



NASA Health Physics

Portals to the Future: People, Partnerships
and Prevention

Office of the Chief Health and Medical Officer

2011 NASA Annual Occupational Health Meeting, Albuquerque, NM





PEOPLE – Who are the NASA HPs

ARC – Patrick Muldoon,
Eric Packard

DFRC – John Piatt – Retired

JPL – Marc Martz
Gloria Mar

WSTF – Jeff Hughes

JSC – Dennis Waggett,
Andy Grief,
Mary Van Baalen

MAF – Kyesha Jacquet

SSC – Katrina Wright,
John Lindsay

MSFC – Philip Brown,
Patrick Patterson

KSC – Randy Scott,
Rodney Nickell

LaRC – Kim Merritt,
Pat Cowin

GSFC – Dan Simpson,
Ted Simmons

WFF – Marv Bunting

HQ –

GRC – Chris Blasio

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PARTNERSHIPS

Internal, Interagency, & External:



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PARTNERSHIPS

Internal, Interagency, & External:

- Site Workers
- Colleagues at other NASA Sites
- Cal. Lab
- Clinic
- IH & Safety Dept.
- OCHMO



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PARTNERSHIPS

Internal, Interagency, & External:

- INSRP
Interagency Nuclear Safety Review Panel



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PARTNERSHIPS

Internal, Interagency, & External:

- NRC
- OSHA
- FAA
- ANSI
- SAE
- IEEE ICES
- HPS /ABHP
- Others



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PREVENTION

Training:

- Staff
Education, Experience, Certification
- Workers / Users
Internal Programs / SATERN
External
OCHMO-Sponsored





PREVENTION

Accountability & Control:

- Hazard Analysis
- User Qualification
- Administrative and Engineering Controls
- Permits
- Surveillance and Monitoring
- Reporting





Triennial Health Physics Meeting

▶ **WHEN:** April 19 – 21, 2011

▶ **WHERE:** NASA HQ, Washington, DC

WHY: Share insights, network with peers, and discuss issues, requirements, and challenges. Continuing ed. credits for laser safety, radiation protection, and industrial hygiene.



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Welcome and Meeting Kickoff by Occupational Health Director, Catherine Angotti, RD, LD and Senior Environmental Health Officer, Guy Camomilli, CSP, CHMM

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Radiation Effects Facility Irradiator Upgrades
Daniel Simpson, Radiation Safety Officer
Goddard Space Flight Center

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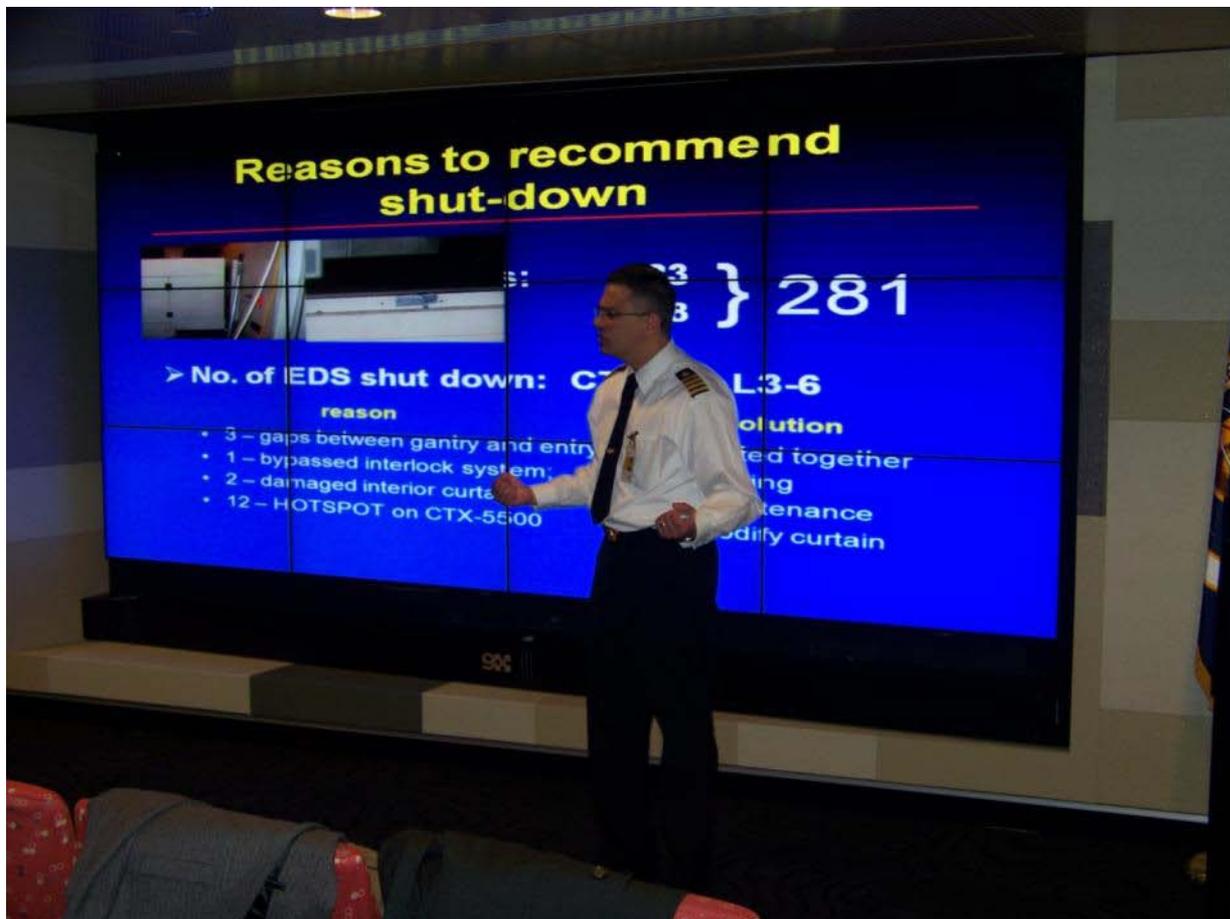




Irradiator Project Lessons Learned
Gloria Mar, Radiation Safety Engineer
Jet Propulsion Laboratory



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HP Assessments for X-Ray Scanner Devices
John Cardarelli, PhD, CHP, CIH
Occupational Safety Program Office, U.S. EPA

