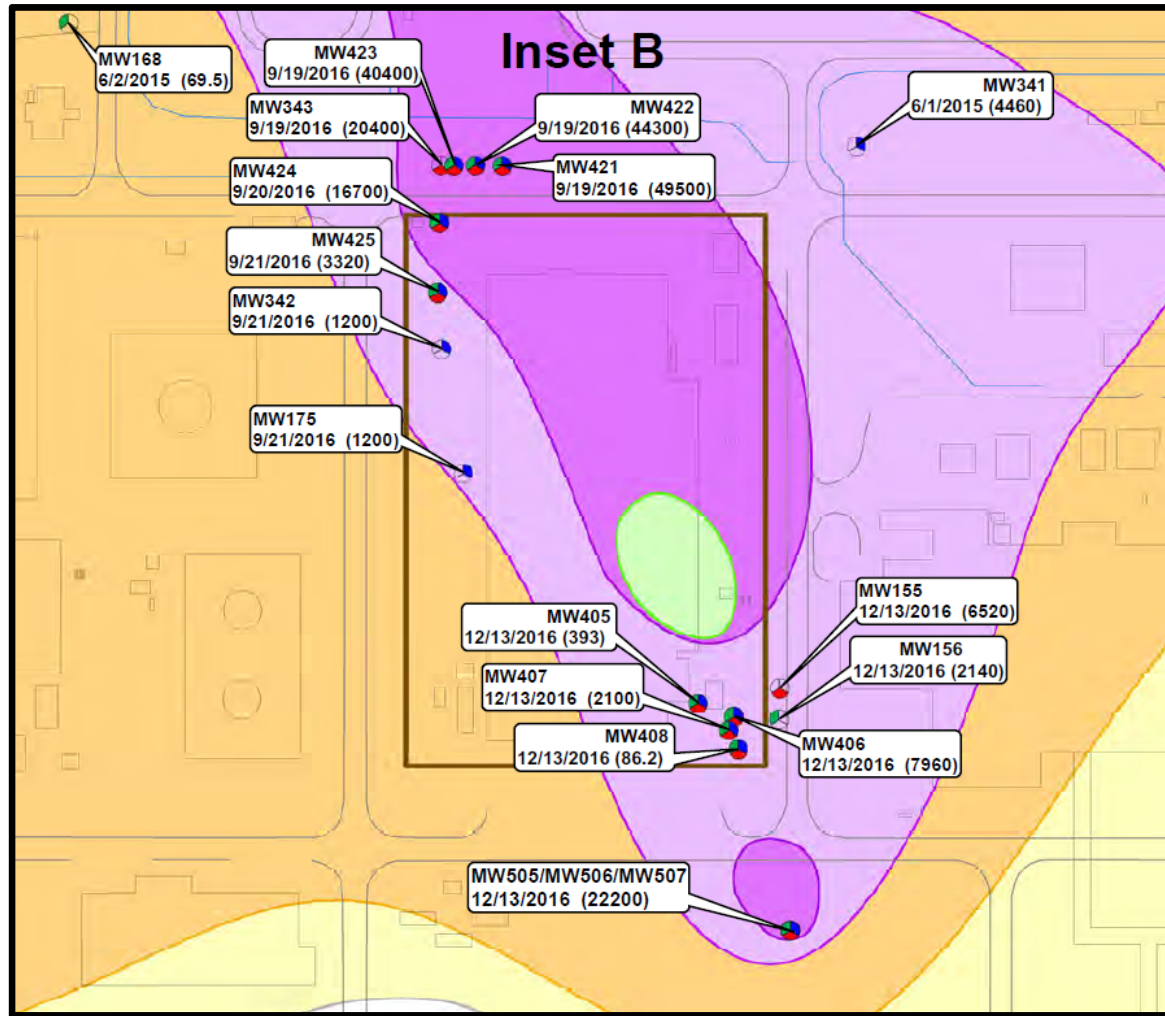




C-400-Wide Groundwater Contamination (Review of 2012-2017 Data)

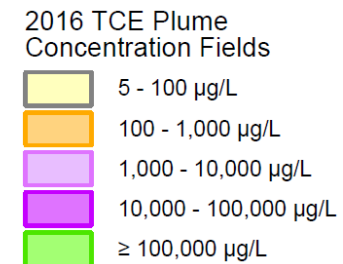
DRAFT WORKING COPY – FOR DISCUSSION ONLY 6/5/18

