

# **NRC International Activities**



**Janice Dunn Lee**  
**Director**  
**International Programs**  
**August 15, 2000**

# **International Arena Share of NRC's FY 2000 Budget**

**\$ 4.7 Million = One Percent  
of the NRC's FY 2000 Budget**

# **NRC International Nuclear Activities**

- **Non-Proliferation Support, Including Export Licensing and Safeguards**
- **Information Exchange**
- **Safety Assistance**
- **Cooperative Safety Research**

# **Export Activities**

- **143 Licensing Actions**
- **12 Executive Branch Consultations**

# **Non-Proliferation Activities**

- **NPT Review Conference**
- **Core Conversion**
- **Strengthening IAEA Safeguards**
- **MPC&A Assistance to FSU**
- **Physical Protection Convention**

# **FSU Nuclear Safety Assistance**

## **Accomplishments:**

- **Chornobyl Closure  
Commitment**
- **BN-350 Reactor Closure**
- **Regulatory Profile**
- **Sunsetting G-24**

# **FSU Nuclear Safety Assistance**

## **Challenges:**

- **High-Risk Reactor Closure**
- **Ukraine (Cumulative Impact)**
- **NRC Funding/Resources**
- **GAO Recommendation**

# **Possible Exchange Activities**

**South Africa:**

**Licensing Approach for  
Advanced Modular Pebble-  
Bed Reactor**



# **New Country Contacts**

**Probable Requests for  
Nuclear Safety Assistance:**

**Vietnam**

**North Korea**

# **Foreign Assignees**

**9 Assignees from 6 Countries:**

**France (2)**

**Japan (2)**

**Spain (2)**

**Brazil, China, Switzerland**

# **Foreign Visits to NRC**

**Over 100 Foreign Visits since**

**October 1, 1999:**

- **28 Countries, plus Taiwan**
- **5 International Organizations**
- **19 Commission-Level Visits**

# **IAEA Participation**

- **Nuclear Non-Proliferation**
- **Conventions**
- **Standards**
- **Advisory Services**
- **Technical Assistance**

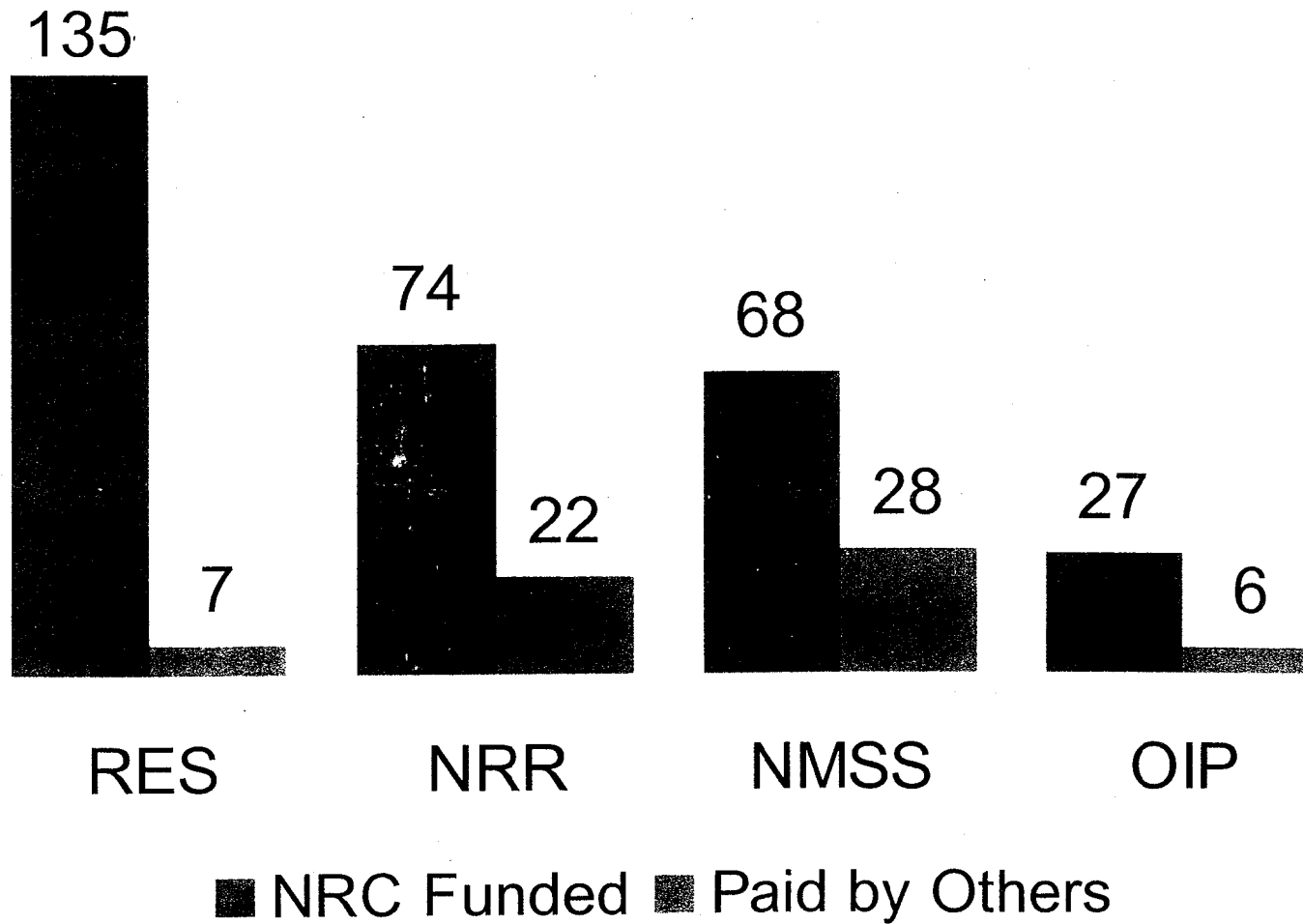
# **OECD/NEA Participation**

- **Strengthening Nuclear Cooperation**
- **Harmonizing Approaches**
- **Multilateral Research**
- **Avoiding Duplication**

