



**Construction Permit
Application Review
SHINE Medical Technologies**

Environmental Panel

December 15, 2015

Panelists

- **Jane Marshall**
 - **Deputy Director, Division of License Renewal, NRR**
- **David Wrona**
 - **Branch Chief, NRR**
- **Michelle Moser**
 - **Project Manager, NRR**

Environmental Review

- **National Environmental Policy Act**
- **Environmental review process**
 - **Title 10 of *Code of Federal Regulations* (10 CFR) Part 51**
 - **Environmental Standard Review Plan (NUREG-1537)**
 - **Interim Staff Guidance**

Environmental Impact Statement (EIS)

- **10 CFR 51.20**
- **Project-specific decision**
 - **Potential significant impacts**
 - **First-of-a-kind facility with a unique application of technologies**
 - **Public involvement maximized**

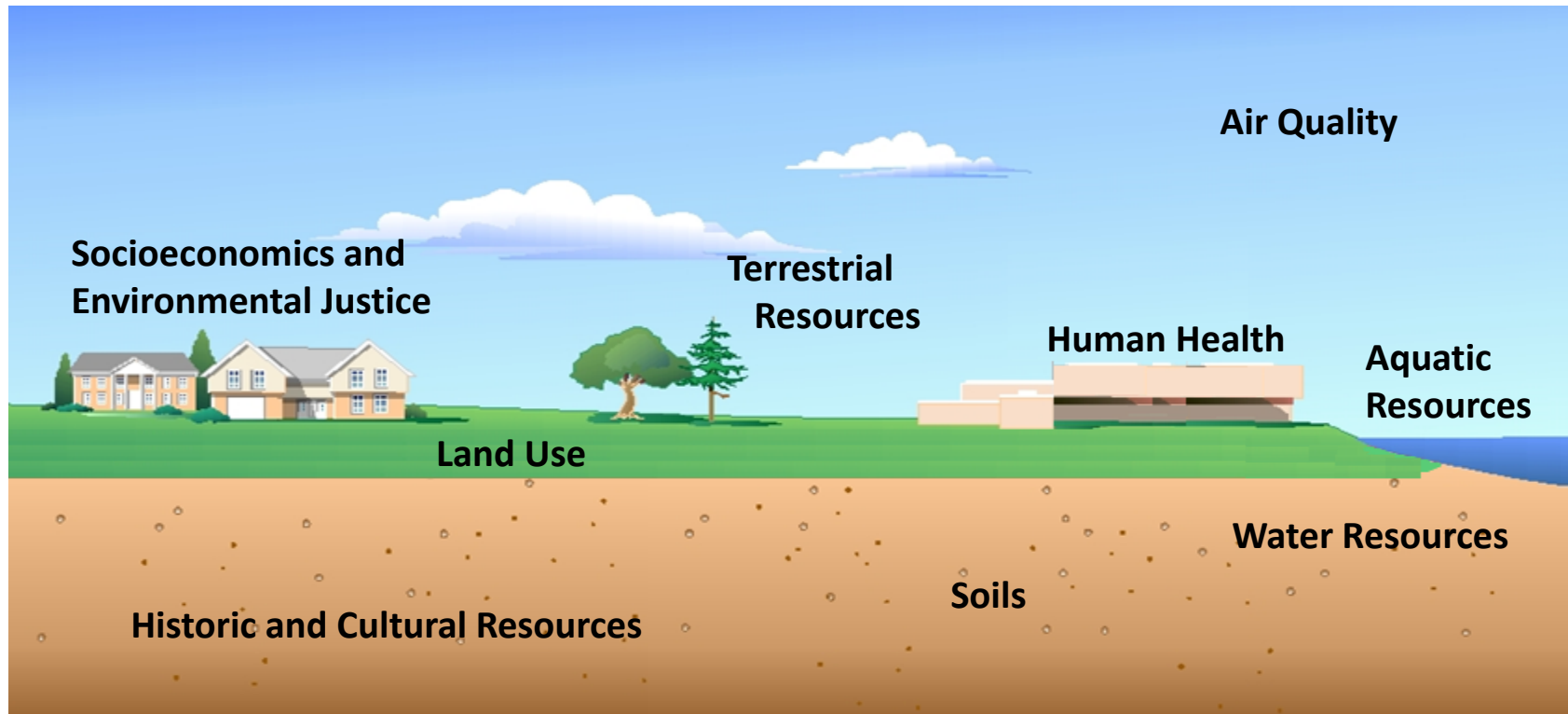
Scoping

- **2 public meetings in Janesville, Wisconsin**
- **5 oral comments**
- **6 written comments**

Department of Energy (DOE)

- **National Environmental Policy Act**
 - **Lead agency: Nuclear Regulatory Commission**
 - **Cooperating agency: DOE**
- **American Medical Isotopes Production Act**
 - **Complementary environmental reviews**

Environmental Review Areas



Environmental Impacts

| Resource Area | Impact |
|---------------------------------|-------------------|
| Land Use and Visual Resources | SMALL |
| Air Quality and Noise | SMALL |
| Geologic Environment | SMALL |
| Ecological and Water Resources | SMALL |
| Historic and Cultural Resources | SMALL |
| Socioeconomics | SMALL |
| Human Health and Waste | SMALL |
| Transportation | SMALL to MODERATE |

Reasonable Alternatives

- **No-action alternative**
- **Alternative sites**
 - **Chippewa Falls**
 - **Stevens Point**
- **Alternative technologies**

Alternative Technologies

- **Neutron capture**
- **Aqueous homogenous reactor**
- **Linear-accelerator-based**
 - **Analyzed in depth**

Costs and Benefits

- **Purpose**
 - **Inform recommendation to the Commission**
- **Costs**
 - **Environmental and financial**
- **Benefits**
 - **Societal, medical, and economic**

Environmental Costs

| | SMALL to MODERATE |
|----------------------------|------------------------|
| Proposed Janesville Site | Traffic |
| Chippewa Falls Alternative | Traffic, Noise |
| Stevens Point Alternative | Traffic, Noise, Visual |
| Alternative Technology | Traffic |
| No-action Alternative | None |

- **SMALL impacts for all other resource areas**

Benefits

- **Support United States (U.S.) policy**
- **Support U.S. public health needs**
- **Economic benefits**
 - **Increased tax revenue**
 - **New employment opportunities**

Consultations

| Regulation or Order | Determination |
|---|-------------------|
| Endangered Species Act, Section 7 | No Effect |
| National Historic Preservation Act, Section 106 | No Adverse Effect |

Draft Environmental Impact Statement

- **2 public meetings in Janesville, Wisconsin**
- **1 oral comment**
- **8 written comments**

NRC Staff's Recommendation

Staff recommends issuance of the construction permit.

Future NEPA Analyses

- **10 CFR 51.95(b) requires the staff to supplement the Final EIS**
 - **Matters that differ from the Final EIS**
 - **New significant information**

Acronyms

- **NRR – Office of Nuclear Reactor Regulation**