2016 TCE Plume in the C-400 Area

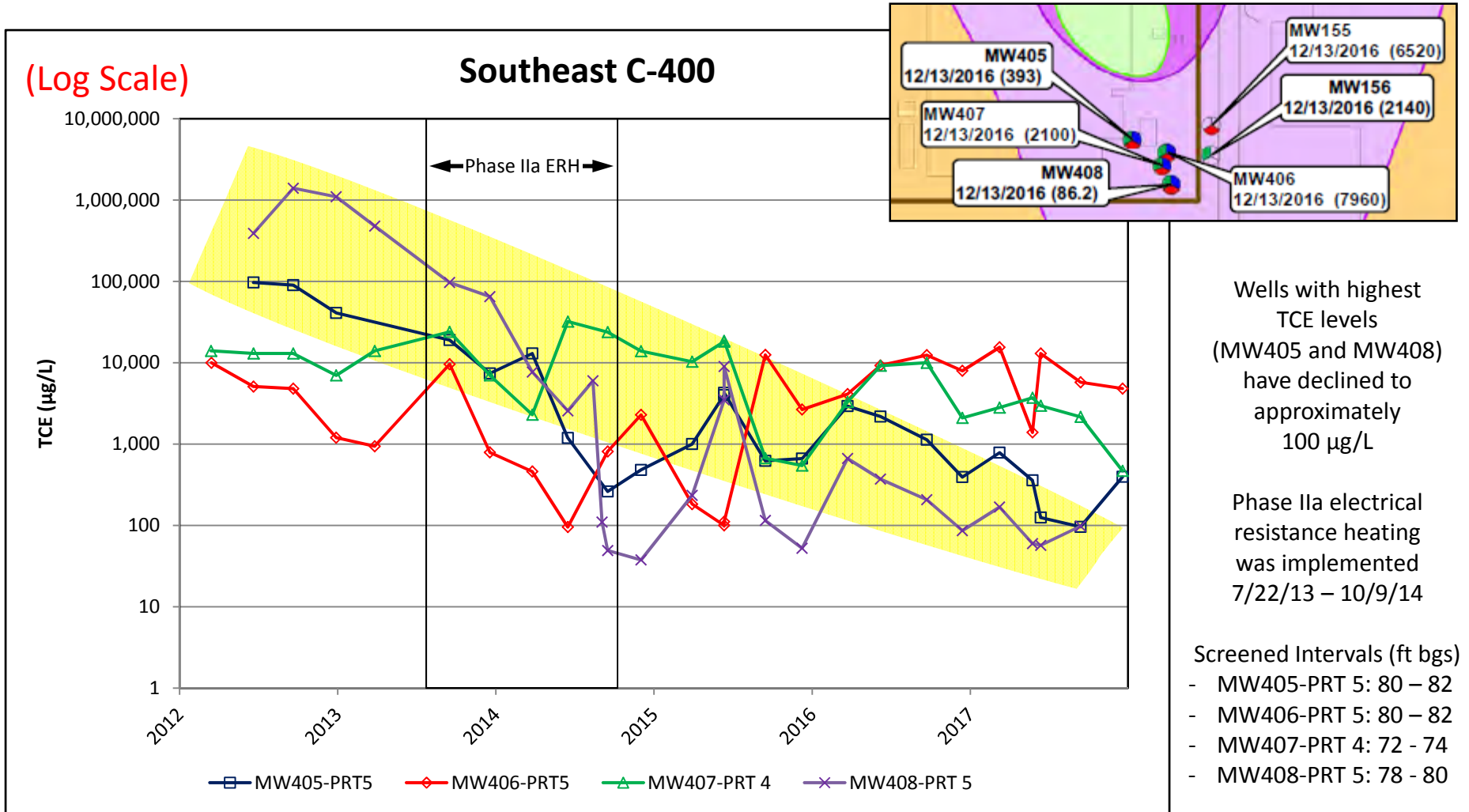


REFERENCE: *Trichloroethene and Technetium-99 Groundwater Contamination in the Regional gravel Aquifer for Calendar Year 2016 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FPDP-RPT-0079*

Note: TCE concentrations are in µg/L (ppb)



