Meeting Purpose

- To gain public input on future research needs
- NIOSH staff will describe completed, ongoing, and future research projects
- Allotted time for public comment at the end of each session
- All comments will be transcribed

Agenda

Morning Session 9:00 – 12:00

- Welcome
- Background
- Completed Research

Afternoon Session 1:00 – 4:00

- Ongoing Research
- Future Research Needs
- Closing

Occupational Energy Research Program

Background and Mission

Public Meeting
October 27, 2005

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CDC Workplace Safety and Health™

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National Institute for Occupational Safety and Health NIOSH

Occupational Energy Research Program - Mission

- To conduct relevant, unbiased research to identify and quantify health effects among workers exposed to ionizing radiation and other agents
- To develop and refine exposure assessment methods
- To effectively communicate study results to workers, scientists, and the public
- To contribute scientific information for the prevention of occupational injury and illness
- To adhere to the highest standards of professional ethics and concern for workers' health, safety and privacy.

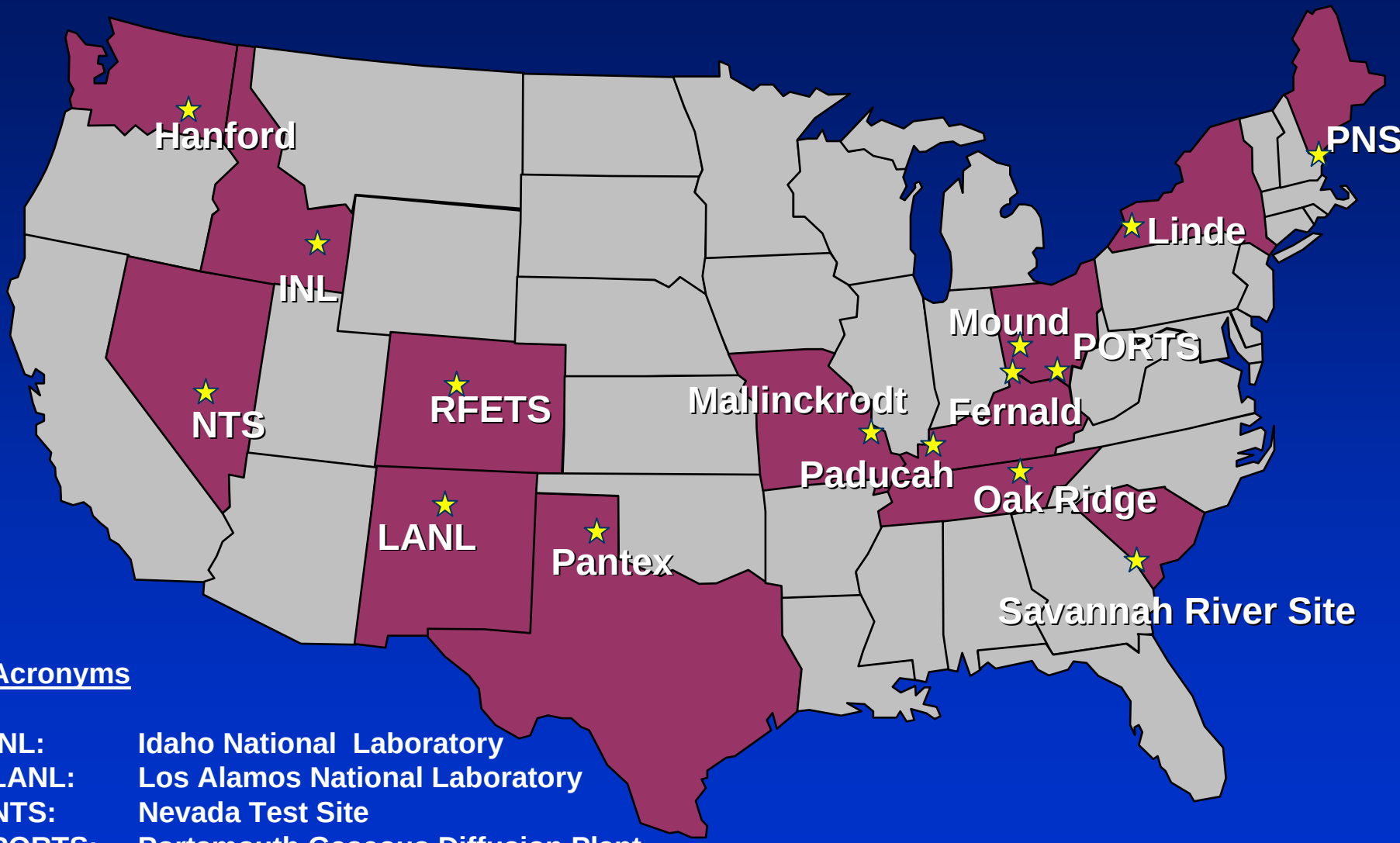
Occupational Energy Research Program - Setting

