

Agenda

Pantex Environmental Restoration Public Meeting

Square House Museum, Panhandle

May 4, 2009 4:00 p.m.

Hosted by

United States Department of Energy/National Nuclear Security Administration,

Pantex Site Office (USDOE/NNSA, PXSO)

and

Texas Commission on Environmental Quality (TCEQ)

4:00 - 4:05	Introductions	Patrick Graham, TCEQ Johnnie Guelker, NNSA
4:05 - 4:20	Long-Term Groundwater Monitoring Network	Dennis Huddleston, B&W Pantex
4:20- 4:25	TCEQ Status Update	Patrick Graham, TCEQ Fay Duke, TCEQ
4:25	EPA Status Update	Camille Hueni, EPA
4:35	Environmental Cleanup Progress <ul style="list-style-type: none">1. Groundwater2. Soil	Dennis Huddleston, B&W Pantex
4:45	Environmental Program Path Forward	Dennis Huddleston, B&W Pantex
4:55	Application to Modify Compliance Plan	Dennis Huddleston, B&W Pantex
5:30	ER Program Questions & Answers	Johnnie Guelker, PXSO Dennis Huddleston, B&W Pantex

Environmental Restoration Public Meeting

May 4, 2009

Dennis E. Huddleston

Projects Division Manager

Long Term Groundwater Monitoring Network

- **Long-Term Groundwater Monitoring Network**
 - Five objectives agreed upon by Pantex, TCEQ and EPA for developing the network

Long Term Groundwater Monitoring Network

- 1. Early detection in the Ogallala aquifer**
- 2. Plume stability in the perched aquifer**
- 3. Corrective action effectiveness**
 - These wells would gauge the effectiveness of our cleanup actions

Long Term Groundwater Monitoring Network

4. Uncertainty management for RRS 3 sites

- These wells would allow us to monitor and confirm expected conditions at certain locations

5. Network Optimization

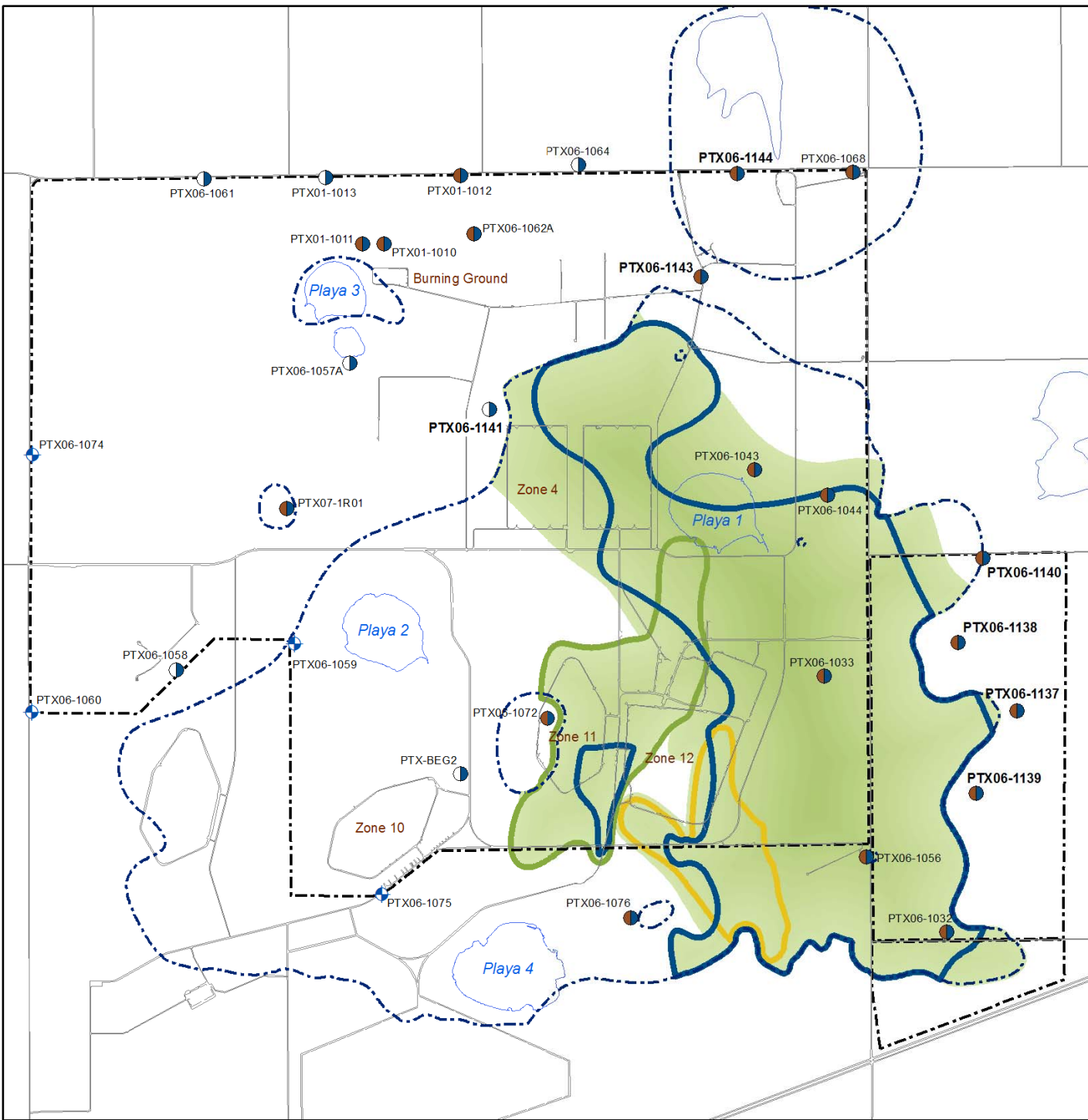
- Some wells at certain locations can meet more than one objective