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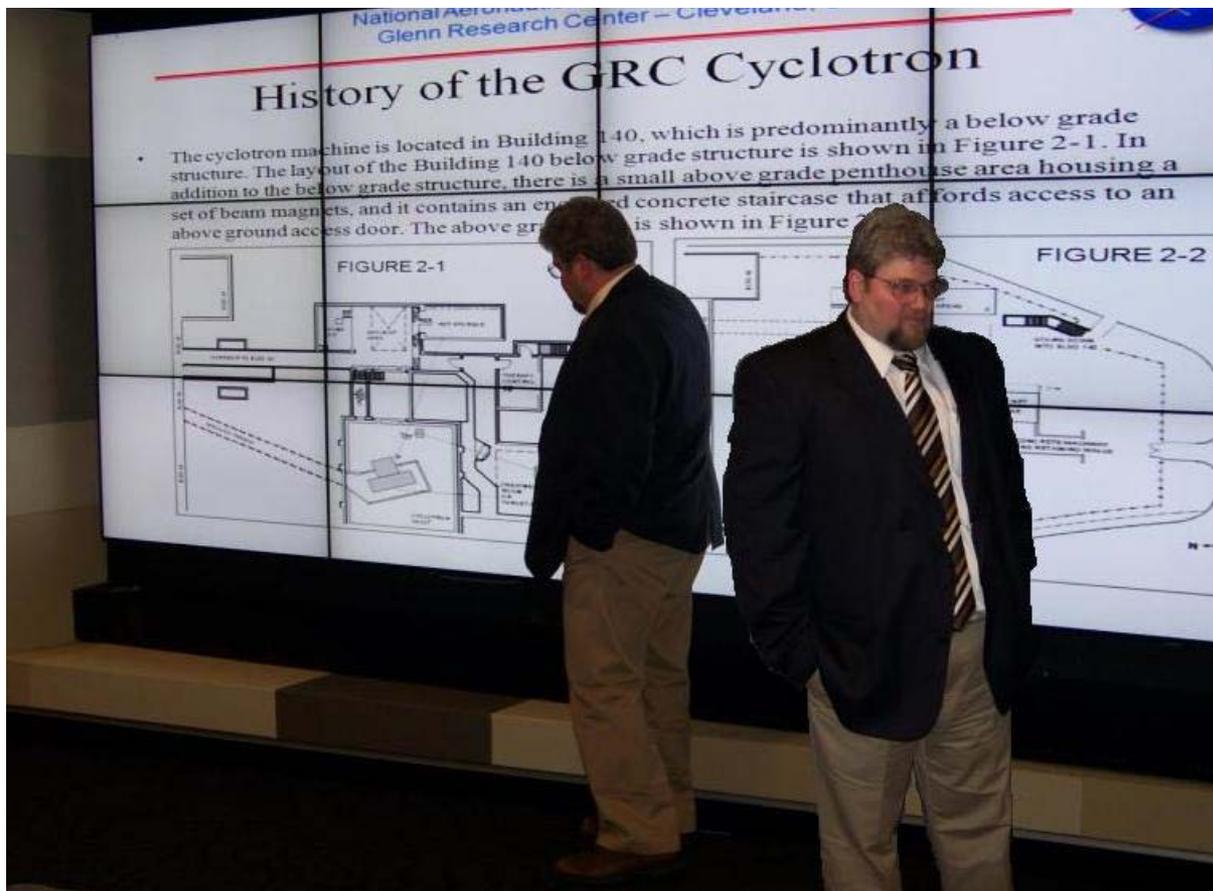




HP Evaluations for Medical & Analytical X-Ray Devices
Marcum Martz, CHP, Radiation & Laser Safety Officer
Jet Propulsion Laboratory



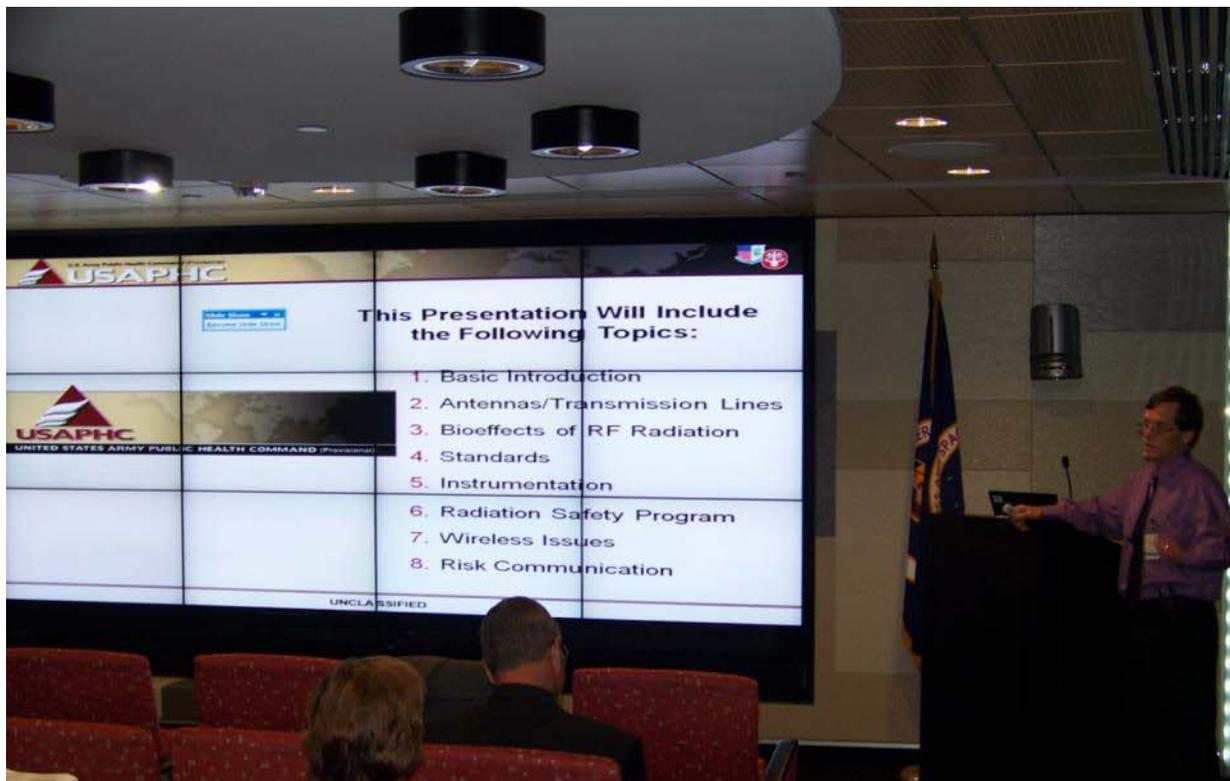
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GRC Cyclotron Decommissioning
Gerald Wood, Radiological Engineer
Plum Brook Research Reactor Decommissioning