- Population
  - ~ 600,000+ current & former DoE workers
  - Navy nuclear shipyard workers
- Time interval: 1940's to present
- Exposures
  - ionizing radiation: internal, photon
  - other exposures: asbestos, metals & solvents
- Health outcomes: primarily cancer

Types of Research

- Hypothesis-Based Epidemiology Studies
- Exposure Assessment for Past and Current Workers
- Health Hazard Evaluations

Occupational Energy Research Program Sites



Acronyms

INL:	Idaho National Laboratory
LANL:	Los Alamos National Laboratory
NTS:	Nevada Test Site
PORTS:	Portsmouth Gaseous Diffusion Plant
PNS:	Portsmouth Naval Shipyard (Non-DoE site)
RFETS:	Rocky Flats Environmental Technology Site

Secretarial Panel for Evaluation of Epidemiologic Research Activities (SPEERA)-1990

- Transfer analytic epidemiologic research to DHHS – via MoU
  - Peer review
  - Open and competitive grants program
- Create Advisory Committee (ACERER)
  - Set research agenda
  - Determine funding priorities
  - Guide peer review
- Create public use database (CEDR)
  - OERP provides de-identified data sets

Memorandum of Understanding (MoU) between HHS and DoE- 1990

- OERP replaced three epidemiologic research programs within DoE (LANL, Hanford, Oak Ridge)
- DoE provides funding and input on research agenda
- OERP conducts independent research
- OERP consists of Intramural and Extramural studies

Advisory Committee (ACERER): Primary Research Questions

- Are current exposure limits adequate?
- What are the health risks for different forms of radiation?
- How do risks from fractionated exposures compare to acute exposure risks?
- What is the joint effect of radiation and chemical exposure?

Advisory Committee (ACERER): Research Principles

- Prioritize Existing DoE Studies for completion
- Combine Cohorts for Greater Power
- Improve Exposure Assessment
- Include Non-Whites and Females
- Consider Previously Unstudied Sites
- Develop Studies of Current Workers
- Increase Morbidity Studies

OERP Epidemiologic Research Goals

- Evaluate possible relationships between workplace exposures and injury or disease using the best available methodologies.
- Analyze combined populations to assess whether certain rare cancers are related to past occupational exposures.
- Examine the relationships of mixed exposures and worker health.
- Provide research findings which enhance the understanding of the effects of low-level protracted exposure to ionizing radiation in DoE workers and others.

OERP Exposure Assessment Goals

- Improve exposure assessment methods to reduce uncertainty in mortality and morbidity studies.
- Characterize the combined exposures experienced by DoE workers for use in epidemiologic analyses.
- Emphasize quantitative (vs. qualitative) relationships between exposure and health outcomes.
- Evaluate the quality and validity of the available worker exposure data.

OERP Communication Goals

- Expand the involvement of partners
- Conduct research in an open environment
- Provide information that enhances the understanding of risks associated with radiation-induced health effects
- Solicit and consider concerns of workers and the public
- Provide relevant occupational exposure and health information for public health research and policy

NIOSH Peer Review (1991-2005)

Key tenets of the NIOSH peer-review policy:

- Peer review at project inception by external experts
- All publications, including those submitted to peer-reviewed journals must first undergo external scientific peer review.
- Prior to publication, OERP shares findings with DoE, site management and workers

