Consulting Party Meeting
for the Portsmouth Gaseous Diffusion Plant
Decontamination and Decommissioning (D&D) Project

December 10, 2012
Agenda

Welcome and Introductions.............................John Godec, Facilitator

Highlights since
the 5/24/12 Consulting Party meeting.............Amy Lawson, US DOE

Prehistoric Archaeological Sites
within PORTS, Pike County, Ohio.................Albert Pecora, Ph.D.
                        Ohio Valley Archaeology, Inc.

Regulatory Review Process and
Mitigation Measures....................................Eric Woods, Fluor-B&W Portsmouth

Facilitated Discussion......................................John Godec, Facilitator
Highlights
since the May 24, 2012, Consulting Party Meeting

Presented by
Amy Lawson, US DOE
Highlights

US DOE received the following comments and suggestions during the Consulting Party Meeting on 5/24/12:

- Document the details about the families whose properties were purchased by the Atomic Energy Commission, and add to oral histories/interviews.
- Document the details about construction personnel from Peter Kiewit & Sons.
- Provide information about the economic impact of plant construction and operations on the local community and tax payers, in particular the impact of the AEC project on local government’s dealing with the influx of 20,000+ construction workers into the community.
- Consider funding the construction of a multipurpose building to display artifacts and historical information.
- Consider physical preservation of certain buildings.
Highlights

US DOE Response:

• A Historic Context Report is being prepared, and will include information about the families, construction workers, economic impact, and other recollections and details of the facility.

• FBP personnel contacted representatives of the Peter Kiewit & Sons’ Company (now known as the Kiewit Company) and has received some information about the PORTS construction history.

• Additional interviews and oral histories, including those with families whose property was purchased by the Atomic Energy Commission, will be captured and incorporated into the Virtual Museum.

• All decisions related to displaying artifacts and historical information, as well as the physical preservation of certain buildings, will be documented through the CERCLA process, which takes into account public comments including those made during Consulting Party meetings.
US DOE met with four Tribal Nations on November 14, 2012:

- Eastern Shawnee Tribe of Oklahoma, Seneca, MO.
- Shawnee Tribe, Wyandotte, OK.
- Absentee-Shawnee Tribe of Indians of Oklahoma, Shawnee, OK.
- Seneca-Cayuga Tribe of Oklahoma, Grove, OK.
Highlights

Review of meeting with Tribal Nations:
• Established an intergovernmental relationship with four Tribal Nations
• Discussed scope and schedule of D&D Project.
• Reviewed information on prehistoric archaeological sites.
• Asked for input on mitigation approaches if an adverse effect results from the proposed undertakings.
• Discussed future tribal participation interests.
• Planning onsite visit.

12/10/2012
Highlights

US DOE has completed the following actions:

- Ohio Valley Archaeology completed Phase II Archeological Investigations in September 2012.
- Survey information was discussed with the Ohio Historic Preservation Office in October and December 2012.
- US DOE hosted a Public Meeting on October 22, 2012.

US DOE plans to make a presentation on prehistoric archaeological sites on the PORTS property to PORTS EM Site Specific Advisory Board on December 11, 2012.
Prehistoric Archaeological Sites
Within PORTS, Pike County, Ohio

Presented by
Ohio Valley Archaeology, Inc.
Albert Pecora, Ph.D. and Jarrod Burks, Ph.D.
PREHISTORIC ARCHAEOLOGICAL SITES WITHIN PORTS, PIKE COUNTY, OHIO

Phase II Investigations of Four Prehistoric Archaeological Sites

By Albert M. Pecora, Ph.D. and Jarrod Burks, Ph.D.

Ohio Valley Archaeology, Inc.

2012
### Ohio’s Timeline

<table>
<thead>
<tr>
<th>Period Names</th>
<th>Subperiods</th>
<th>Time</th>
<th>Calendar Years</th>
<th>Years Before Present</th>
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<tr>
<td>Historic-Era</td>
<td></td>
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<td>A.D.2012</td>
<td>Today</td>
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<tr>
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<td>A.D.1800</td>
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<td>Fort Ancient</td>
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<td>A.D.1650</td>
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<td>Late “Intrusive Mound”</td>
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<td>Middle Hopewell</td>
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<td>200 B.C.</td>
<td>2212</td>
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<td>Early Adena</td>
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<td>1000 B.C.</td>
<td>3012</td>
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<td>Late Glacial Kame/Maple Creek</td>
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<td>3000 B.C.</td>
<td>5012</td>
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<tr>
<td>Archaic</td>
<td>Middle</td>
<td></td>
<td>5000 B.C.</td>
<td>7012</td>
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<tr>
<td></td>
<td>Early</td>
<td></td>
<td>8000 B.C.</td>
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<td>Paleoindian</td>
<td>Folsom/Clovis</td>
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<td>12,000 B.C.</td>
<td>14,012</td>
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Lithic Debris
Fire-Cracked Rock
Archaeological Survey Efforts

• Archaeological Surveys
  – 1997 ASC Group, Inc. Survey
  – Phase II Archaeological Surveys of 13 Historic-era Farmstead Sites
  – Reconnaissance Surveys of Additional Historically Mapped Farmsteads
  – Enhanced Phase I Surveys of Historic-era Farmsteads
  – Phase I Prehistoric Settlement Surveys
Combined Survey Results

• Documentation of 53 Archaeological Sites with Prehistoric Artifacts within PORTS
  – i.e., PORTS contains 53 prehistoric archaeological sites
  – 18 overlap with historic-era farmstead sites and cemeteries
Site Types?