Long Term Groundwater Monitoring Network

- **Extensive planning by Pantex**
 - Studies by nationally-recognized groundwater modeling experts to design Ogallala Aquifer and perched groundwater networks
 - Public workshops in April and June 2008
 - Ogallala Borehole Flow meter Study by USGS in 2008
 - Frequent discussions between Pantex, TCEQ and EPA

Long Term Groundwater Monitoring Network

- **Draft Final network
(as compared to current Compliance
Plan monitoring network)**
 - For perched groundwater:
 - ◆ 16 new wells
 - ◆ 113 total
 - For Ogallala Aquifer
 - ◆ Seven new wells
 - ◆ 30 total



Ogallala Well Objectives

- Early Detection
- Uncertainty Management
- ◆ Other Ogallala Monitoring Wells

New Wells in Bold

 USDOE/NNSA Property

Perched Groundwater Plumes

- Extent of All COCs
- Hexavalent Chromium
- Perchlorate
- RDX
- Approximate Perched Extent

0 2,500 5,000 Feet
 0 500 1,000 Meters



B&W
Pantex

TCEQ Status

- **Patrick Graham, TCEQ**
- **Fay Duke, TCEQ**

EPA Status Update

- **Camille Hueni, EPA**

Environmental Cleanup Progress

Construction of selected remedies is complete:

- Playa 1 Pump & Treat completed September 30, 2008
- Zone 11 ISB completed March 30, 2009

Selected Remedy

■ **For Soils:**

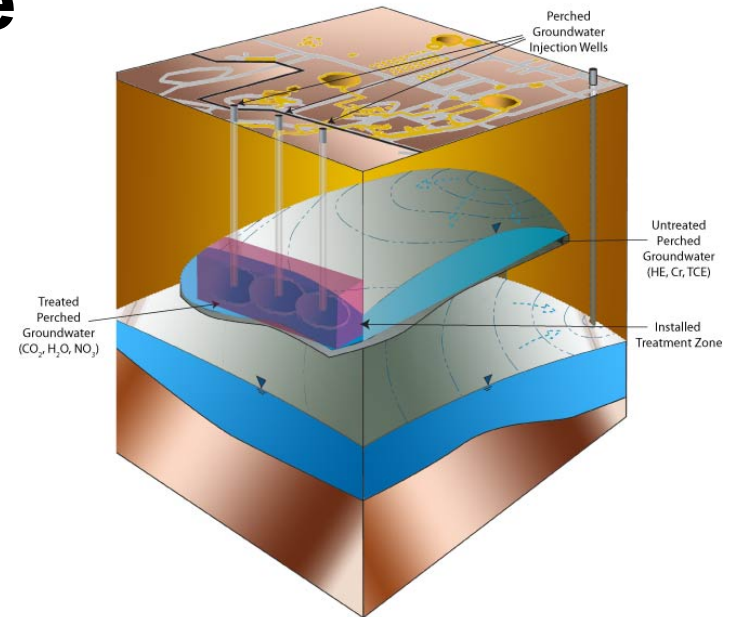
- Institutional Controls, Containment, and Ditch liners
- Soil Vapor Extraction at the Burning Ground

■ **For Groundwater:**

- Pump and Treat Systems at Playa 1 and in the Southeast
- *In-Situ* Bioremediation systems in the Southeast and at Zone 11
- Institutional Controls

SE In Situ Bioremediation Project

- Identified through the Risk Assessment as an area of potential risk to the Ogallala Aquifer.
- Goal is to bio-remediate the constituents in the perched aquifer to prevent them from reaching the Ogallala Aquifer.



SE In Situ Bioremediation Project

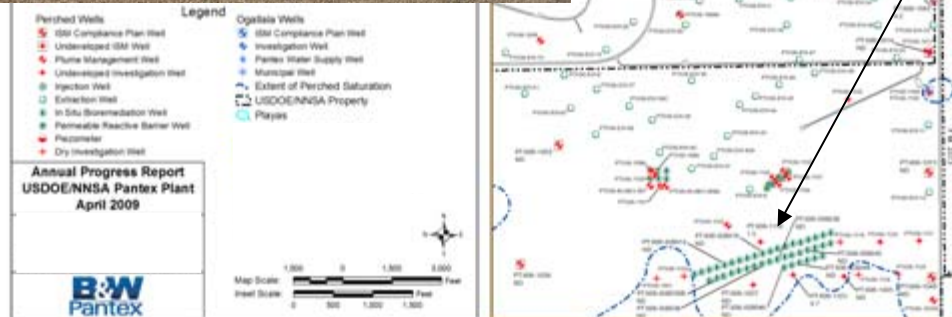
- **Emulsified soybean oil injected into groundwater November 2007 – March 2008**
- **Most recent data indicates significant decreases in HE concentrations from pre-injection levels**
- **Overall decreases in RDX, total chromium, sulfate, and nitrate concentrations indicate successful bioremediation**