# **Notifications**

- **Y2K Early Warning System (YEWS)**
- **Nuclear Information Exchange System (NIXS)**

# Foreign Trips in FY 2000



# **Improvement Plan**

- **Information Management**
- **Reorganization**
- **PBPM Process/Strategic Plan**
- **International Council**



# **NMSS**

## **International Activities**

**Martin Virgilio**  
**Deputy Director**  
**August 15, 2000**

# **NMSS Primary Purposes**

- **Gain Access to Non-U.S. Safety Information**
- **Assist Other Countries Regulatory/Safety Cultures**
- **Influence International Regulatory Standards, Policies and Practices**

# **NMSS Primary Purposes**

- **Implement U.S. Treaties and Agreements**
- **Strengthen Countries' Domestic Safeguards Systems**
- **Support and Strengthen the Non-Proliferation Regime**

# **Non-Proliferation**

- **International Physical Protection Support**
- **Convention on Physical Protection**
- **Counter Terrorism: Design Basis Threat**

# Safeguards

- **Strengthening of International Safeguards**
- **FSU MPC&A Support**
- **Trilateral Initiative – Verification of Fissile Material**

# **Safety**

- **Transportation and Storage Safety**
- **IAEA Waste Safety Standards  
Advisory Committee (WASSAC)**
- **IAEA Radiation Safety Standards  
Advisory Committee (RASSAC)**

# **Safety**

- **Fuel Cycle/Waste Information Exchanges**
- **Radiation Source Safety/Radioactive Material Security**
- **Lisbon Program Safety Support**

# **International Obligations & U.S. Priorities**

- **Import/Export Licensing Reviews**
- **Agreements for Peaceful Nuclear Cooperation**
- **U.S. - IAEA Safeguards Agreement**



# **International Obligations & U.S. Priorities**

- **Nuclear Materials Management and Safeguards System (NMMSS)**
- **International Treaty on Nuclear Waste Safety (“Joint Convention ...”)**

# **Accomplishments**

- **Completion of Project Sapphire Downblending**
- **New Revision (#4) of IAEA INFCIRC/225**
- **Interagency Agreement with DOE**

**Nuclear Regulatory  
Research  
International Activities**

**Ashok Thadani**

**Director**

**August 15, 2000**

# **Research Outcomes**

## **Access to Foreign Research, Experience & Facilities:**

- Enhanced Focus on Safety**
- Supplements U.S. Developed Info**
- Leverages NRC Resources**
- Promotes International Understanding**

# **International Research**

- **Agreements: ~78 - 25 Countries**
- **Contributions: \$1.7 Million/Year**
- **For ~\$4M, and In-Kind Research-  
Receive Benefit Over \$55M**
- **NRC Plays Active Role with  
International Organizations on Safety  
Issues**

# **Examples of Cooperation Programs**

- **Experimental/Analytical: Severe Accidents, Containment, Seismic, Fuels, Human Factors, Digital I&C**
- **Analytical Code Applications**
- **Irradiation Assisted Stress Corrosion Cracking (IASCC)**

# **Examples of Research Outcomes**

- **Realistic Regulatory Basis –  
Fuel Performance**
- **Enhanced Analytical Tools**
- **Fragility Info. For Risk Analysis**
- **Enhanced Understanding of Aging  
Effects - License Renewal**

# Research Outlook

- **Worldwide Declining Research:**
  - Declining Budgets
  - Loss of Expertise and Facilities
  - Loss of Education and Training
- **Importance of International Cooperation**



# **Future Challenges**

- **Maintain Research Infrastructure**
- **Ageing**
- **MOX and High Burn-up Fuels**
- **Digital Technology**
- **Advanced Designs**

# Future Challenges

- **Waste and Decommissioning**
- **Increased use of Risk Assessment**
- **Deregulation – Power Uprates, Staffing**

# **Nuclear Reactor Regulation International Activities**

**Samuel J. Collins**

**Director**

**August 15, 2000**

# **NRR Activities**

- **Bilateral Foreign Technical Exchanges**
- **Participation in Multilateral Technical Working Groups and Committees**

# Foreign Assignees

- **France, Spain: Digital Instrumentation & Control Systems**
- **Japan: Non-Power Reactors**
- **China: Probabilistic Safety Assessment, Revised Reactor Oversight Process**

# **Bilateral Support**

- **Czech Republic: Temelin NPP Digital I&C**
- **Taiwan: Lungmen NPPs Regulatory Review – SRP**
- **Russia & Ukraine: Ongoing Dialog**
- **France: NRC Observer at Nuclear Safety Authority**