PLUM BROOK ORDNANCE WORKS
Restoration Advisory Board

Quarterly Fact Sheet ***October thru December 2005***

SITE DESCRIPTION

The former Plum Brook Ordnance Works is located four (4) miles south of Sandusky, Ohio, near Lake Erie. Nitroaromatic explosives produced at the site included TNT, DNT, and pentolite; other products produced at the ordnance works included nitric and sulfuric acid. The plant operated for four years from 1941 to 1944, and was decontaminated by the end of 1945. Possession of the property was transferred to the Ordnance Department in 1946, then to the War Assets Department, and finally to the GSA in 1949. NASA acquired the property in 1963 and presently maintains and utilizes 6453.5 of the original 9009 acres.

SITE HISTORY

The U.S. Army entered into a contract with Trojan Powder Company for the purpose of manufacturing this ordnance. The official title for the site during this time was the Plum Brook Ordnance Works (PBOW). Groundbreaking to construct the facilities to support the manufacturing of ordnance began on April 15, 1941. Production began on December 16, V-J Day (1941). During the production period more than one billion pounds of ordnance was manufactured.

PBOW was placed in standby condition from 1945 to 1946. Throughout this time, the Army conducted decontamination and decommissioning (D&D) of many of the buildings and structures associated with the manufacturing of ordnance. Decontamination efforts on all TNT and DNT lines began in September 1945. Decontamination of TNT lines, acid lines, pentolite lines, and DNT lines was halted during the last quarter of 1945. Typical D&D methods for buildings and structures involved removal and relocation of all explosives to a burning ground where they were burned. Where possible, remaining buildings and structures were burned to the ground. Steam lines, drain lines, etc., were flushed and dismantled. There is no indication in PBOW historical records of where lines were flushed.

It is estimated that 65 percent of the necessary decontamination of PBOW was completed by December 1945. On midnight of December 17, the physical custody of the PBOW was transferred from Trojan Powder Company to the U.S. Army Ordnance Department. The Ordnance Department became the accountable agency and the U.S. Army Corps of Engineers assumed responsibility for maintenance and custodial duties at the PBOW from January 1 through June 30, 1946.

After further decontamination efforts were completed, and the extent of contamination certified, PBOW was transferred to the War Assets Administration in August 1946. From 1946 to 1949 the property was protected and maintained by Matthew-Levio and Sons. In 1949 it was transferred to the General Services Administration (GSA), which maintained oversight of the facility. Ravenna

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Arsenal conducted further decontamination efforts from 1945 to 1958. NASA accepted the facility in 1963 after Ravenna Arsenal certified that the PBOW had been completely decontaminated and was suitable for unrestricted future use. After acceptance of the PBOW, NASA identified further areas that required decontamination. In 1964, NASA continued site decontamination and the removal of structures.

In 1956 an agreement was made to lease 500 acres of the north portion of the site to construct and operate the Plum Brook Reactor Facility (PBRF). NASA operated the PBRF from 1963-1973 under a license agreement with the Atomic Energy Commission (AEC). NASA currently has a license agreement with the Nuclear Regulatory Commission (NRC) for the safe protective storage of the PBRF. NASA acquired an additional 6,000 acres of the former PBOW on March 15, 1963, for the purpose of conducting various aerospace research activities. NASA continues to use the site today.

SUMMARY OF ACTIVITIES

Red Water Ponds Area

An interim soil removal action is complete at Pentolite Road, however additional excavation is required to obtain clean closure of the contaminated areas. This will be conducted when funding is available. The field work for the removal was completed in fall 2004 and the draft report is expected in late 2005.

TNT Area B

An interim soil removal action is complete at TNT Area B, however additional excavation is required to obtain clean closure of the remaining contaminated areas. The field work for the additional excavation is anticipated in spring 2006.

TNT Area A and TNT Area C

USACE will pursue the Interim Soil Removal Action as funding becomes available. The Preliminary Draft Decision Document and Proposed Plan for Area A and Area C were received in late May 2005 and late June 2005, respectively. The districts (LRH and LRN) reviewed the documents and the contractor submitted the revised documents in early August 2005. See Groundwater Remedial Investigations below for an update on groundwater activities for these areas.

TNT A, B and C & Red Water Ponds Areas

The Final Groundwater Report of Findings was submitted in late April 2005. The Final Baseline Human Health Risk Assessment of Groundwater Work Plan was submitted for review in late January 2005. Comments were received in January 2005 and Revision 1 was submitted in early October 2005. The Draft Risk Assessment and Report is expected in late October 2005. The Draft Risk Assessment and Report is expected to be submitted in early February 2006.

A Task Order was awarded to Shaw Environmental in late November 2005 for the Groundwater Feasibility Study (FS) in TNT Areas A, B, C, and Red Water Ponds Areas. Work on the FS is expected to begin as soon as the districts' review of the Groundwater Risk Assessment is completed.

Reservoir No. 2 Burning Ground

Remedial Investigation Part 1

In late February 2005, the Delivery Order was modified to include additional soil samples to further define a specific portion of the burning grounds. This additional soil sampling was conducted in late April 2005. The Interim Final Report was submitted in early July 2005 and included all soils and groundwater results. Comments on the report were received and discussed at the PBOW Team meeting in early December 2005. The final report is expected in early January 2006.

Engineering Evaluation/Cost Analysis (EE/CA)

Based on discussions in the September 2005 PBOW Team meeting, an EE/CA was scoped and Delivery Order was awarded in late October 2005. Field activities were completed in early December 2005 and the Treatability Summary Report is expected in early February 2006.

Acid Areas

The Draft Soils Remedial Investigation Report was submitted in early August 2005, comments on the report were received in late September 2005. The comment responses were discussed at the PBOW Team Meeting in December 2005. Based on the discussions, USACE decided to delay the delivery of the final document and modify the Delivery Order to include additional soil sampling in the Acids Areas, if funding is available. Results from the additional sampling would be included in the final report.

The Round 2 Quarterly Groundwater Report was submitted in late August 2005 and comments have been received. Corrections to the document are being made by the contractor and the document will be finalized in early February 2006.

Restoration Advisory Board

Restoration Advisory Board (RAB) meetings are scheduled when sufficient technical information is available to present to the community members, or at the request of the RAB. A RAB meeting was conducted on December 8, 2005. Jacobs Engineering provided an update of Acid Areas 2 and 3 Remedial Investigation and an overview of the EE/CA in Reservoir No. 2 Burning Grounds. The next RAB Meeting is scheduled for February 23, 2006.

Project Team Meetings

Team meetings are conducted several times throughout the year to discuss project issues. A Full Team Meeting includes representatives from NASA, OEPA, USACE and USACE contractors. A USACE Team Meeting includes only project participants from LRH, LRN and other USACE representatives as appropriate. A full Team Meeting was conducted December 8, 2005 prior to the RAB meeting. The next team meeting is scheduled for February 23, 2006.