SE In Situ Bioremediation Project



ISB Trailer

Southeast *ISB*



Zone 11 In Situ Bioremediation Project

- A treatability study of perchlorate and TCE in perched groundwater in Zone 11
- Project is comprised of 23 injection wells and three monitoring wells



Installation of a conveyance line that transports treated water from the southeast pump & treat system to the Zone 11 *ISB*.

Playa 1 Pump & Treat

- Pump & Treat facility and 10 wells near Playa 1
- Project was completed in September



Playa 1 Pump & Treat

- Treated more than 19 million gallons of water to date
- Water is put to beneficial reuse on crop land via subsurface irrigation



Southeast Pump & Treat

- **Pump & Treat Facility**
 - 62 active wells
 - 4 active injection wells
- **Operated since 1995**
- **Treated 715 million gallons of perched groundwater to date**



TCEQ Chairman Buddy Garcia tours the Southeast Pump & Treat Facility in April 2008.

Institutional Controls

- **Help minimize the potential for human exposure to contamination by ensuring appropriate land use**
- **Includes ditch liners and landfill covers at Pantex**



Vegetative Cover on Landfill 1

Institutional Controls

- **Also includes:**
 - Deed Restrictions
 - SWMU warning signs
 - SWMU interference process
 - Control of access at Pantex



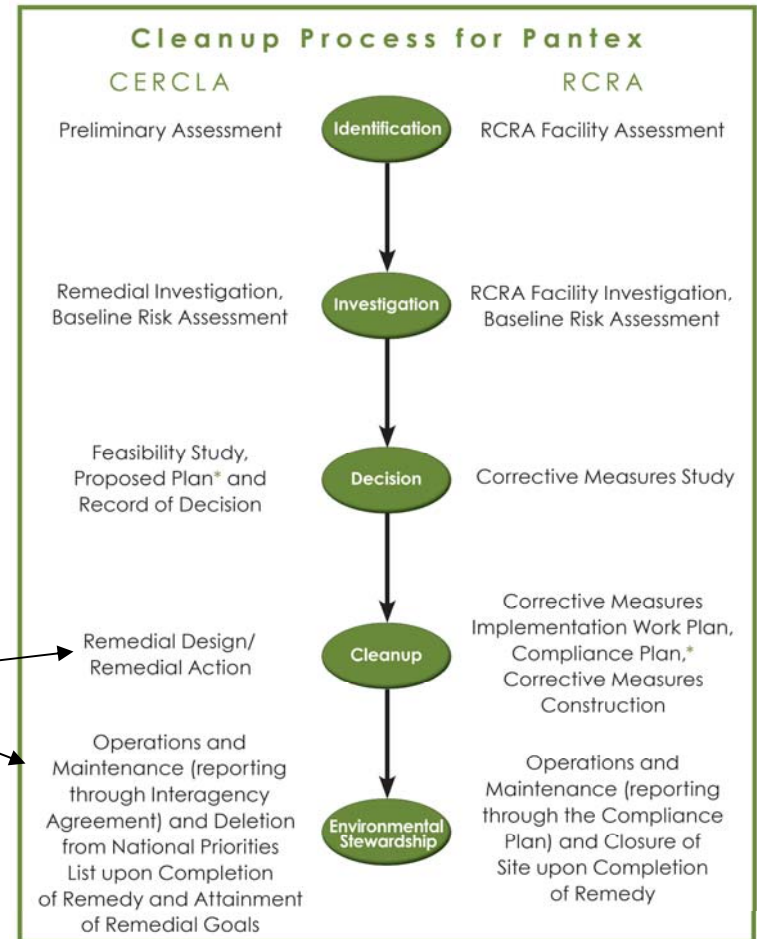
Environmental Program Path Forward

- **Application to Modify Compliance Plan**
- **TCEQ and EPA site visit**
- **Preliminary Construction Completion Report review by regulatory agencies**
- **Continued maintenance & operation of selected remedies**

Environmental Program Path Forward

- Quarterly and annual reporting
- Five-year remedy effectiveness reviews

We are here.



*Public participation stage as required for CERCLA or RCRA

Application to Modify Compliance Plan

- **The current Compliance Plan concentrates on interim measures**
- **The Compliance Plan application will concentrate on operation and maintenance of the installed remedies (Corrective Action Systems)**

Compliance Plan

- **The Compliance Plan application will be submitted upon approval of the Remedial Design**
- **The application process encourages public involvement**
 - Formal public notice issued at time application is deemed administratively complete
 - Pantex hosts public meeting and receives comments for 60 days