OERP Communication Tools

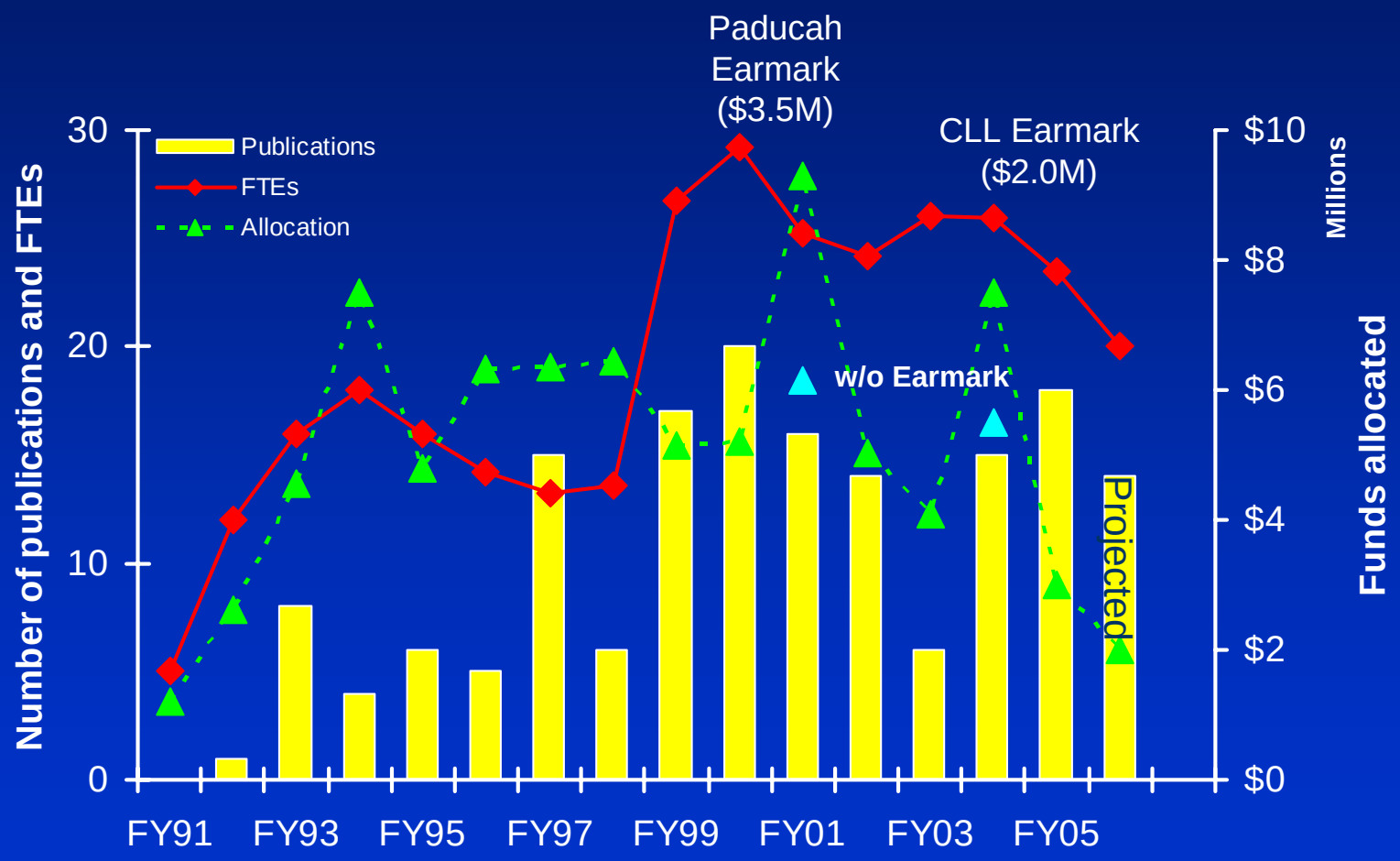
Scientific Community

- Peer-reviewed literature
- Scientific and technical reports
- Presentations at scientific conferences
- Provide data sets to CEDR