• 29 Isolated Finds
  – Locations where a single prehistoric artifact was found

• 24 Lithic Scatters
  – Locations where multiple prehistoric artifacts were found
Survey Recommendations

- Phase II Surveys were Recommended for Four Prehistoric Sites
  - Site A
  - Site B
  - Site C
  - Site D

- 33Pk210 (Duvall & Associates 2003)
Phase II Field Methods

- Geophysical Survey
  - Magnetometer Survey
  - Magnetic Susceptibility Survey
- 5-meter (15 ft) Interval Shovel Testing
- 1x1 m Unit Excavation (Artifact Sampling)
- Selected Feature Documentation and Excavation
Archaeological Features

• The remains of below-ground “facilities”

• Examples
  – Earth Ovens
  – Hearths
  – Structural Post Molds
  – Storage Pits
Temporal Data

• Temporally Diagnostic Artifacts
  – Projectile Point Typology
  – Pottery
  – Micro-Drill Technology?

• Radiometric Dates
  – Obtained from Carbon Samples Extracted from Features
Site A
Magnetic Survey Results

- 20 meters
- 65 feet
- About 0.9 acres

20 meters
65 feet

About 0.9 acres
Site A
Magnetic Survey Results

20 meters
65 feet
about 0.9 acres
65 feet
20 meters

about 0.9 acres
Site B
Magnetic Survey Results

about 1.8 acres

65 feet
20 meters
Site B
Magnetic Survey Results

Yellow = Fire-cracked Rock Debris Fields

Red (solid) = Fire-cracked Rock Filled Pits

20 meters
65 feet
Feature 1, Site B
20 meters
65 feet
about 1.8 acres

Site B

Magnetic Survey Results

Results

acres

rs
Site C
Magnetic Survey Results

about 1.3 acres
Site C
Magnetic Survey Results

about 1.3 acres
Feature 2, Site C
Feature 2, Site C

Plan View @45 cmbs

Planview @60 cmbs

East-West Profile

Burnt Earth

20 cm
Feature 1, Site C
Site C Artifacts

- Projectile Points: 8000-6000 B.C.
- Burnt Biface Fragments: 380-180 B.C.
- Ground Stone Celt Bit: 380-180 B.C.
- Core
- Grit-Tempered Pottery Fragments: 380-180 B.C.
Site D
Magnetic Survey Results

about 1 acre

65 feet
20 meters
Site D
Magnetic Survey Results

about 1 acre

Old Fence

65 feet
20 meters
Site D Artifacts

- Core
- Early & Late Stage Biface Blanks
- Cup-Stone/Nutting Stone
- Flake Tools
- Grit-Tempered Pottery Fragments 1500-300 B.C.
- Projectile Point Fragment
- Hoe Fragment
- Groundstone Celt Fragments
Unique Tools and Objects from Site D

Stone Ball

Stone Cube w/ Drilled Hole

Micro-Drill Technology

= Actual Size
<table>
<thead>
<tr>
<th>Site</th>
<th>Temporal Diagnostic Artifacts</th>
<th>Radiometric Dates</th>
<th>Time Period</th>
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<tbody>
<tr>
<td>Site A</td>
<td>Triangle Cluster P.Pt. (A.D. 700-1200)</td>
<td>A.D. 1260-1290</td>
<td>Late Prehistoric</td>
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<tr>
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<td>Notched P.Pt. (4000-1700 B.C.)</td>
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<td>Late Archaic</td>
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<tr>
<td>Site B</td>
<td>Micro-Drill Technology (750-680 B.C.?)</td>
<td>1000-840 B.C. 1010-900 B.C.</td>
<td>Late Archaic/Early Woodland</td>
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<td>1290-1280 B.C.</td>
<td>Late Archaic</td>
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<tr>
<td>Site C</td>
<td>Thick, Grit-Tempered Pottery (1500-300 B.C.)</td>
<td>A.D. 660-780 380-180 B.C.</td>
<td>Late Woodland</td>
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<tr>
<td></td>
<td>Projectile Points (8000-6000 B.C.)</td>
<td>660-780 B.C. 810-760 B.C.</td>
<td>Late Archaic/Early Woodland</td>
</tr>
<tr>
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<td>1010-830 B.C. 1210-1200 B.C.</td>
<td>Late Archaic Early Archaic</td>
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<tr>
<td>Site D</td>
<td>Micro-Drill Technology (750-680 B.C.?)</td>
<td>750-680 B.C. 2460-2260 B.C.</td>
<td>Early Woodland</td>
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<tr>
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<td>Thick, Grit-Tempered Pottery (1500-300 B.C.)</td>
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<td>Late Archaic</td>
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</tbody>
</table>
Archaeological Interpretations

...based on about 1-2% excavation

• Unplowed Contexts
• Excellent Site Structure
• Intact Cultural Features
• Temporally Diagnostic Artifacts
• Datable Material (C-14 dates)
• Well-Defined Micro-Drill Technology
NRHP Eligibility

- **Criterion D**: Sites *that have yielded, or may be likely to yield, information important in prehistory*...
Regulatory Review Process and Mitigation Measures

Presented by
Eric Woods, Fluor-B&W Portsmouth
Regulatory Review Process

The decontamination and decommissioning (D&D) project at PORTS is being conducted under CERCLA – Comprehensive Environmental Response, Compensation and Liability Act.

