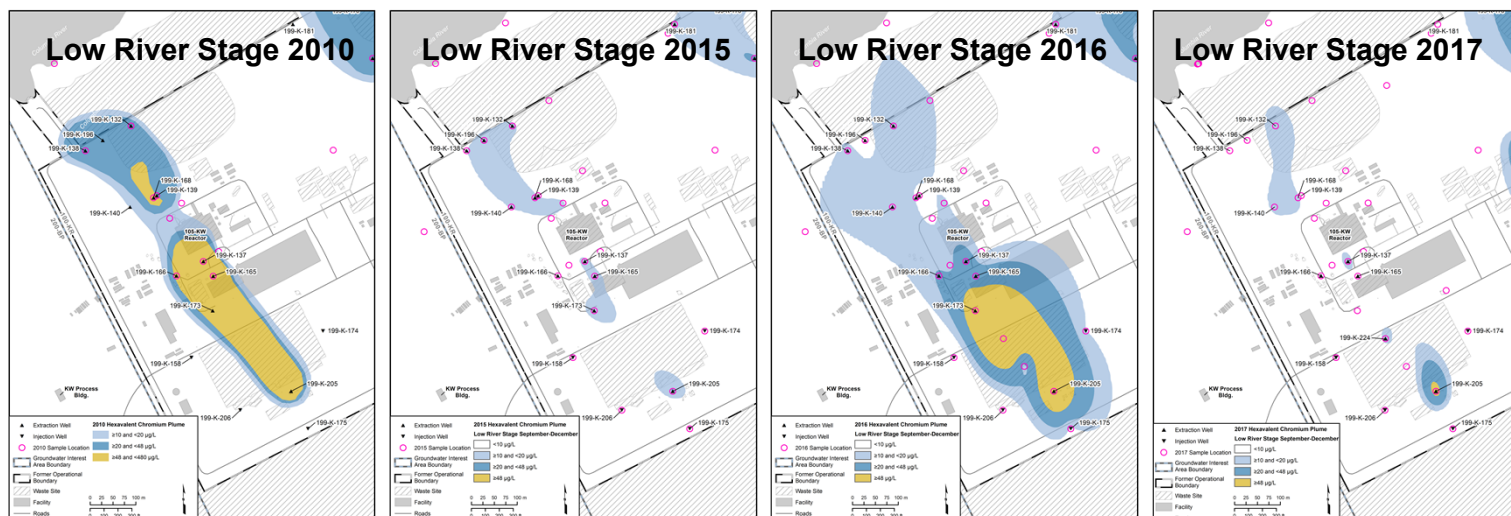


KW Soil Flushing Treatability Test

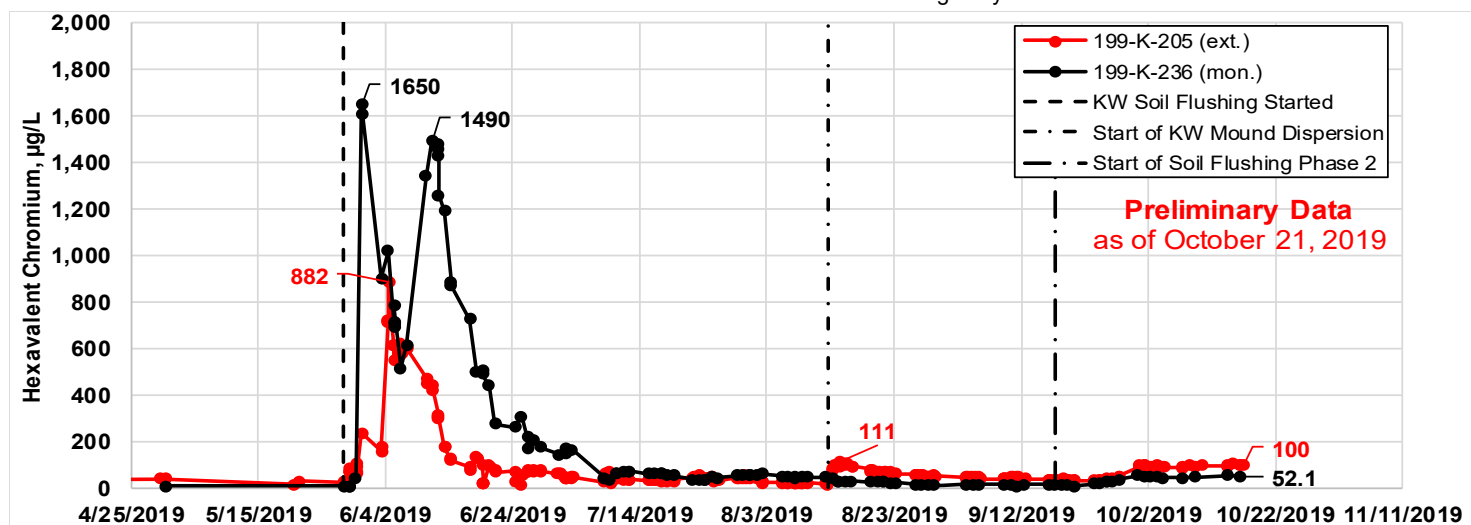
KW Hexavalent Chromium [Cr(VI)] Plume Progress (2007 to 2017)

- KW Cr(VI) plume has been under active remediation since January 2007, with 241 kilograms of Cr(VI) removed by the KW pump and treat (P&T) system between 2007 and 2016.
- By 2015 the KW P&T system included 11 extraction wells and 4 injection wells, processing groundwater at a rate of up to 330 gpm.
- By January 2016, all monitoring wells were below the groundwater remediation target of 20 µg/L.
- A rebound study was performed between May 2016 and March 2017. Sampling and analysis indicated that changes in Cr(VI) concentrations are area specific:
 - North of 105KW Reactor, no increase in concentration
 - South of 105KW Reactor, significant rebound in concentration.
- In May 2017, the KW P&T system was restarted south of 105KW to focus on re-established Cr(VI) plume.



2019 KW Soil Flushing Treatability Test

- The goal of soil flushing is to remove Cr(VI) from the deep vadose zone where it presents a continuing source of groundwater contamination, and capture it with the active P&T system.
- KW P&T system effluent is the source of flushing water.
- The area for flushing is approximately 3,400 m² (0.85 ac).
- The test is being performed in phases to allow for saturation and drainage of the vadose zone.
- In the first phase of flushing, flow rates ranged between 230 to 260 gpm. For the second phase, rates range from 90 to 110 gpm.
- From June 1 to September 30, the KW P&T Cr(VI) removal efficiency increased with approximately 12 kg of Cr(VI) removed relative to a monthly average of 0.5 kg.
- Monitoring well 199-K-236 has the highest concentrations of Cr(VI) detected during the study so far.
- As of October 21, over 4.5 million gallons of water has been sent to the infiltration gallery.



References:

DOE/RL-2016-42, Sampling and Analysis Plan for KW Pump and Treat System Rebound Study
SGW-62061, KW Rebound Study Summary Report and Assessment

DOE/RL-2017-30, KW Soil Flushing/Infiltration Treatability Test Plan
DOE/RL-2018-10, KW Soil Flushing/Infiltration Treatability Test Plan Sampling and Analysis Plan