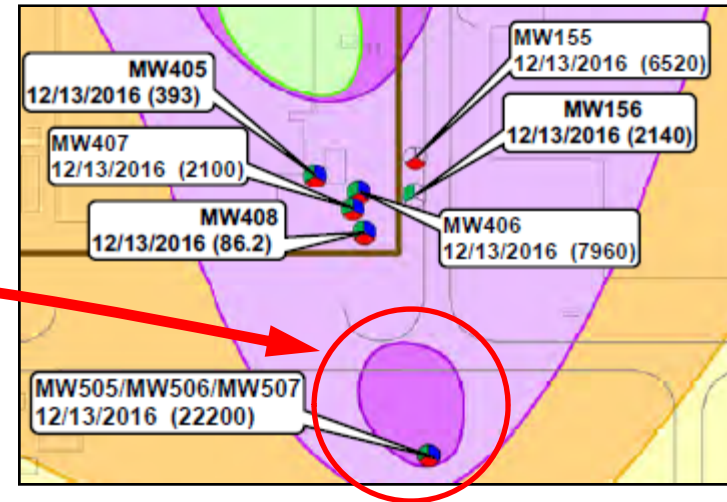
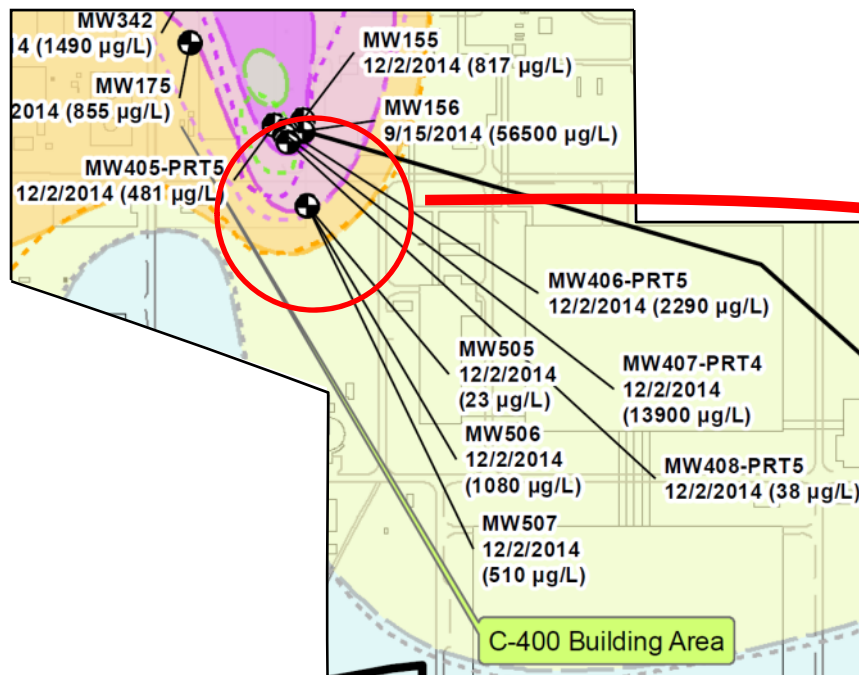
Southeast C-400 TCE Trends: Near-Source Area



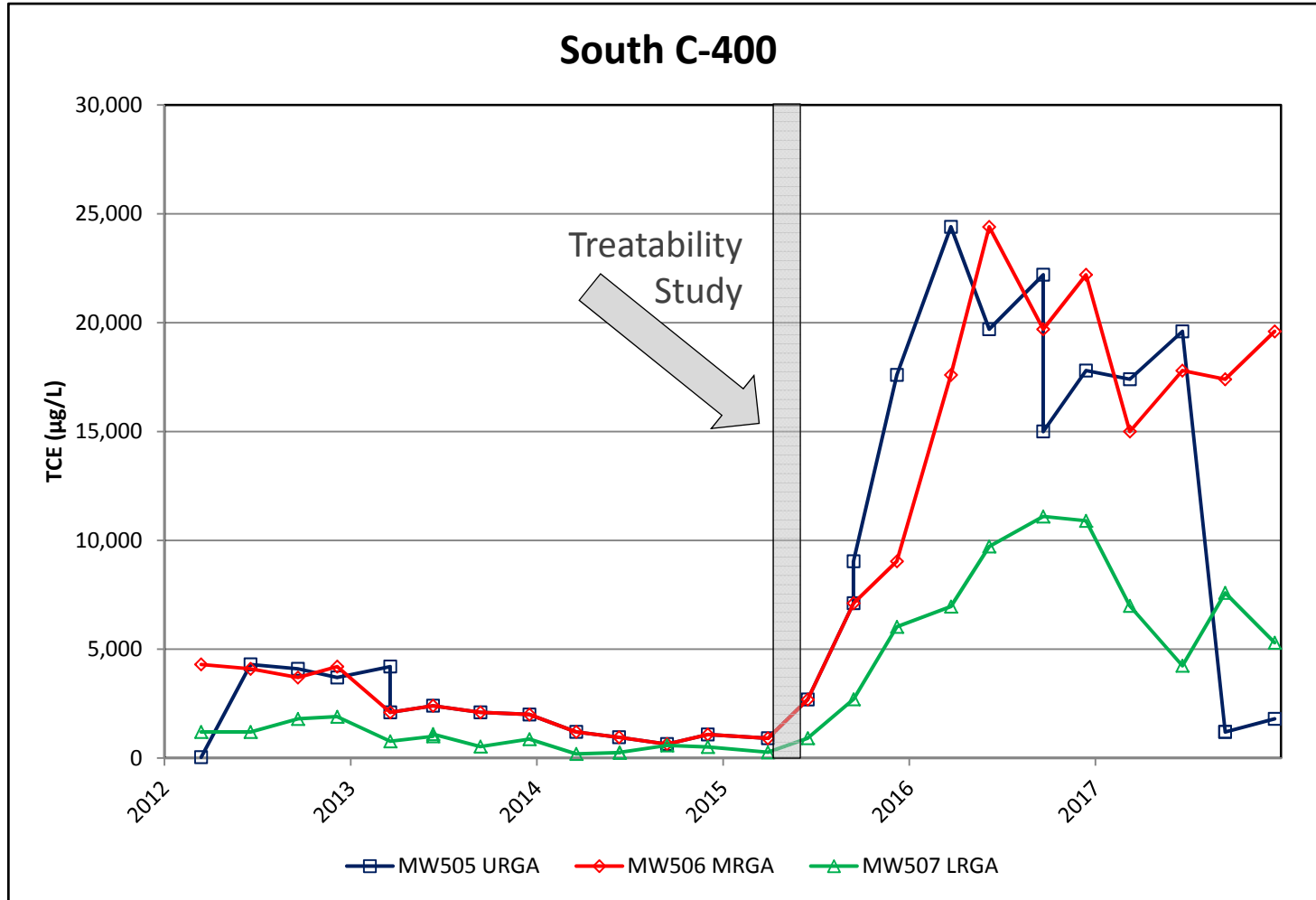
Dissolved Phase Plume Displaced by Steam Treatability Study (April/May 2015)

