



Remedial Action for the Former Y Station State Lead Site

March 27, 2019
Prepared for:
City of Clovis
Public Works Committee



Agenda

- Site History
- Existing Conditions
 - Extent of contamination
- Additional Investigation
- Technical Approach



Previous Investigation History

- Initiated at Allsup's #320 (2011)
 - UST system, convenience store replaced
 - Installation of 3 borings, 3 nested wells
- Continued off-site (2014)
 - Installation of 4 single zone wells
 - Focus shifts to assessing off-site sources
- Continued off-site (2016)
 - Installation of 3 nested wells
 - Last quarterly sampling July 2016



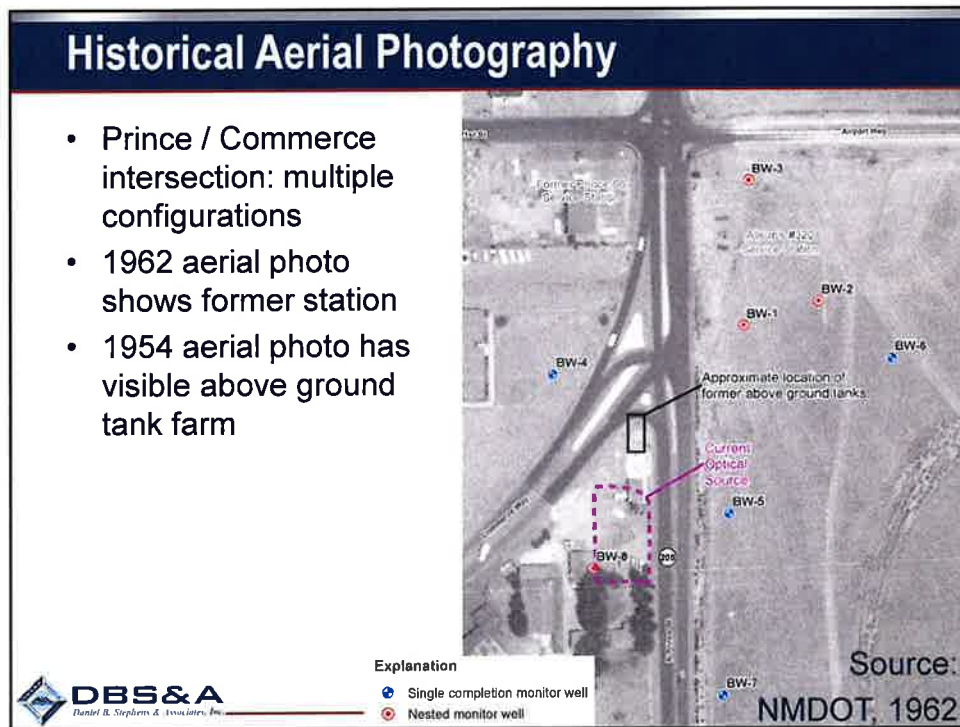
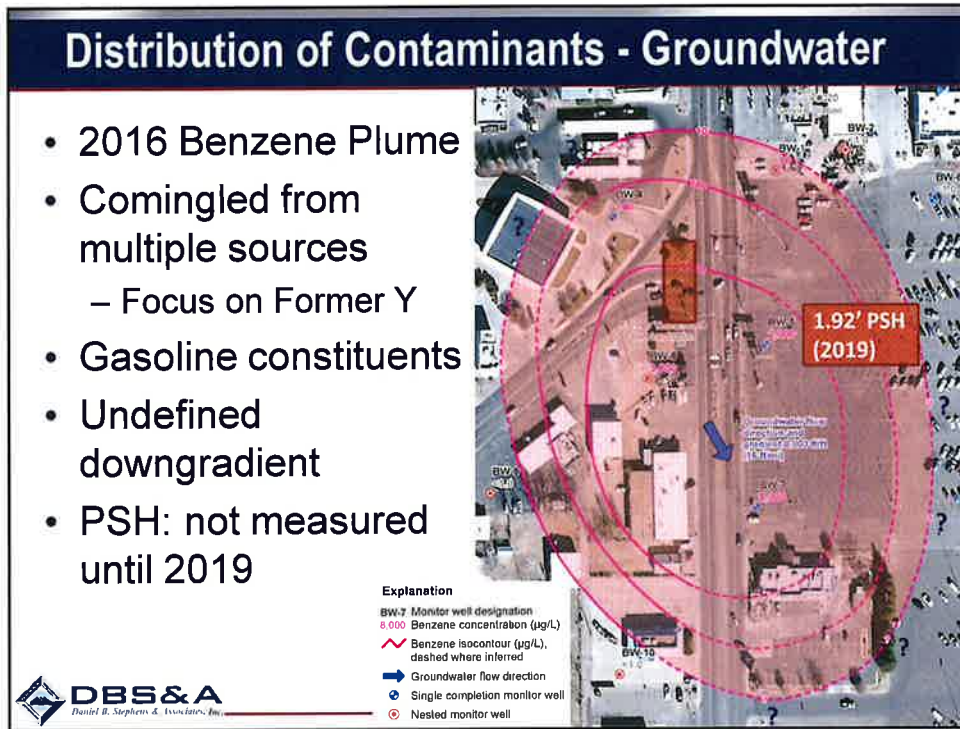
Site Map