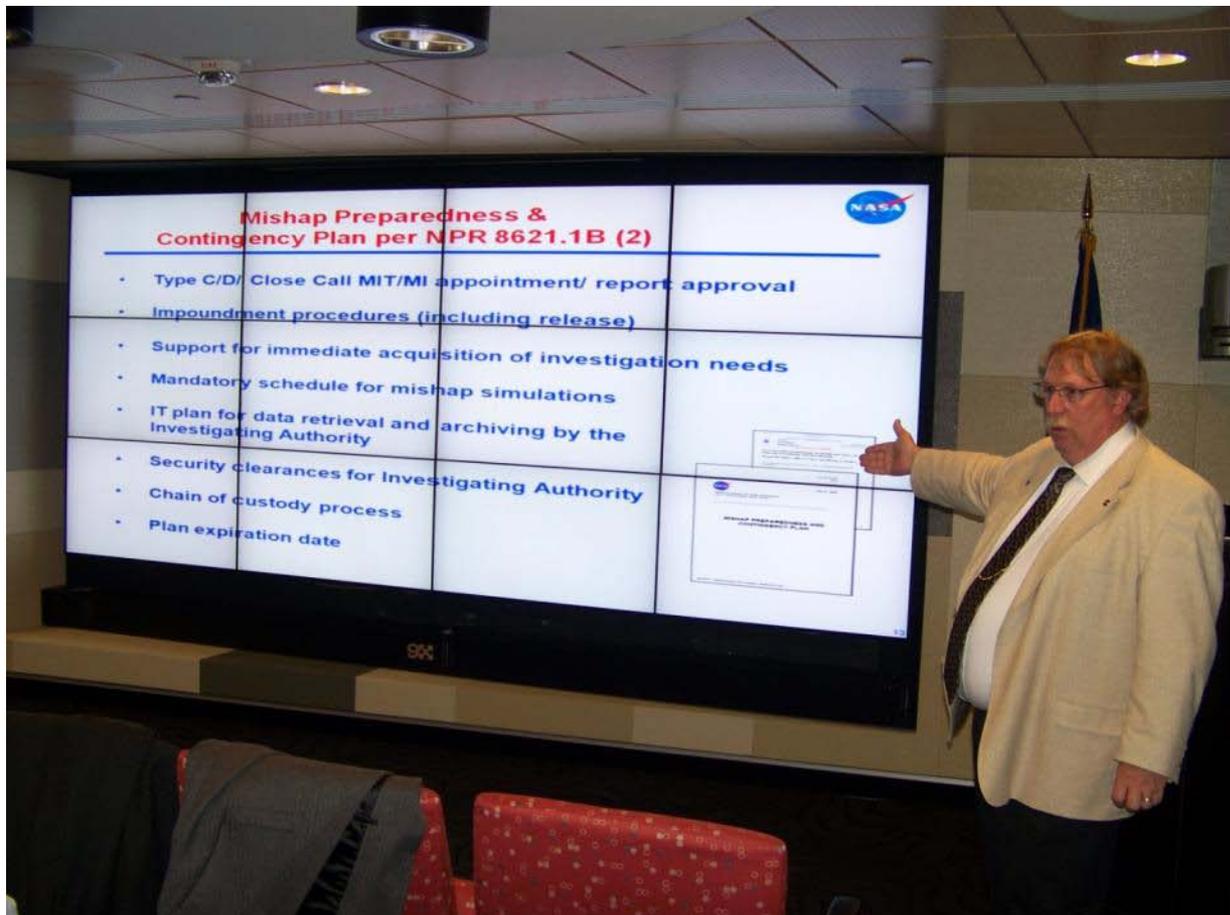
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Radio Frequency Radiation Safety Training
Brad J. Roberts, Electronics Engineer
Radio Frequency Program
US Army Institute of Public Health



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Mishap & Close-Call Reporting & Investigation
Gerald Schumann
NASA Office of Safety & Mission Assurance

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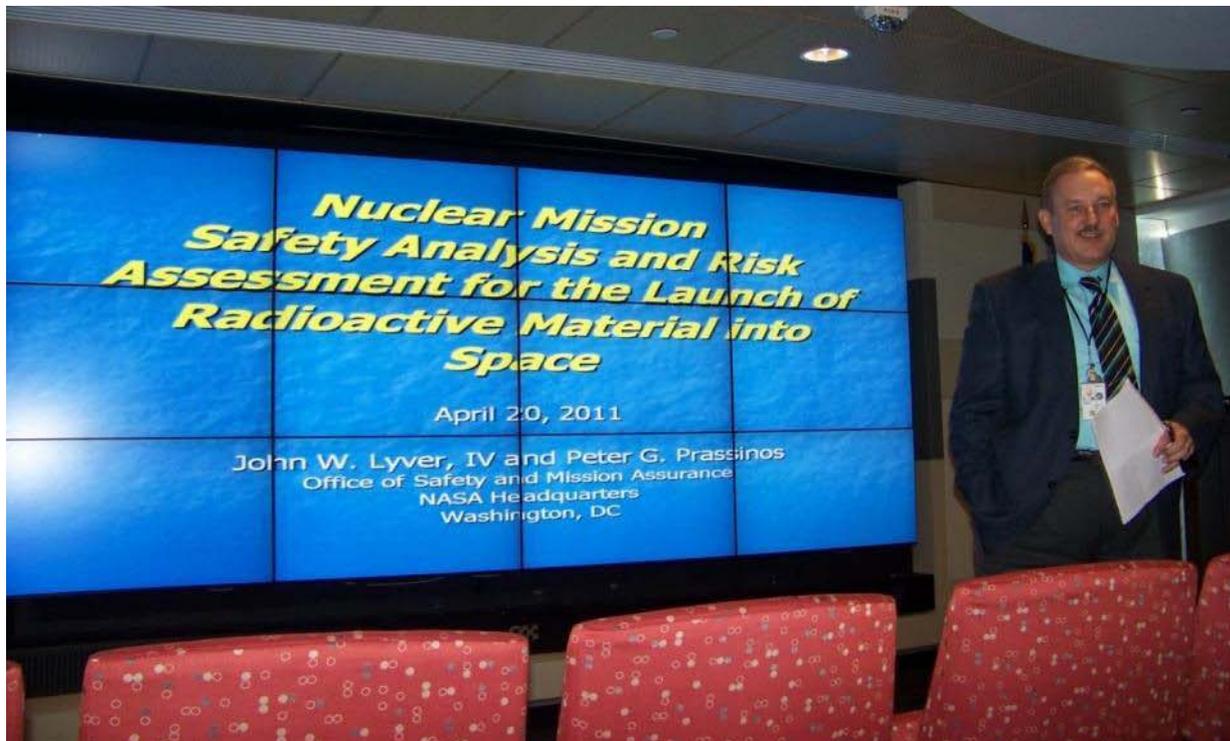