Calendar Year 2016

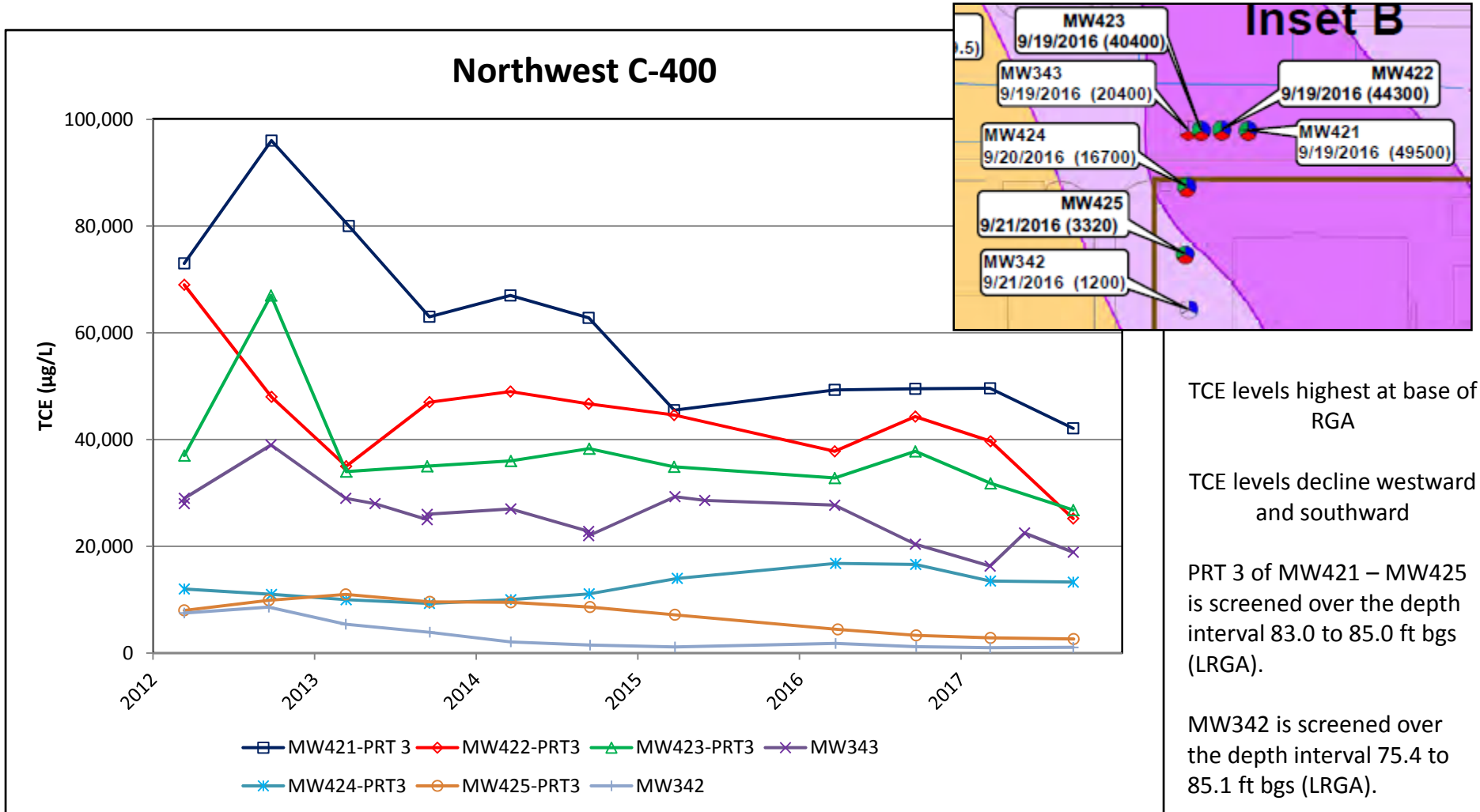
Calendar Year 2014



