



**Commission Mandatory Hearing
SHINE Construction Permit Application
Environmental Overview
December 15, 2015**

Development of the Environmental Report

- Began work October 2011
- SHINE production facility will be located in Janesville, Rock County, Wisconsin
- Environmental Report follows the Final Interim Staff Guidance Augmenting NUREG-1537



Structure and Content of the Environmental Report

Chapter	Contents
19.1 – Introduction	Purpose and need for the proposed action, Regulatory provisions, permits and required consultations
19.2 – Proposed Action	Site location and layout, Radioisotope facility description, Water consumption and treatment, Cooling and heating dissipation systems, Waste systems, Storage, treatment and transportation of radioactive and nonradioactive materials, including LEU, waste, radioisotopes and any other materials
19.3 – Description of the Affected Environment	Land use and visual resources, Air quality and noise, Geologic environment, Water resources, Ecological resources, Historic and cultural resources, Socioeconomics, Human health
19.4 – Impacts of the Proposed Construction, Operations, and Decommissioning	Land use and visual resources, Air quality and noise, Geologic environment, Water resources, Ecological resources, Historic and cultural resources, Socioeconomics, Human health, Waste management, Transportation, Postulated accidents, Environmental justice, Cumulative effects
19.5 – Alternatives	No-action alternative, Reasonable alternatives, Cost-benefit of the alternatives, Comparison of potential environmental impacts
19.6 – Conclusions	Unavoidable adverse environmental impacts, Relationship between short-term uses and long-term productivity of the environment, Irreversible and irretrievable commitments of resources



Scope of Field Investigations

- Phase I Environmental Site Assessment
- General Reconnaissance
- Soil Borings/Geotechnical Investigation
- Well Installation
- Phase I Archaeological Investigation
- Baseline Visual Assessment
- Wetland Delineation
- Quarterly Ecological Investigations
 - Aquatic Ecology
 - Terrestrial Ecology
- Monthly Water Resources
 - Water Quality
 - Water Levels



Context for Data Acquisition

- Site
 - 91.27 acre parcel located on the south side of the City of Janesville in Rock County, WI
- Project Area
 - Circular area with a radius approximately 1 mile from the site center point
- Region
 - Circular area with a radius of 5 miles from the site center point
 - Larger context as appropriate (e.g., geology, air quality)
- Region of Influence
 - Rock County



Consultations

- City of Janesville
- Rock County
- Wisconsin Department of Natural Resources
- Wisconsin State Historic Preservation Office (SHPO)
- Wisconsin Department of Transportation
- U.S. Fish and Wildlife Service
- Federal Aviation Administration
- Bureau of Indian Affairs
- Native American Tribes (13):
 - Wisconsin Tribes:
 - *Forest County Potawatomi Community, Wisconsin*
 - *Ho-Chunk Nation of Wisconsin*
 - Non-Wisconsin Tribes:
 - *11 Tribal Entities*



Alternative Sites

	SHINE (Janesville)	Chippewa Falls	Stevens Point	No-Action
Construction Impacts	SMALL impacts to all resource categories	MODERATE impacts to Visual Resources, Noise and Transportation	MODERATE impacts to Land Use, Visual Resources, Noise, Ground Water, and Transportation	SMALL impacts to all resource categories
Construction Benefits	420 jobs; \$635,000 annual property tax payments	420 jobs; \$635,000 annual property tax payments	420 jobs; \$635,000 annual property tax payments	None
Operation Impacts	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories
Operation Benefits	150 jobs; reliable source of diagnostic isotopes: Mo-99, I-131, Xe-133; \$660,000 annual property tax payments	150 jobs; reliable source of diagnostic isotopes: Mo-99, I-131, Xe-133; \$660,000 annual property tax payments	150 jobs; reliable source of diagnostic isotopes: Mo-99, I-131, Xe-133; \$660,000 annual property tax payments	None



Alternative Technologies

	SHINE Technology	Linear Accelerator Technology	Low-Enriched Uranium Aqueous Homogenous Reactor	No-Action
Construction Impacts	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories
Construction Benefits	420 jobs; \$635,000 annual property tax payments	420 jobs; \$635,000 annual property tax payments	420 jobs; \$635,000 annual property tax payments	None
Operation Impacts	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories	SMALL impacts to all resource categories
Operation Benefits	150 jobs; reliable source of diagnostic isotopes: Mo-99, I-131, Xe-133; \$660,000 annual property tax payments	150 jobs; reliable source of Mo-99; \$660,000 annual property tax payments	150 jobs; reliable source of diagnostic isotopes: Mo-99, I-131, Xe-133; \$660,000 annual property tax payments	None



NRC Environmental Site Audit

July 30 – August 1, 2013

- SHINE presentations on the production process and alternative site selection process
- Janesville site visit
 - Walk down of proposed site
 - Driving tour
- Rock River visit
- Sampling sites 1 and 2 along the unnamed tributary to the Rock River
- Tour of the Janesville Wastewater Treatment Facility
- Alternative site visits:
 - Stevens Point
 - Chippewa Falls
- Responded to NRC Site Audit Information Needs



SHINE and The Community

- SHINE believes the relationships between the company, Janesville, and Wisconsin are important
- SHINE favors a policy of transparency with our community
- SHINE's actions support these principles
 - Participation in four public meetings per year (two SHINE hosted, two for city council)
 - SHINE management involvement in community activities
 - Regular discussions with city leadership to coordinate plans
 - Regular updates provided to State of Wisconsin
- These activities have fostered a relationship of trust and enthusiasm for the project



Conclusions

- The SHINE environmental review was conducted pursuant to 10 CFR Part 51 and is adequate
- The requirements of Sections 102(2) (A), (C), and (E) of the National Environmental Policy Act (NEPA) have been satisfied
- SHINE's weighing and balancing of the environmental, technical, and other costs and benefits of the SHINE facility supports issuance of the construction permit

