

# Community Meeting

November 29, 2006



8531.1 11/06

The first quarterly Legacy Management Community Meeting was held on November 29, 2006, at the Ross, Ohio, Fire House. Approximately 50 people attended the meeting to discuss the Aquifer Restoration Project and other related issues.

# Nature Nook

## Belted kingfisher

*Ceryle alcyon*



- 12 inches long
- Short-legged, big-headed, big-billed bird
- Hovers over water and dives headfirst into water in pursuit of fish, salamanders, tadpoles, insects and mollusks
- Found along rivers, streams, ponds, lakes and marshes



The Nature Nook, which highlights flora or fauna inhabiting the Fernald Preserve, is one of the topics featured at these community meetings.

# Fernald Preserve



**As a community asset, the Fernald Preserve will foster wildlife habitat and provide educational opportunities through environmental stewardship.**



# Aquifer Restoration



- **Extracted 20.1 billion gallons**
- **Treated 8.9 billion gallons**
- **Removed 7,754 pounds of uranium**
- **Great Miami Aquifer: 960,000 acres, 196 acres contaminated**
- **2026 projected completion**

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Aquifer restoration is the only ongoing environmental remediation activity taking place at the Fernald Preserve. The water is cleaned to meet the U.S. Environmental Protection Agency's (EPA) drinking water standards before being discharged to the Great Miami River.

# Aquifer Restoration

## Extraction Wells



- **Extraction wells: 23**
- **Well depth: 45-120 feet**
- **Extraction rate:  
Seven million gallons  
per day**

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Extraction wells pump 7 million gallons of contaminated water from the Great Miami Aquifer on a daily basis.

# On-Site Disposal Facility



- **3 million cubic yards of waste**
- **3,700 feet long, 1,000 feet wide, 65 feet tall**
- **120 acre footprint**
- **5 foot liner, 8.75 foot cap**
- **Completed cap October 29, 2006**

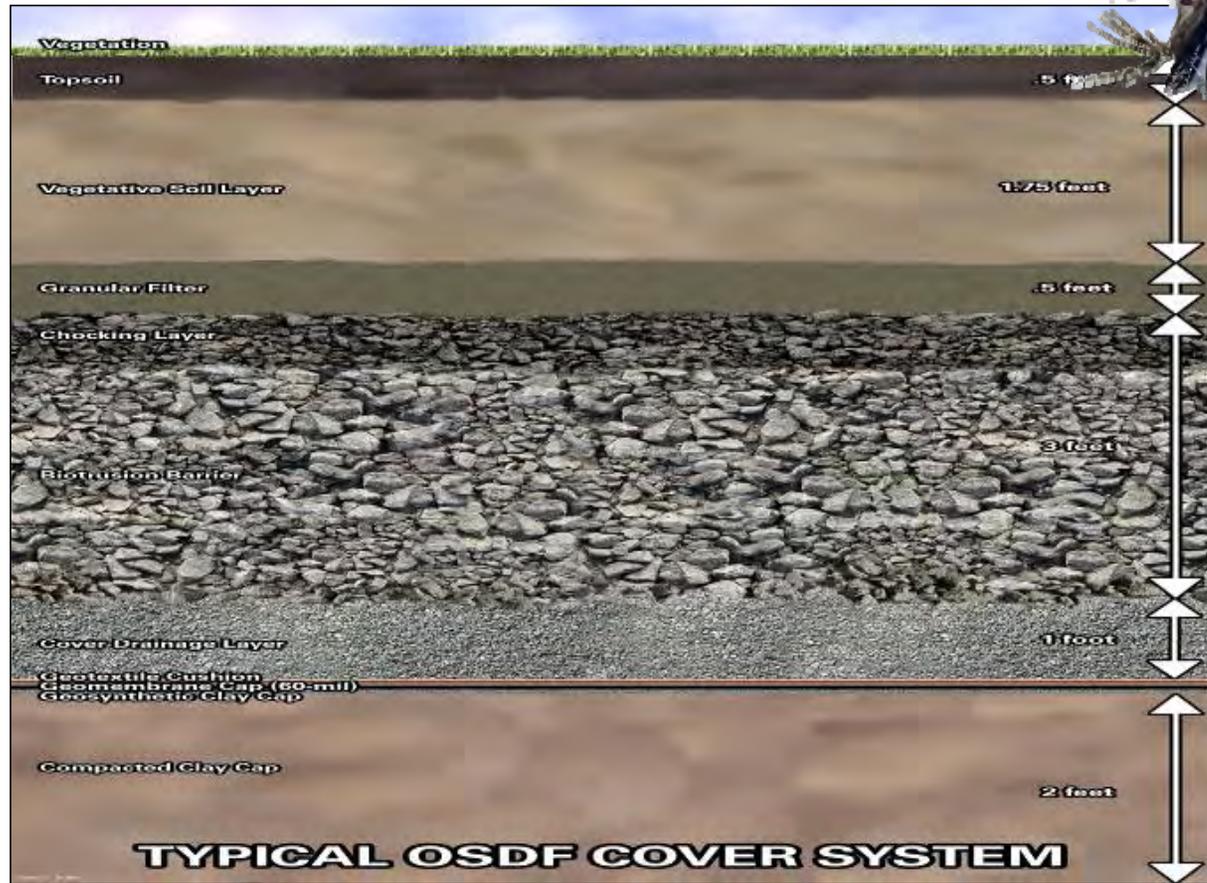
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Advisory boards, regulators, citizen's groups, and DOE agreed on a balanced approach to waste disposition during environmental restoration that includes sending small volumes of higher-contaminated material off site and keeping larger volumes of lower-contaminated material on site.