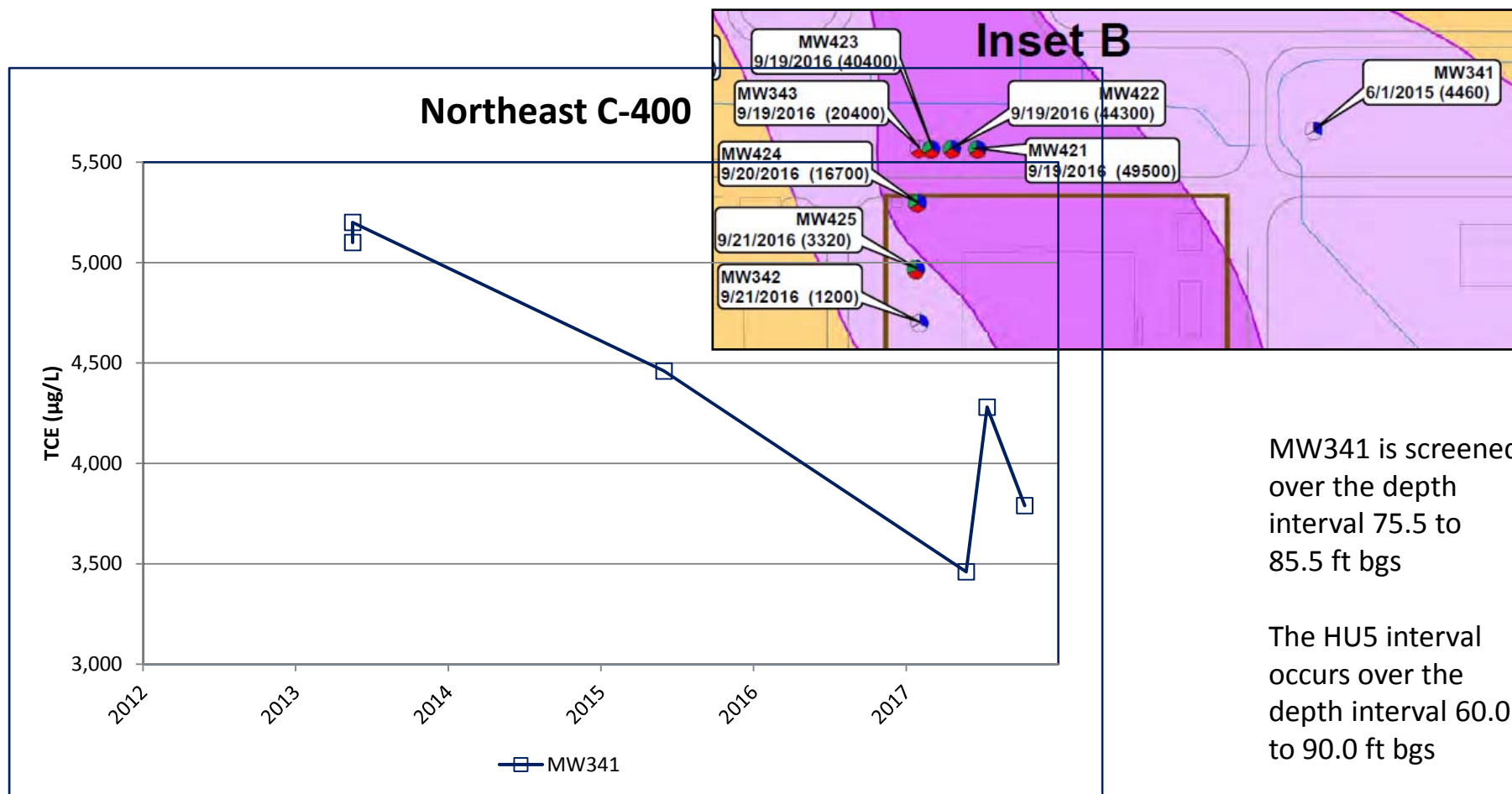
Dissolved Phase Plume Displaced by Steam Treatability Study