Major Source Launch Contingency Planning
Randall Scott, Radiation Protection Officer
Kennedy Space Center



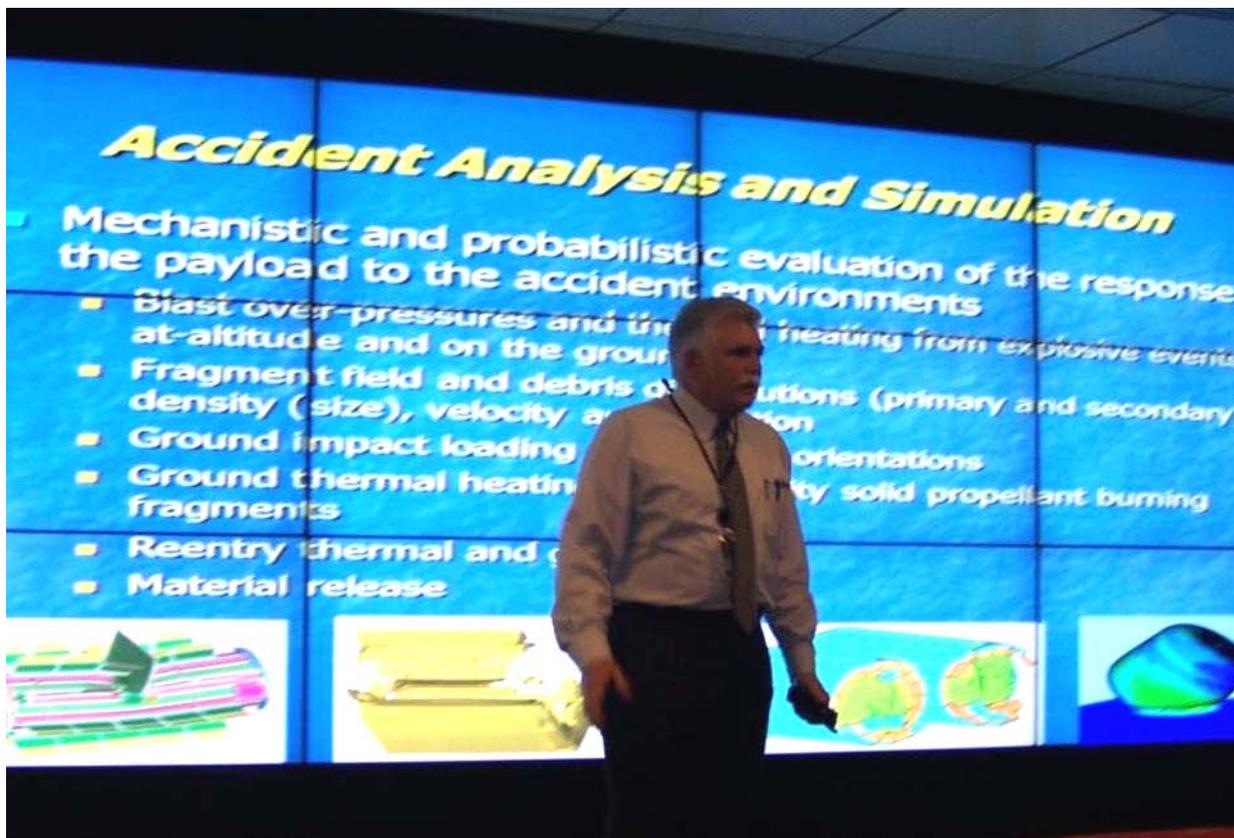
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Interagency Nuclear Safety Review Process, Part 1
John Lyver, PhD
NASA Office of Safety and Mission Assurance



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Interagency Nuclear Safety Review Process, Part-2
Peter Prassinos
NASA Office of Safety and Mission Assurance



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Responding to Nuclear Terrorism
Brooke Buddemeier, Certified Health Physicist
Global Security Directorate
Lawrence Livermore National Laboratory



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Excellence in Radiation Protection Programs

Donald Cool, PhD, Senior Advisor,
Federal and State Materials and Environmental
Management Programs

U.S. Nuclear Regulatory Commission

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Update on NRC's Tritium Exit Sign Issue

Angela McIntosh

Federal and State Materials and Environmental
Management Programs

U.S. Nuclear Regulatory Commission

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**National Institutes of Health Radiation Protection Program
Bethesda, MD Campus
Robert Zoon, Director, Division of Radiation Safety
Nancy, Newman, Radiation Safety Officer**

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National Institutes of Health Radioactive and Mixed Waste Management Program

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**National Institute of Standards and Technology
Radiation Protection Program
Gaithersburg, MD Campus
Thomas O'Brien, CHP**

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NIST Radiation Protection Program Highlights and Lessons Learned

Thomas O'Brien, CHP

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NIST Neutron Instrument Calibration Facility
Dr. Alan Thompson



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Demonstration: Neutron Source Engineering Controls

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NIST MnSO₄ Neutron Source Calibration Facility
Dr. Scott Dewey



