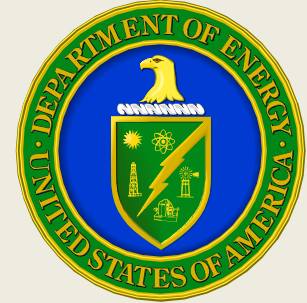




United States Naval Nuclear Propulsion Program Nuclear Data



U. S. NAVAL DISPATCH

NUMBER		CLASSIFICATION	UNCL
FROM	USS NAUTILUS SSN 571		
ACTION	COMSUBLANT		
INFO:	NJOF TE NWCL -T-YZZF -D-1716/12 -FL- MWCL -TO YZZF GR 3 BT		
	UNDERWAY 24HR ON NUCLEAR POWER BT...		
	702 / 1133R	DU/ELT	
	FA / K. H.		
	PBR		
			17 JAN 55



Stephen Bell
Naval Reactors

Naval Nuclear Propulsion Program



NAVAL REACTORS FACILITY

- Dry Storage Program
- Expanded Core Facility



DEDICATED LABORATORIES

- Bettis Atomic Power Laboratory
- Knolls Atomic Power Laboratory
- GOCO



SPECIALIZED INDUSTRIAL BASE

- One dedicated equipment prime contractor
- Hundreds of Suppliers



- Ensures focus on mission
- Immediate identification of concerns



NUCLEAR POWERED FLEET

- 84 warships
- Over 45% of major combatants
- 95 reactors



SHIPYARDS

4 Public ; 2 Private



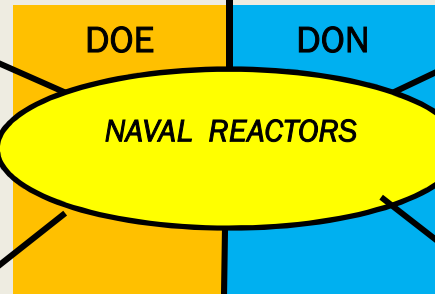
SCHOOLS

- Nuclear Power School
- Nuclear Field "A" School



R&D/TRAINING REACTORS

- Train ~3,000 students/year



Naval Nuclear Propulsion Program

Nuclear Method/Data Drivers

- 30-40+ year life of ship submarine cores
- 60-90 year project life cycles
- Transport theory design process
- Spent Fuel Handling & Storage
 - New facility
 - Dry storage and repository disposal



Nuclear Data Priorities

- Long-lived fission products (fission product credit)

Mo-95	Tc-99	Ru-101	Rh-103
Cs-133	Cs-135	Pr-141	Nd-143
Nd-145	Sm-147	Sm-145	Sm-150
Sm-152	Eu-153		

- Elastic scattering angular distribution
 - Fe-56 (for shielding)
 - Zirconium
- Light water reactor materials
 - U-236 neutron capture
 - Zirconium, hafnium
- Irradiation damage
- Thermal scattering law data