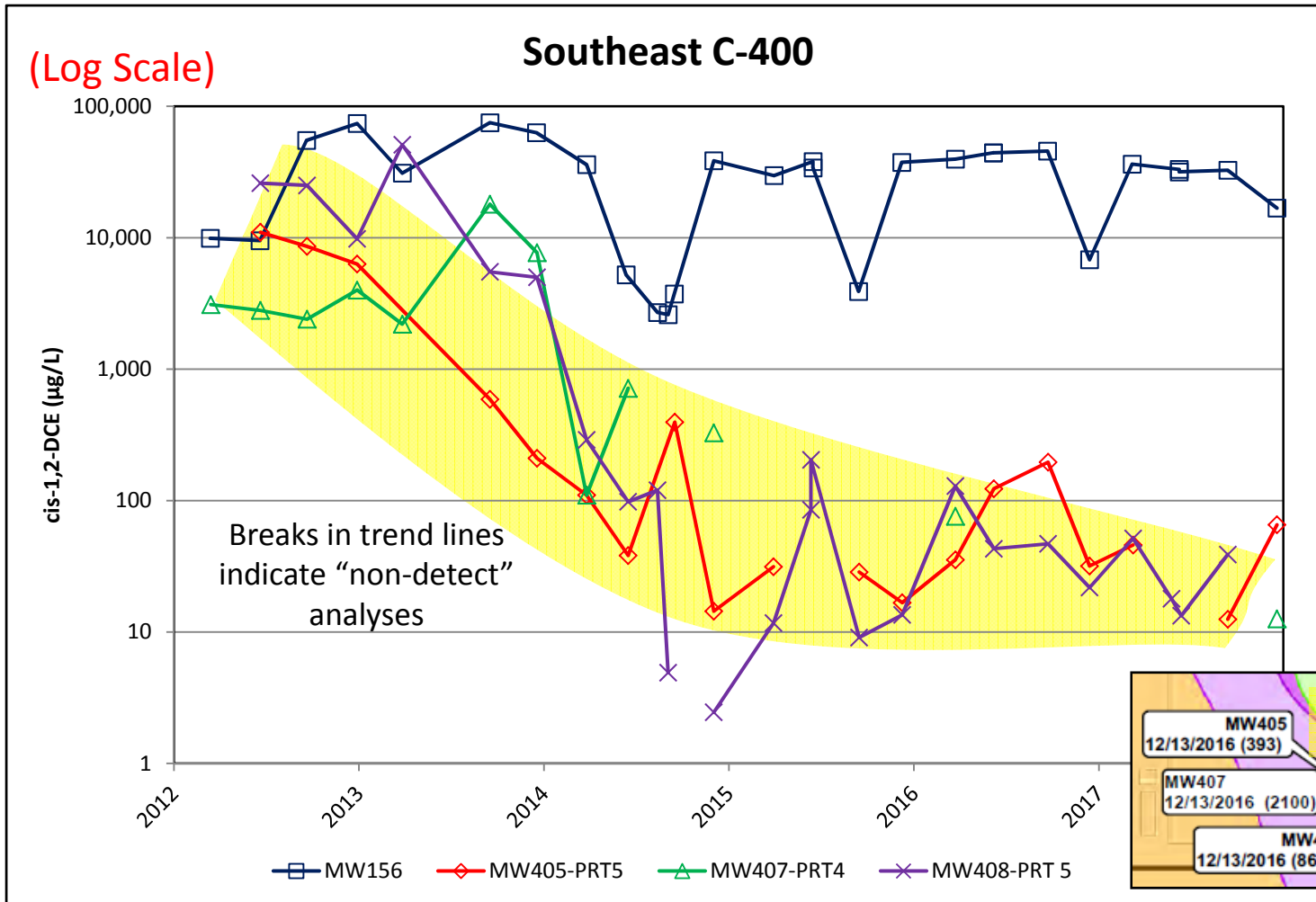
Northwest C-400 TCE Trends: Downgradient Plume



