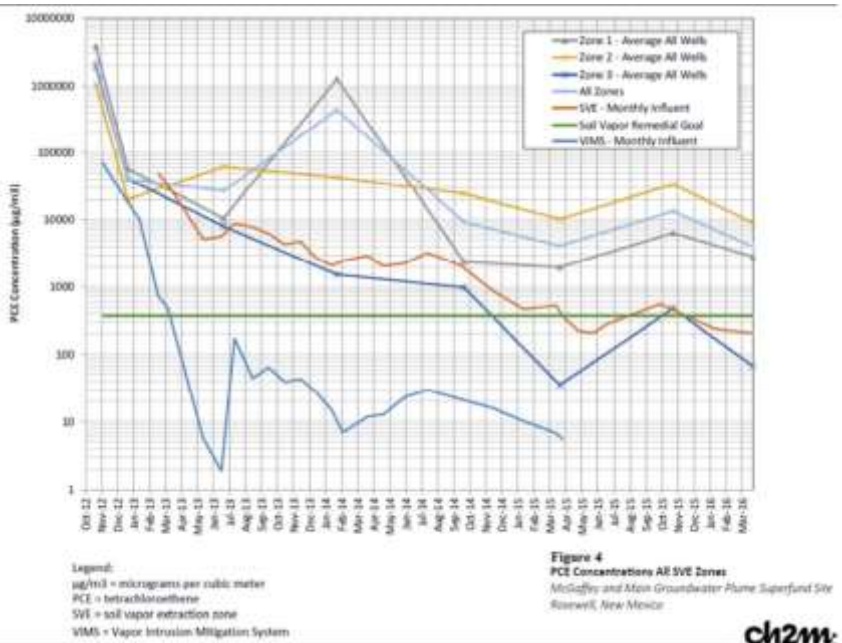


P&T Optimization

McGaffey and Main
Roswell, NM
2011–2022
Dry Cleaners
Superfund Site/NPL

P&T Objectives: PCE and
TCE to MCLs

Risk Scenario—Impact to
water supply wells and
vapor intrusion to
commercial and
agricultural properties



In 2015 the project managers requested an optimization review to see whether a more aggressive in situ source treatment such as ISCO, ISTT, or ERD might improve the plume extent and the cleanup time frame and avoid complicated water rights issues at the site.

The optimization team found ISTT would not be an appropriate remedy for this site due to access and vapor intrusion concerns. It recommend the use of P&T for hydraulic containment. ERD was tentatively recommended as a backup remedy if P&T is not practical due to water rights constraints.

The site optimization report prioritizes implementation of the source area groundwater P&T system over improvements to the source area soil and soil vapor remedies.

The optimization team suggested temporarily discontinuing several VIMS suction pits, operating the existing SVE wells in pulse mode, and installing additional SVE wells in several locations to address the soil vapor at the site.

With respect to addressing the groundwater plume core, the optimization team suggested further activity only after the source area is controlled. Groundwater monitoring of the plume core after source control is initiated will help the site team determine whether additional characterization and remediation are required. If remediation is needed for the plume core, the optimization team suggests the use of a P&T system instead of the planned ERD system. The optimization lists several concerns regarding the proposed ERD remedy and estimates that the P&T remedy would be more cost-effective than the ERD remedy. The proposed ERD remedy is estimated to cost \$7 million to \$10 million over 10 years, and the P&T system that could address a similar or larger area would likely cost approximately \$4 million over 10 years.

Lines of evidence used to support the changes:

1. The New Mexico Environmental Department performed further remedial design investigations for the groundwater plume and hot spot areas.
2. Water rights issues at the site made the selected remedy of P&T more challenging to implement.

The optimization recommended only a revision of the remedial design, not a change to the original remediation technology. The site is still following the 2008 ROD.