Public

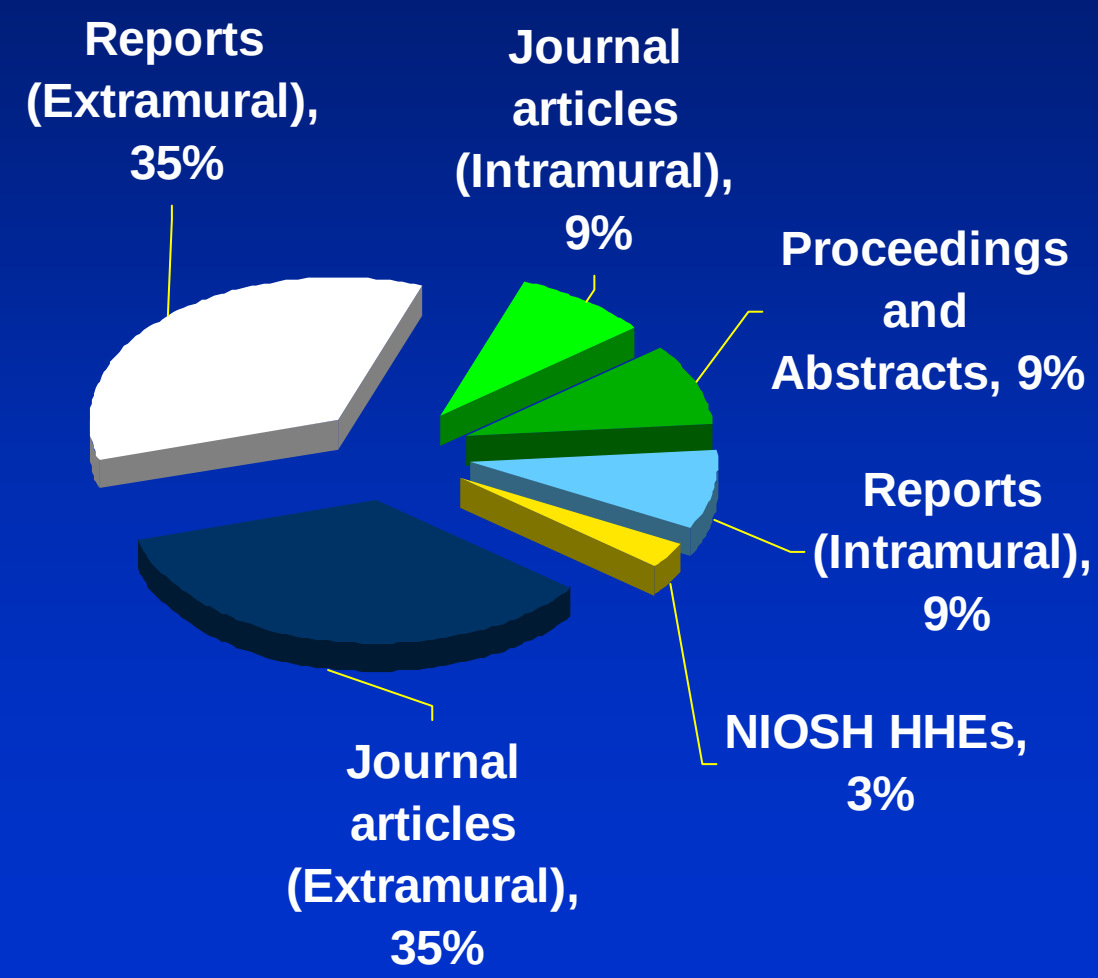
- Website
- Factsheets
- Meetings with workers and management
- Presentations to site advisory groups

OERP Funding and Publications



Completed Proceedings, Publications, and Reports

- 20 projects initiated by DoE prior to MoU
- 34 projects initiated by NIOSH
- 151 completed products



Impact of the OERP

- **Site Specific Recommendations**
  - Health Hazard Evaluations
- **Health Communication**
  - Individual Worker's Health Decisions
- **Advances in Radiation Health Science**
  - Direct Evidence of Low-Dose Effects
  - Exposure Assessment Methodologies
  - Risks of Mixed Exposures
- **Public Health Policy, Regulation, and Compensation**
  - Quantify risks from low-dose fractionated exposures
  - Radiogenicity of Chronic Lymphocytic Leukemia