Northeast C-400 TCE Trends: Downgradient Plume

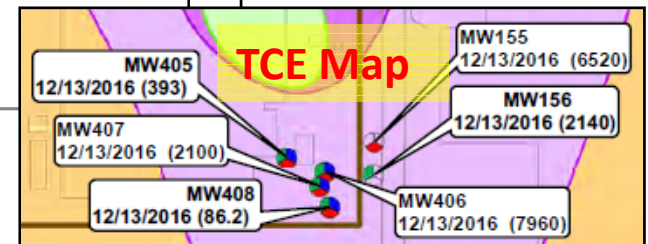


Southeast C-400 cis-1,2-DCE Trends: Near-Source Area

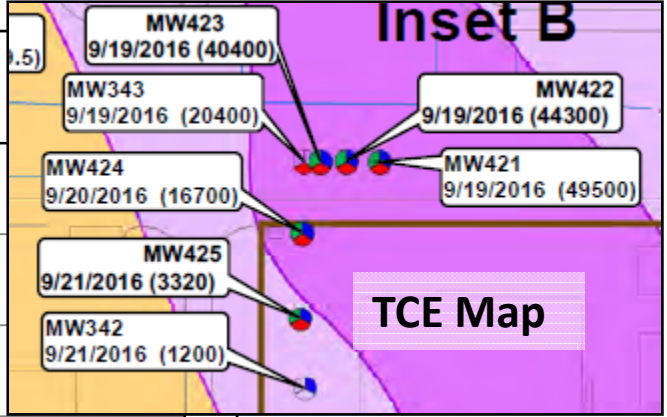
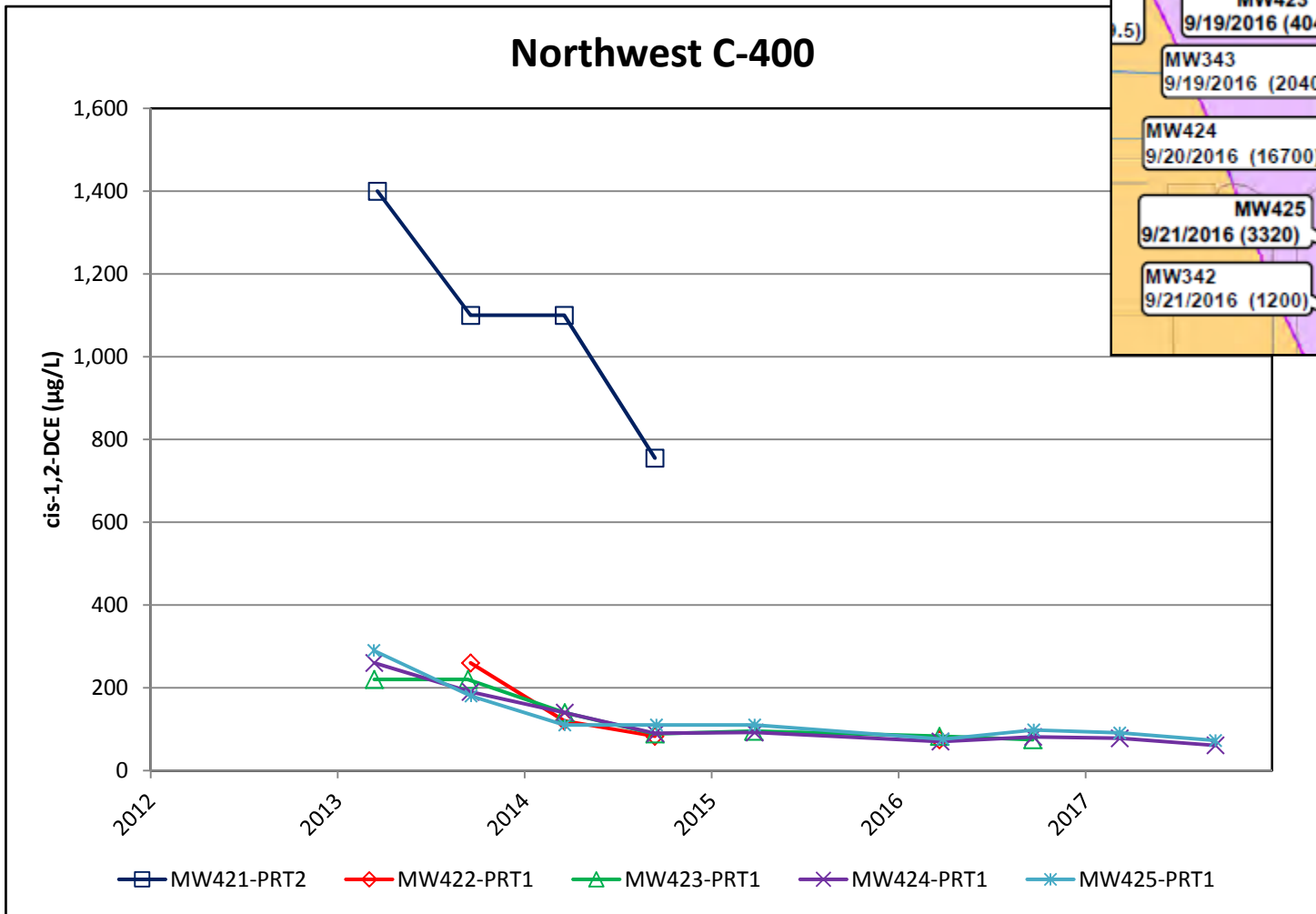


Most wells with previous highest cis-1,2-DCE levels (MW405, MW407, and MW408) have declined to <100 µg/L

MW156 (URGA), alone, has maintained high levels



Northwest C-400 cis-1,2-DCE Trends: Downgradient Plume



Downgradient cis-1,2-DCE levels have declined to <100 µg/L

PRT 1 of MW421 – MW425 is screened over the depth interval 71 to 73 ft bgs (MRGA).