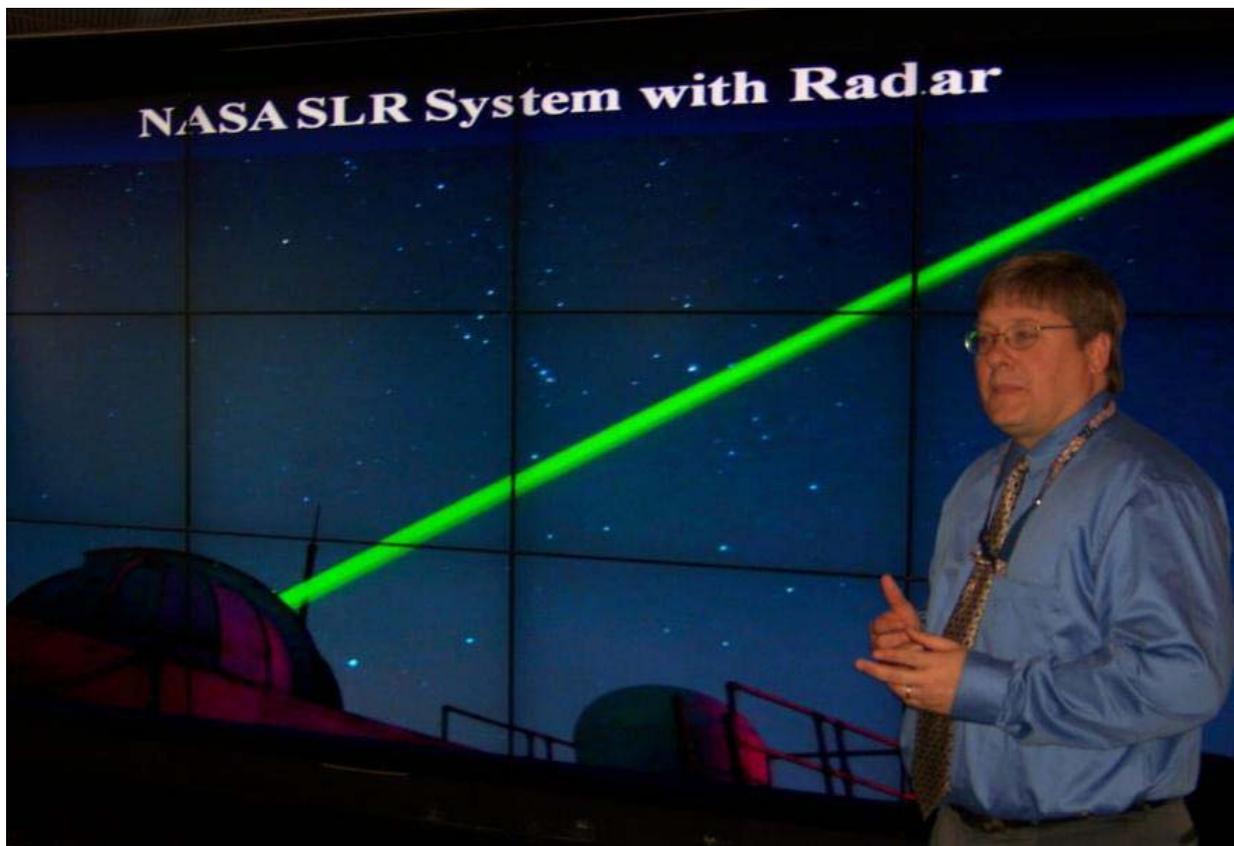
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NIST Vertical Beam Irradiator Facility
Dr. Ronnie Minnitti