# On-Site Disposal Facility

## Cap

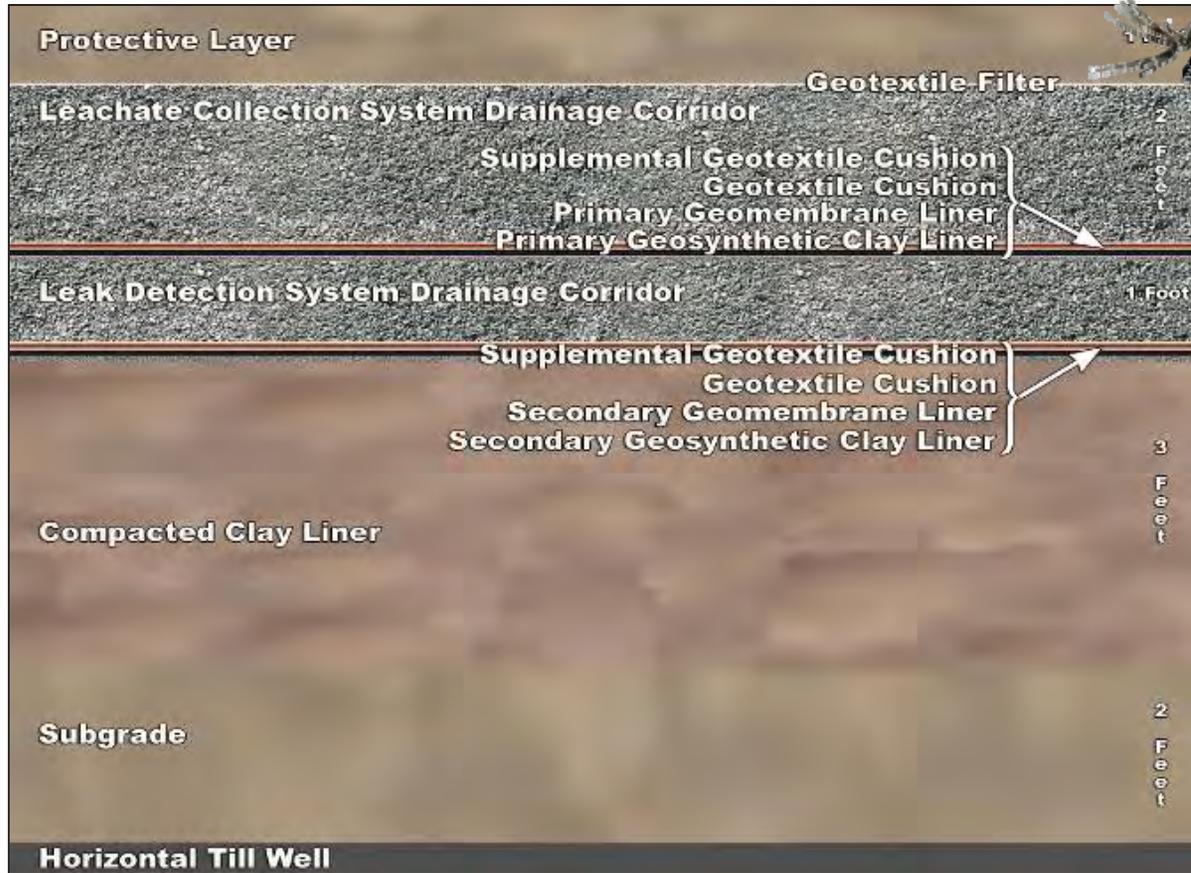


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The On-Site Disposal Facility (OSDF) cap is over 8-feet thick and was designed to shed rainwater, prevent the growth of woody plants, and deter animals from burrowing into the waste cells.

# On-Site Disposal Facility

## Liner



The OSDF liner is more than 5-feet thick and was constructed of natural and man-made materials. The liner includes a leachate (moisture in the waste) collection and detection system. In addition to the engineered liner, the OSDF is located on a naturally occurring 40-foot thick layer of clay.