Initial Condition
Optimization Review
Outcome

P&T Optimization

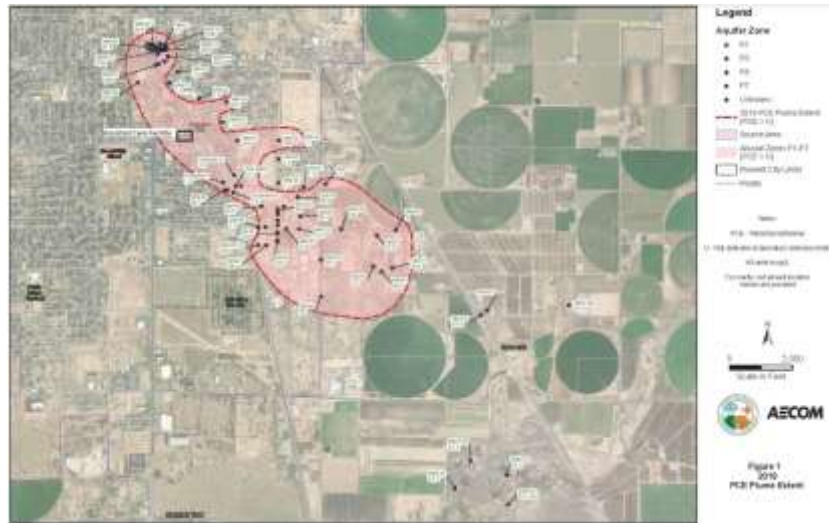
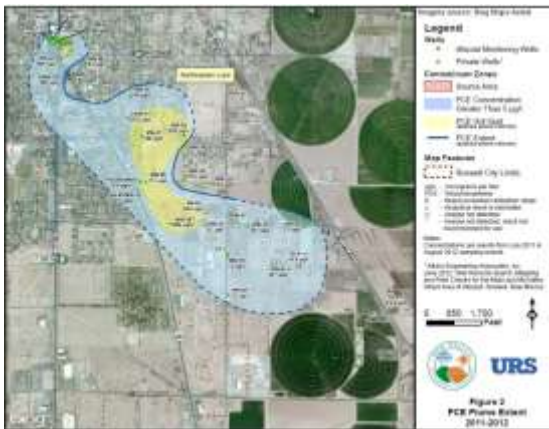
McGaffey and Main
Roswell, NM
2011–2022
Dry Cleaners
Superfund Site/NPL

Regulatory aspect: City agreed to process the disposal water through POTW. Water rights concerns addressed through reinjection of treated groundwater.

Shutdown of VIMS was implemented for 12 months (April 2015 to April 2016), and no adverse indoor air impacts have been observed. There were no detections of PCE in the indoor air rebound samples that exceeded the current USEPA regional screening level of 11 µg/m³ during the 12-month VIMS shutdown period. The primary conclusion from the VIMS rebound test is that the SVE remedy appears to be effectively controlling the vapor intrusion pathway when operated in a continuous or pulsed mode.

Transition of the SVE system from continuous to pulsed operations represents a logical progression for the SVE remedy. The VIMS has remained shut down through the present day (2022), while the SVE system was shut down through November 30, 2017, to allow for completion of a COC concentration rebound test. The SVE system was restarted in November 2017 and continues to operate in a pulsed mode, based on ongoing monitoring.

The P&T remedial design was completed in 2017. It includes one well pumping 20 gpm and an air stripper treatment plant that discharges to a City of Roswell POTW. Figures show delineation of the plume before and after optimization.



- Initial Condition
- Optimization Review
- Outcome

Stakeholders: In February 2016, USEPA was contacted regarding the proposed purchase of two parcels on the 1100 block of South Main Street for the construction of a car wash facility. The two buildings located on these parcels, which were equipped with VIMS, were slated for demolition by the new property owner. By mid-January 2017, the VIMS at the two locations were fully decommissioned and the buildings were demolished. There is now an operating car wash at that location.

P&T Actions Conclusion
Optimization of P&T system
Estimated lifetime cost savings from optimization report: \$3,000,000
Sustainability benefits: Reduced air blower rates and decommissioned obsolete VIMS