- CERCLA is a law that streamlines the regulatory review process.
- Streamlined reviews enable risks and hazards to human health and the environment to be cleaned-up in an expedited manner.
- Section 106 requirements are being carried out within the CERCLA process as an Applicable, Relevant and Appropriate Requirement (ARAR).
Regulatory Review Process

DOE is required to consider the effects of the Portsmouth D&D Project on properties that are eligible for or listed on the National Register of Historic Places.

• **Input** DOE receives through meetings with consulting parties, tribal nations, elected officials, and the general public will be considered in the development of mitigation measures.

• **Measures** needed to avoid, minimize or mitigate impacts to historic properties are identified in the CERCLA documents.

• **Commitments** DOE makes to take these avoidance, minimization or mitigation actions are included in the decision documents and are binding on the Department.
The Proposed Plan will include the mitigation measures developed using the input provided by consulting parties, tribal nations, elected officials and the general public.

The Proposed Plan will be issued for formal public review and comment.

Avoidance, minimization, and mitigation actions are included in the Record of Decision and binding on the DOE.
DOE is evaluating the impacts of the potential onsite disposal cell to the four archaeological sites on the US DOE Portsmouth Site property that are considered eligible for the National Register of Historic Places:

**Site A:** Site **IS** in potential OSDC footprint and support areas.  
✓ Impacts could be mitigated.

**Site B:** Site **IS NOT** in potential OSDC footprint, but **IS NEAR** proposed support areas.  
✓ Impacts could be avoided by design.

**Site C:** Site **IS NOT** in potential OSDC footprint or support areas.  
✓ Impacts could be avoided.

**Site D:** Site **IS NOT** in potential OSDC footprint or support areas.  
✓ Impacts could be avoided.
Since Site A could be adversely affected if onsite disposal is selected and implemented at the most technically suitable location, DOE is currently considering the following mitigation options for Site A:

- **Avoidance** - site is preserved in place.
  - Significant impacts to crucial support areas.
  - Significant elevation difference between the existing and proposed grades.
  - Requires alternate, less efficient approach to access and material staging.

- **Minimization** - protective cover
  - Site is preserved in place using a protective layer of soil to cover the site.
  - Risks disturbance of the site due to shallow features.
  - Requires alternate, less efficient approach to access and material staging.

- **Mitigation** - Phase III Investigation
  - Collection of detailed information, including recovery of artifacts.
  - Obtain valuable educational and scientific data that can be shared.
  - Permanent loss of the site.
  - No impact to potential OSDC operations.

*Mitigation measures considered will recognize the Anti-Deficiency Act as the controlling mechanism for the ability to implement any action using federally appropriated funds. Furthermore, mitigation measures should not create health, safety, environmental/human health risks, e.g. put visitors at risk, or cause adverse effects to the clean-up mission, e.g. delays or complications.*
Discussion – Archaeological Sites
Mitigation for Site A

Avoidance, Protective Cover, Phase III Investigation, Other
Proposed and Ongoing Mitigation Measures: DOE-Built Environment

Mitigation being considered for the DOE-Built Environment is a combination of documentation and interpretation methods:

- Collect and evaluate items recovered from selected PORTS facilities;
- Develop a GIS Atlas to support understanding of operations and infrastructure at PORTS;
- Develop a Historic Context Report describing the PORTS site using photographs of interior and exterior building features; and existing design and construction related drawings, photographs, and a written narrative
- Take panoramic photographs prior to, during, and following demolition.
Proposed and Ongoing Mitigation Measures: DOE-Built Environment

- PORTS Virtual Museum, incorporating the following components:
  - Ohio University multimedia web documentary film and photographic essay highlighting the history of the PORTS Site, the current clean up process, and the outreach and visioning project.
  - Oral histories and interviews with current and former workers, neighbors and stakeholders.
  - Interactive virtual site tour, including building interiors.

More than 8,500 visitors from 45 different countries since November 30, 2012

www.portsvirtualmuseum.org
Discussion – Mitigation Measures for DOE-Built Environment
Providing Input

Send your comments to US DOE using the following methods:

**US Mail**
US Department of Energy
PO Box 700
Piketon, Ohio 45661
ATTN: Amy Lawson, US DOE

**Email**
Jennifer.Chandler@wastrenadvantage.com

**Fluor-B&W Portsmouth LLC Website**
http://www.fbportsmouth.com/community/questionnaire.php