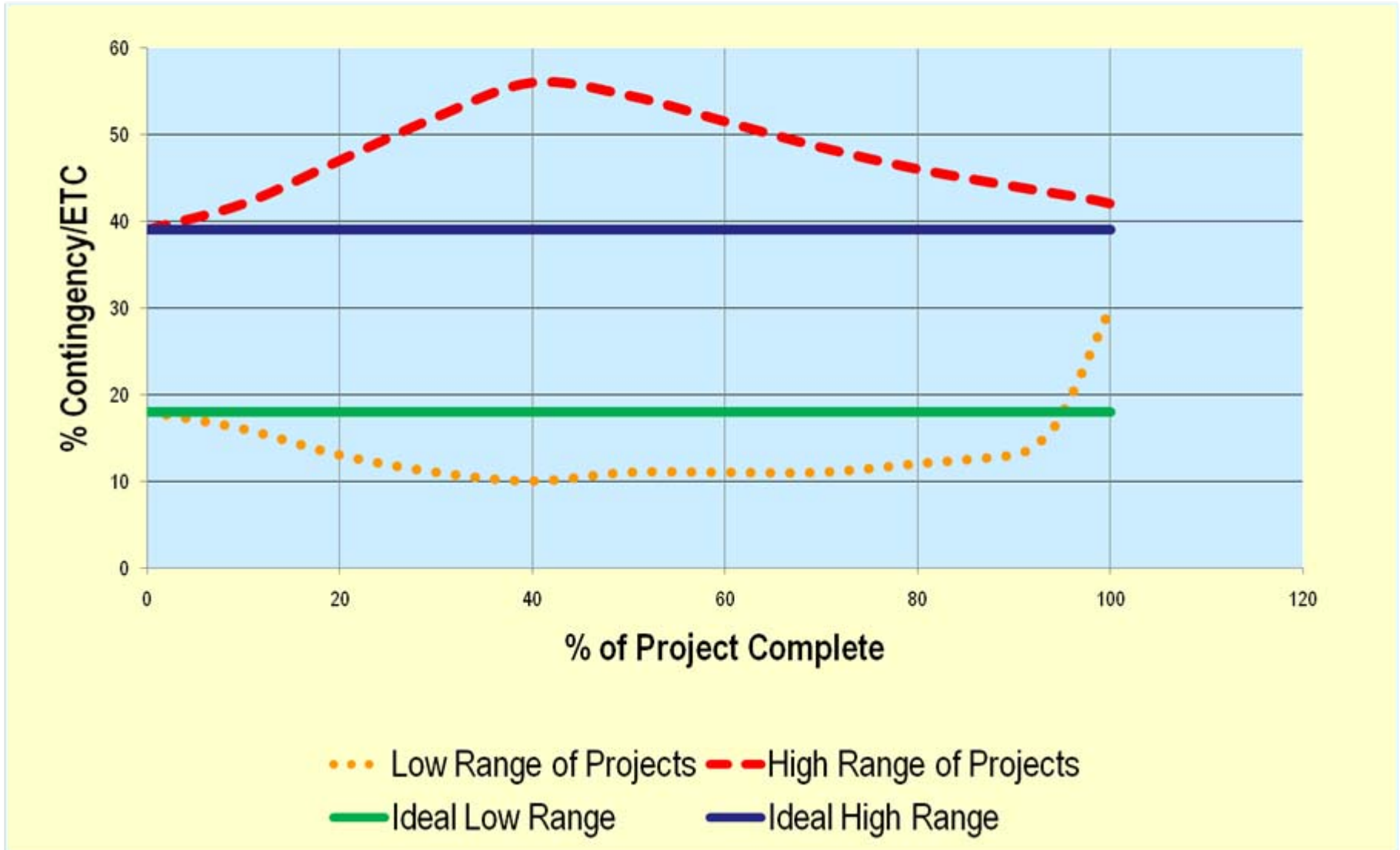
- **Utilize experienced managers to control risks**
- **All risk sources are managed**
- **Risks are updated throughout project lifecycle**
- **Avoid prescribing “how to” manage risks**
- **Frequently assess project performance & risks**





# Peer (Lehman) Reviews

- **Prior to critical decisions, or more frequently**
- **Peer reviewers are recognized experts**
- **Address all baseline requirements**
- **Evaluate all performance**
- **Keep senior management informed**



- Risk requirements should be **results-oriented, non-prescriptive, high level and objective**
- Document **“how to’s”** in guides and training materials
- Always **tailor risks** for the project
- Always utilize **“checks and balances”**, such as peer reviews, to prevent constantly changing conditions from taking control

- **Use experienced & successful staff**
- **Front-end planning is essential**
- **Avoid prescribing “how to” manage risks**
- **Update the risk registry**
  - **Manage to cost**
- **Utilize “Checks and Balances”**
- **Management must be kept informed**

Presentation	Status	Presenter
Spallation Neutron Source	Complete	Suzanne Herron Les Price
Oak Ridge National Laboratory Approach to Risk Management	MLF – In Construction CNMS - Complete	Jack Stellern
National Synchrotron Light Source II	In Construction	Diane Hatton