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MOBLAS-7 Lessons Learned

Patrick Hancock

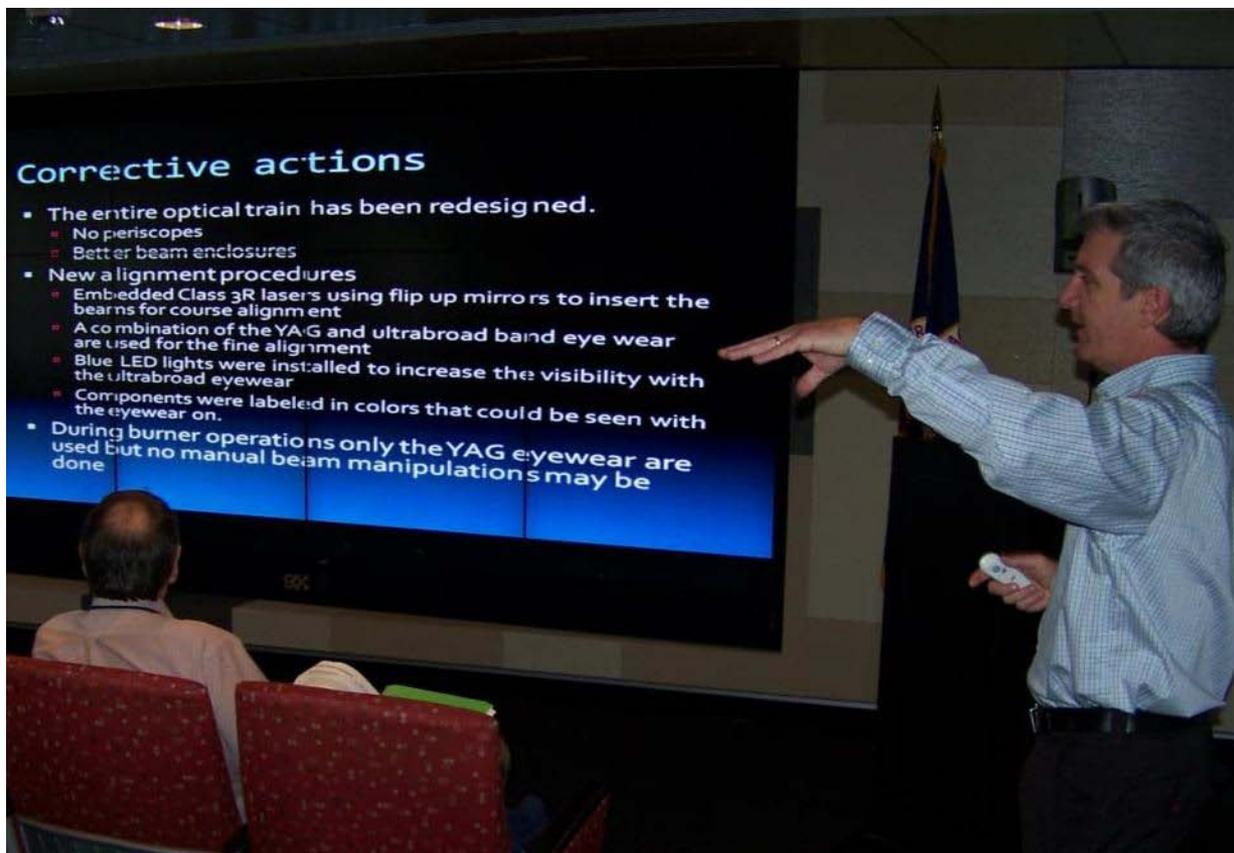
Occupational Safety & Health Division

Goddard Space Flight Center



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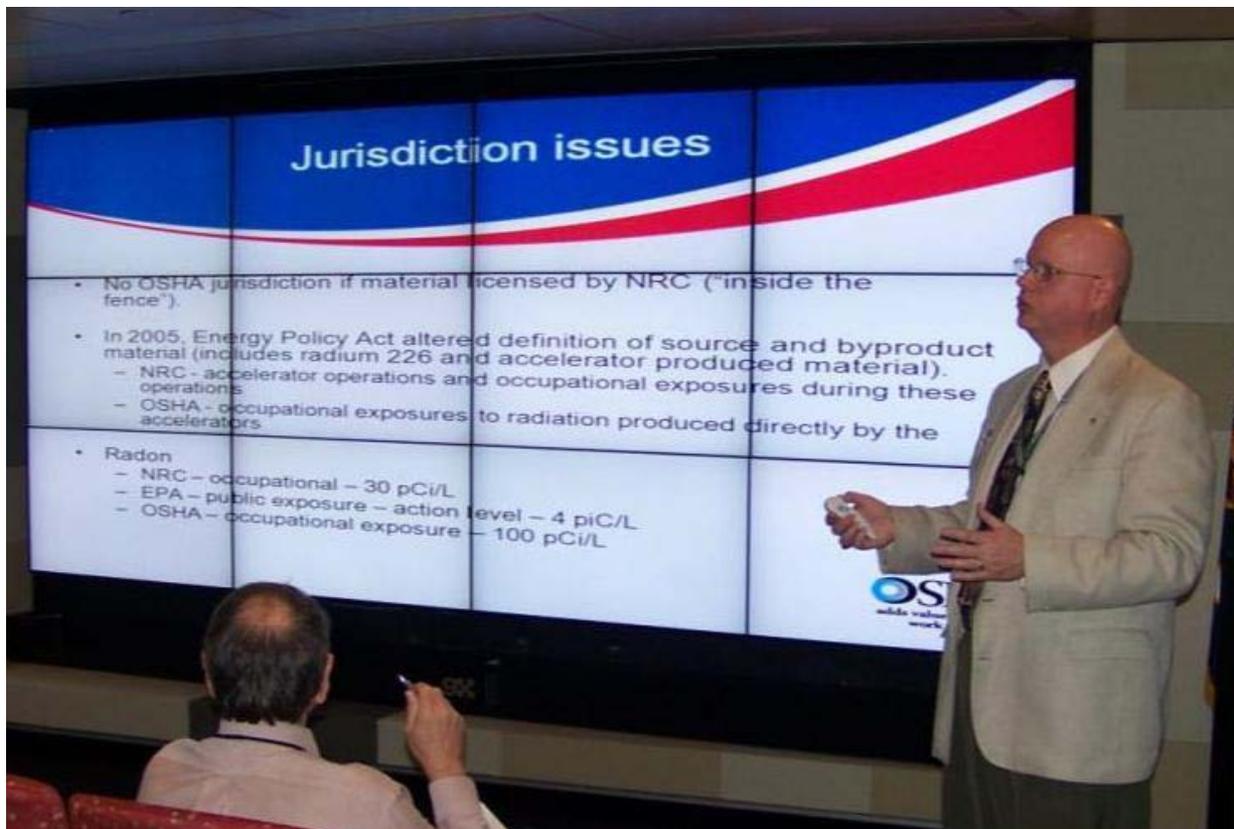
Corrective actions

- The entire optical train has been redesigned.
 - No periscopes
 - Better beam enclosures
- New alignment procedures
 - Embedded Class 3R lasers using flip up mirrors to insert the beams for course alignment
 - A combination of the YAG and ultrabroad band eye wear are used for the fine alignment
 - Blue LED lights were installed to increase the visibility with the ultrabroad eyewear
 - Components were labeled in colors that could be seen with the eyewear on.
- During burner operations only the YAG eyewear are used but no manual beam manipulations may be done

Lessons Learned Following Laser Mishap
Kim Merritt, Radiation & Laser Safety Officer
Langley Research Center



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OSHA Radiation Protection Program Activities
Sven Rundman, Senior Industrial Hygienist
Office of Health Enforcement
Occupational Safety and Health Administration



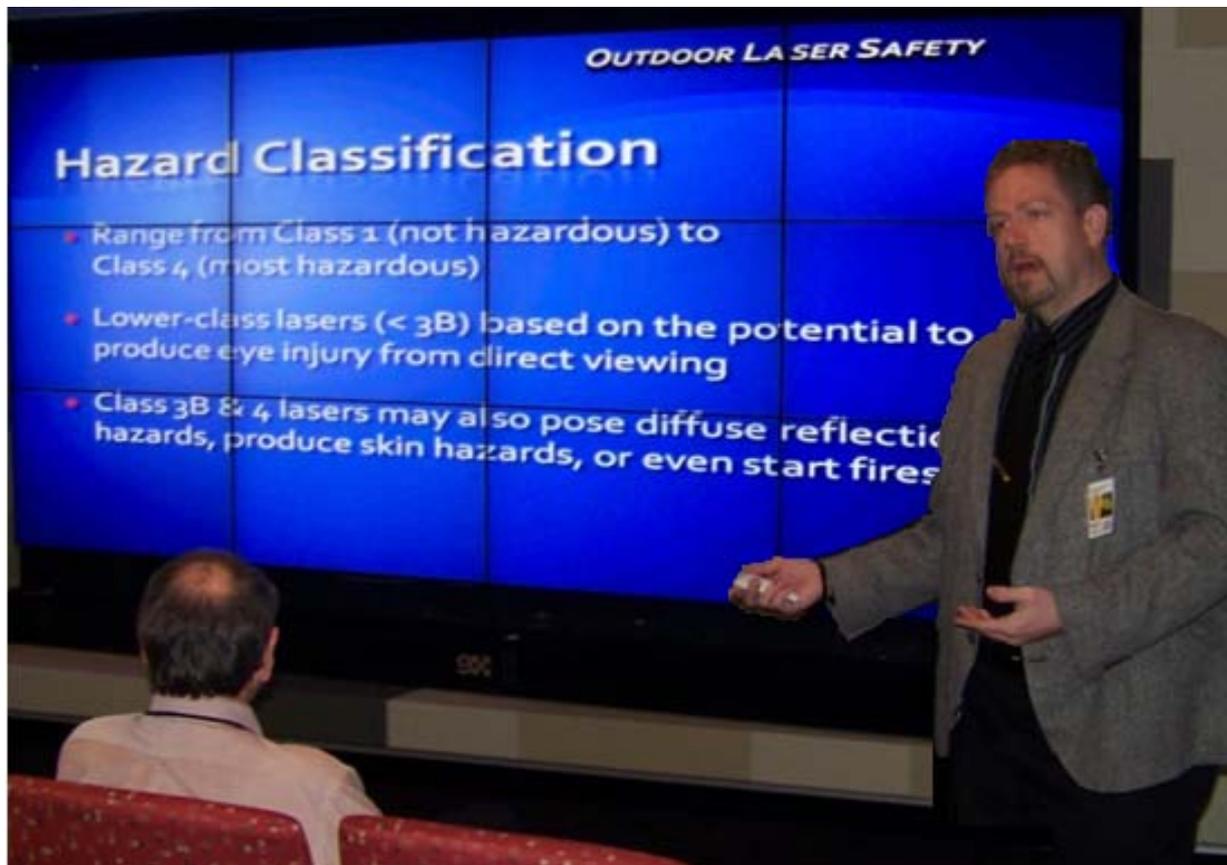
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Exemptions from FDA Laser Regulations
Patrick Hintz, Health Officer / Industrial Hygienist
Center for Devices and Radiological Health
Food and Drug Administration