- Evaluated contributions from multiple releases
 - Allsup's, active currently
 - Former Y Station, active from at least 50's to 80's
 - Others?
- Allsup's
 - BW-1: benzene
 - BW-2 and BW-3: clean
- Former Y
 - BW-5, BW-7, and BW-8: multiple constituents above applicable standards



Explanation

- Single completion monitor well
- Nested monitor well



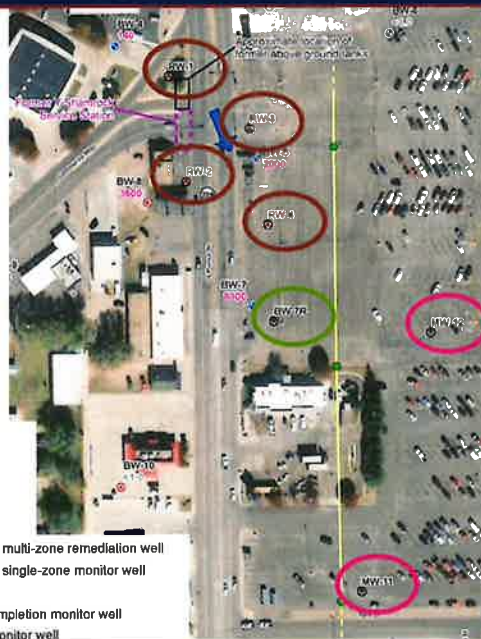
Recent Site History

- RFP for State Lead Remediation
 - Issued September 8, 2017
 - Proposals due October 24, 2017
 - Shortlist presentation December 12, 2017
 - Contract signed May 2018
- First task order / work plan
 - WP submitted September 14, 2018
 - WP approved February 21, 2019
- Delays due to procurement appeals



Proposed Additional Investigation

- Source area remediation wells
 - Multi-zone wells: RW-1 thru RW-4
 - Delineate vertical extent
- Downgradient wells
 - MW-11 and MW-12
 - Third well TBD
 - Delineate lateral extent
- Replace BW-7



Proposed Additional Investigation

- Sonic drilling
 - Soil cores suitable for field screening and analysis
 - Waste management
 - Best option for soil characterization & well install



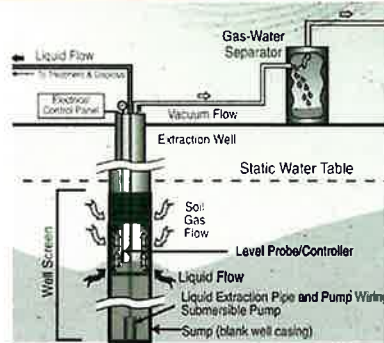
Remediation Plan

- Final Remediation Plan
 - Engineering design document
 - Drawings, specifications, calculations
 - Contamination and hydrogeology
- Public Notice
 - FRP documents available online
 - Newspaper
 - Certified letters to adjacent property owners
 - Notice posted at the site
 - Constant communication