# On-Site Disposal Facility



- **Quarterly cap inspections**
- **Double liner system**
  - **Leachate collection system**
  - **Leak detection system**
  - **Liner system performing within design specifications**



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Quarterly cap inspections are conducted on the OSDF. The multilayer-liner system was designed to ensure the integrity of the OSDF.

# Environmental Monitoring

- 142 ground water wells
- 42 OSDF monitoring locations
- 12+ surface water locations
- 11 air locations
- 2 sediment locations



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Environmental monitoring will be conducted for many years to track the progress of the ground water cleanup and to ensure that environmental remediation continues to meet all EPA drinking water standards.

# Environmental Monitoring

## Ground Water Monitoring



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An extensive system of ground water monitoring wells track the progress of removing uranium from ground water under the Fernald site. More than 140 wells on- and off-site are sampled twice a year.

# Environmental Monitoring

## OSDF Monitoring



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Ground water is monitored beneath the OSDF to ensure the liner system continues to perform within design specifications.



# Environmental Monitoring

## Surface Water Monitoring



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A network of surface water monitoring locations are used to verify that the site's 60 acres of surface water continues to meet EPA drinking water standards.

# Environmental Monitoring

## Air Monitoring



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Eleven air monitoring stations surround the Fernald Preserve and are used to test air quality. One off-site monitor is used as a comparison to the site's air boundary monitors.



# Environmental Monitoring

## Sediment Monitoring



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Sediment is monitored at two locations along the Great Miami River, one above and one below the point where ground water is discharged into the river.

# Community Relations

- Community meetings
- Public Environmental Information Center
- Publications
- Website
- Tours
- Presentations



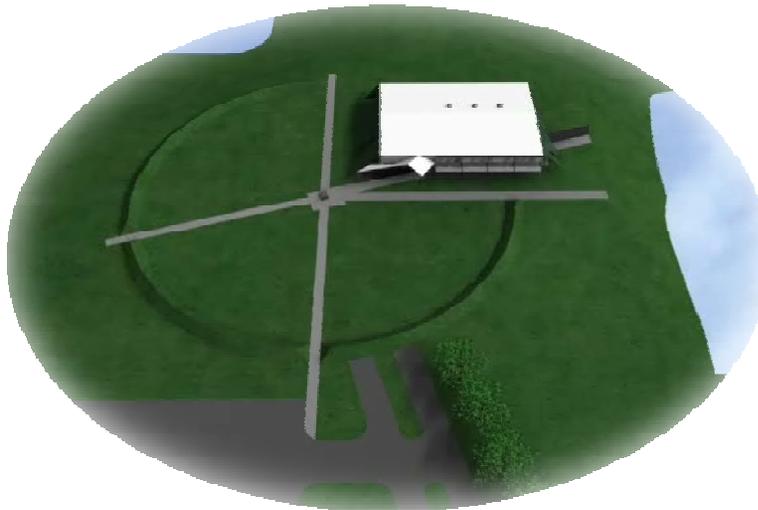
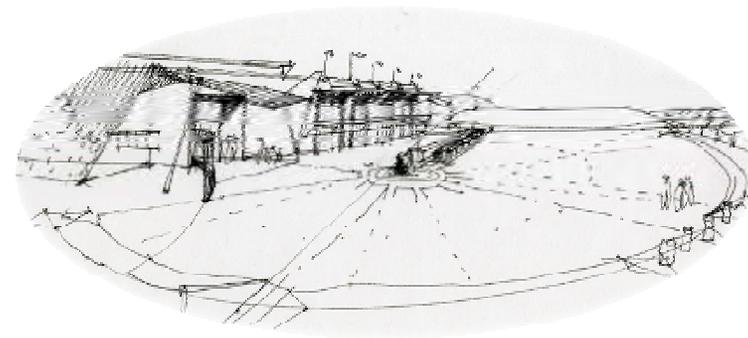
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Community relations are an integral component to the success of the Fernald Preserve. Community members have helped with cleanup decisions and are now assisting in creating a new future for the site.

# Community Relations

## Multi-Use Educational Facility

- Conceptual Design Process
- Status
- Future



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The Fernald Preserve Visitors Center is scheduled to open the summer of 2008. An existing warehouse will be refurbished and house displays and information on the history of the Fernald site as well as information for visitors who are interested in nature observation.

# Restoration Management

## 2006 Activities

- Completed nearly all plantings
- Wetland creation, soil amendment and seeding
- Prepared former Silos Area for the MUEF
- Completed restoration
  - Waste Pits area
  - Production area
  - Silos area
  - Borrow area
  - Support areas



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Ecological restoration activities at Fernald during 2006.

# Restoration Management

## Final Land Use

- 395 acres of woodlots
- 332 acres of prairie
- 81 acres of wetlands
- 60 acres of open water
- 33 acres of savanna
- 120 acres of OSDF



# Community Meeting

**Join us:**

**March 7, 2007**

**6:30 Crosby Township Community Center**

**8910 Willey Road**

**Jane Powell**

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