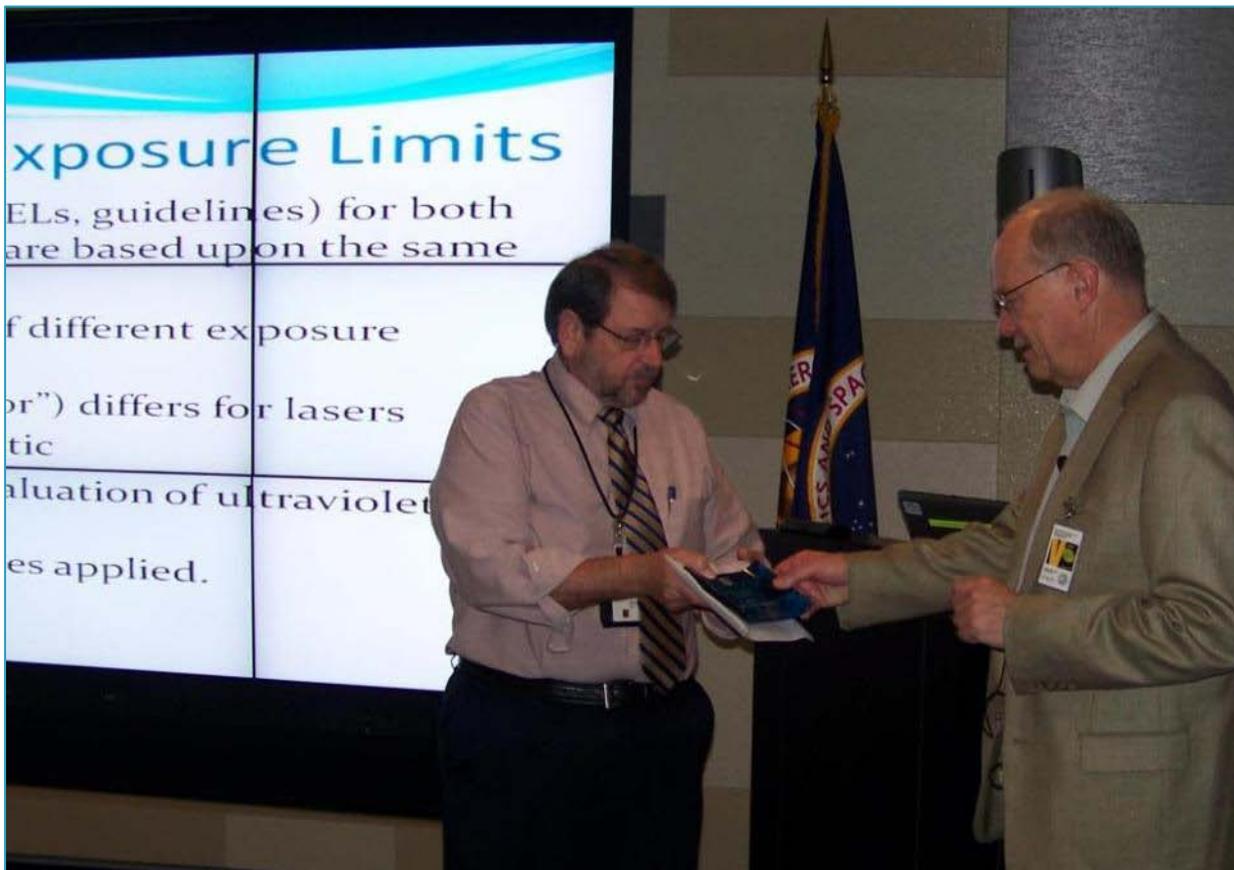
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ANSI Z136.6 Outdoor Laser Safety Standard Updates
Robert Aldrich
Naval Technical Laboratory for Laser Safety



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Exposure Limits
ELs, guidelines) for both
are based upon the same
of different exposure
or") differs for lasers
tic
valuation of ultraviolet
es applied.

