

Pantex Clean-up Progress

Active clean-up continues from legacy operations that released contaminants to the perched groundwater and for solvents that were released to soils in the Burning Ground. The perched groundwater clean-up action includes three in-situ bioremediation systems (ISB) and two pump and treat systems. A soil vapor extraction system operates to remove solvents from the Burning Ground soils. One of the primary goals for treatment is to prevent movement of contaminated perched groundwater and solvents in soils to the deeper drinking water aquifer (Ogallala Aquifer). Pantex monitors over 100 perched groundwater wells to evaluate the effectiveness of the clean-up and 28 Ogallala Aquifer wells to evaluate the continued protectiveness of the action for the drinking water aquifer. Monitoring

results from Ogallala wells continue to indicate that all constituents of concern are below safe drinking water levels. You can find results on the Mission page at pantex.energy.gov. Pantex provides updates of the clean-up progress at an annual Public Meeting held on the second Tuesday of November. This year's meeting will be held at 4:00 p.m. on Tuesday, November 12th, 2019 at the Square House Museum, 501 Elsie Avenue, in Panhandle, TX.

Highlights of Clean-up Actions

- This past year, Pantex removed 1220 lbs of contaminants through remedial actions.

Totals since start of remedial action:

- 2.8 billion gallons of perched groundwater treated with 1.7 billion gallons beneficially used
- 14,020 pounds of contaminants removed from perched groundwater
- Perched water levels are continuing to steadily decline
- Bioremediation systems are reducing high explosives, perchlorate, and TCE (trichloroethene) to safe drinking water levels
- 20,820 pounds of solvents removed from soils by the Soil Vapor Extraction System

Meet the System: Southeast ISB Extension

Pantex completed installation of 25 new ISB injection wells in 2018 along the southeast boundary of Pantex Plant property to prevent further offsite movement of the high explosive contamination offsite. Amendment was injected into those wells in early 2019 and initial results indicated reduction of high explosives at the barrier. To begin treatment of the contaminants, about 13,000 gallons of molasses was injected across the well field. It takes up to 30 tanker truck-loads to bring in the amendment. Several storage tanks are used to store the amendment and treated water from the Southeast Pump and Treat System until it can be mixed. Then using one of the Pantex injection control trailers, the mixture is delivered and injected into the ISB wells. Pantex is committed to preventing further offsite movement of the contaminated groundwater, protecting neighboring wells, and remediating the offsite contamination.

New and Innovative Groundwater Cleanup Efforts

Through the continued evaluation of cleanup operations, Pantex determined there were areas of impacted perched groundwater that have migrated offsite and onto neighboring properties due to a narrow plume of contamination that appears to be following a old subsurface stream channel. While the newly installed Southeast ISB Extension is now helping prevent additional migration of contaminants, our investigation concluded a need for remedial cleanup action south and east of the plant. As a result, Pantex is preparing for further drilling to install for a new offsite system that will be installed starting in 2020. The new system will treat the perched groundwater using a combination of pump and treat and ISB technologies.

Recent evaluation of the offsite contamination resulted in selecting ISB enhanced by recirculation of the perched groundwater to improved distribution of the molasses. This will be achieved by installing wells downgradient of the ISB injection wells, extracting water from those wells, and then reinjecting the water with amendment in the upgradient injection wells. This increases the treatment zone by pulling the amendment across a larger area to improve treatment and reduce further movement of the contamination. Additional information on this system will be presented at the Pantex Environmental Restoration Public Meeting at 4:00 p.m. on Tuesday, November 12th, 2019 at the Panhandle Square House Museum.