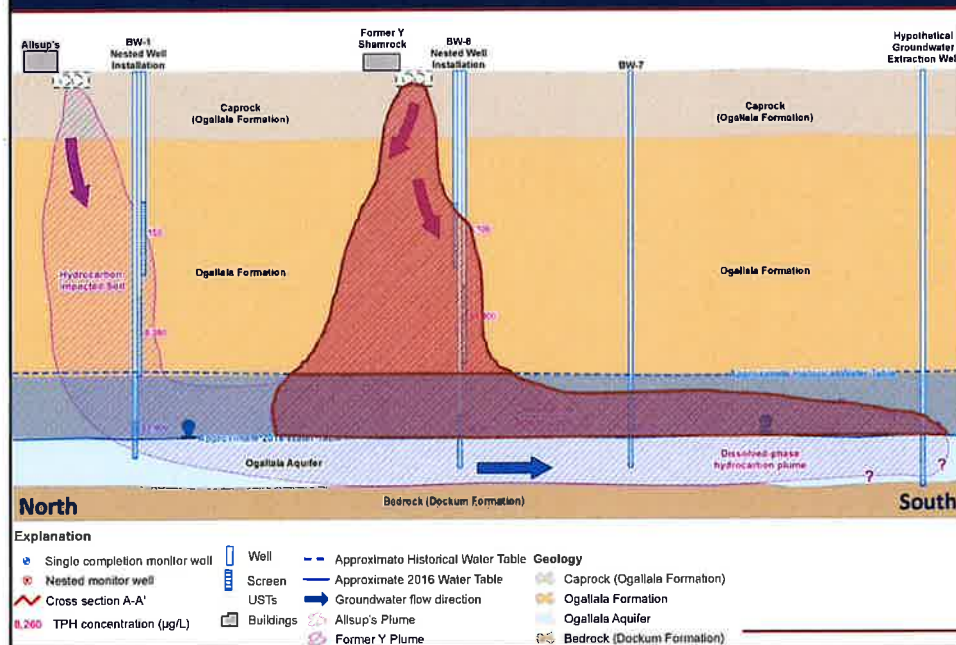


Technical Approach

- Dual phase extraction (DPE)
 - Straight forward approach
 - Extraction of soil vapor and groundwater, ex situ treatment
 - Multi-zone wells: source area
 - Single-zone DPE wells downgradient
- Reduce vapor concentrations below action level: equipment design is aggressive
- Pump and treat may take longer
 - 4 to 7 year timeframe for system operation

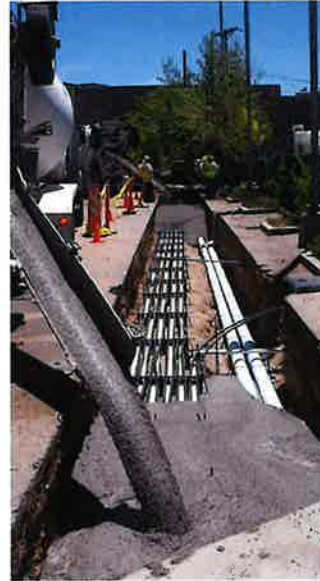


Conceptual Cross-Section



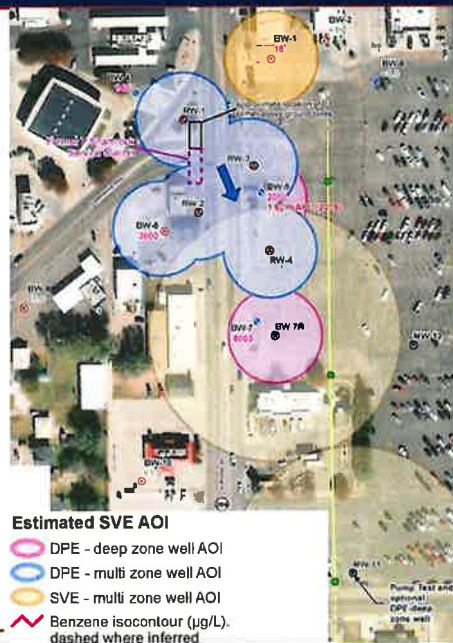
Dual Phase Extraction System

- Goals:
 - Maximize on-site source removal with multi-zone wells
 - Plume containment and groundwater treatment
 - Balance drawdown and pumping rates
 - Remediate direct threat to Clovis municipal water supply



Dual Phase Extraction System

- Multi zone vs. deep zone wells
- Remediation system
 - Vapor treatment
 - Thermal oxidizer
 - Water treatment
 - Diffused aeration and/or air stripping
 - Discharge to sewer



Questions?



Extra (Back-Pocket) Slides





Distribution of Contaminants - Soil Vapor

- Vapor phase TPH, samples collected during well monitoring
- Allsup's
 - Highest concentration in smear zone in most downgradient well
- Former Y Station
 - High concentrations in all zones
- Downgradient wells
- Adsorbed mass?