Optical Radiation: An Overview of Biological Effects and Exposure Limits

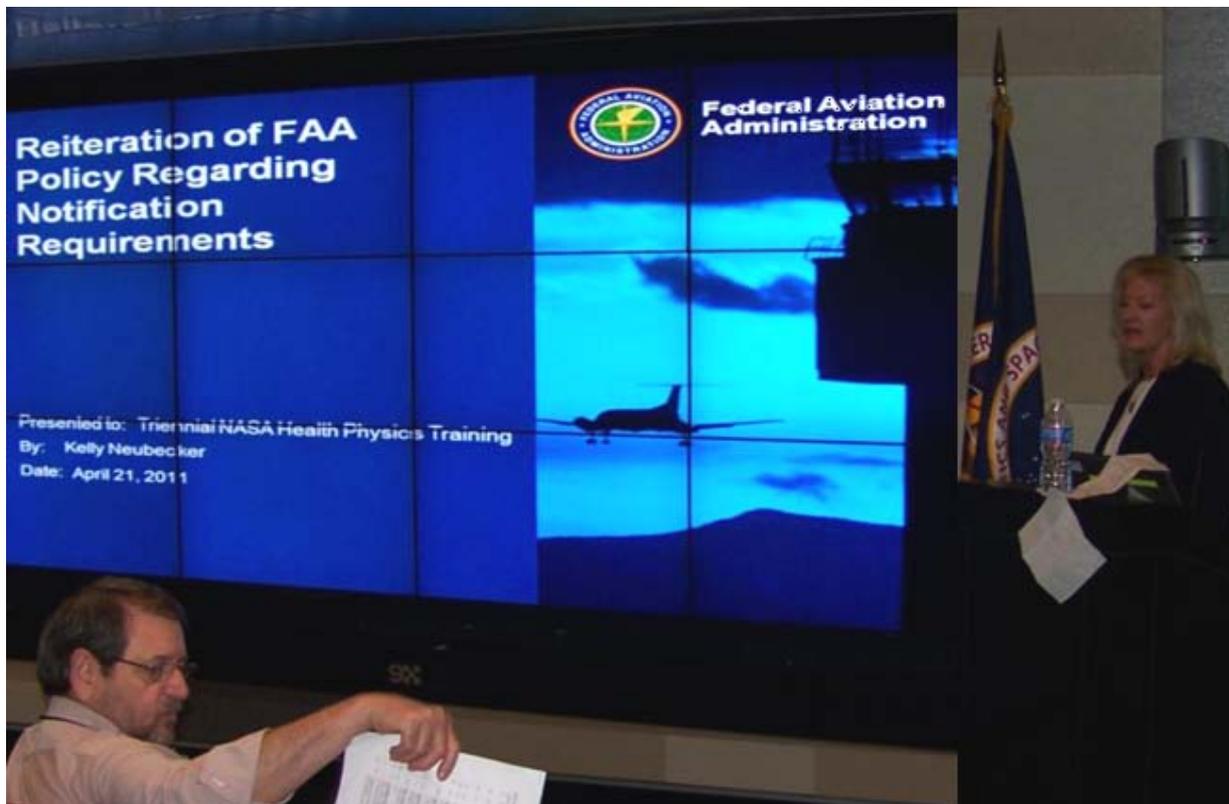
David Sliney, PhD

Consulting Medical Physicist

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Agency Outdoor Laser Coordination
Kelly Neubecker
Airspace and Rules
Federal Aviation Administration



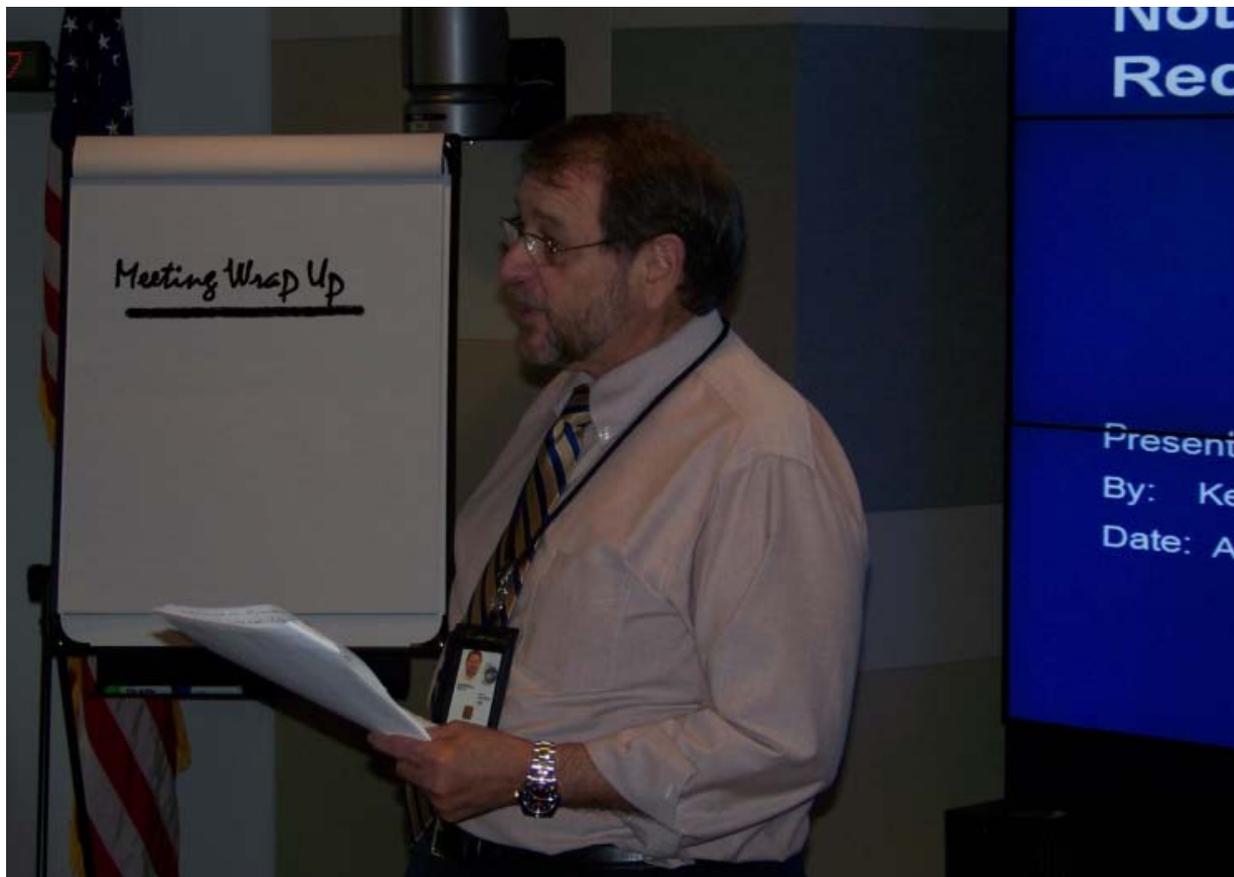
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Agency Perspective and Moving Forward
Catherine Angotti, Director, Occupational Health



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Meeting Wrap Up and Closing Remarks
Guy Camomilli, Sr. Environmental Health Officer
NASA Occupational Health Program



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