Of 17 sample analyses for MW343 (LRGA, screened 75 -85 ft bgs), only two duplicates had detectable levels

- 110 and 115 µg/L, collected on 9/12/14



Other C-400 VOC Analyses

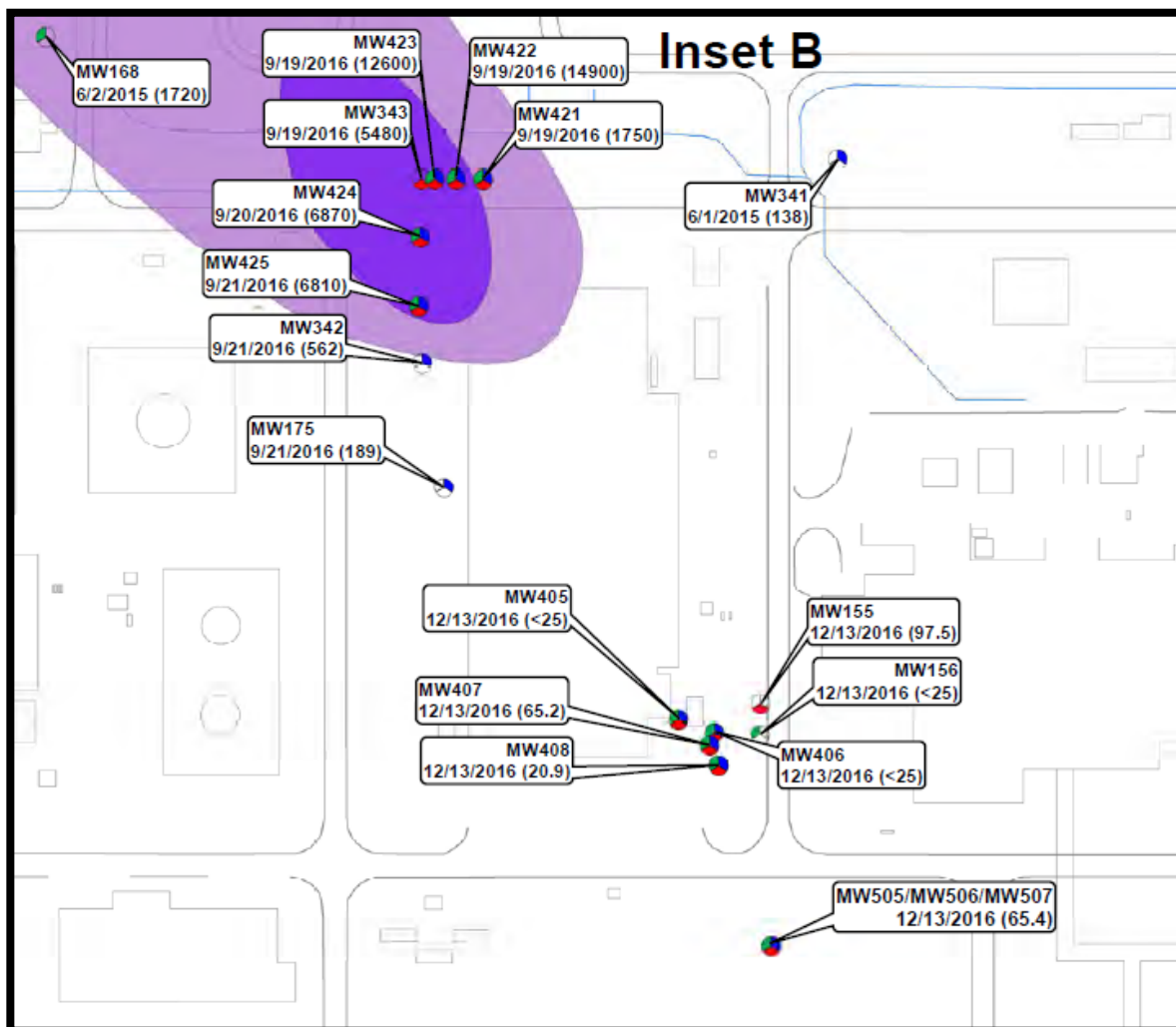
Only other frequent VOC analyses (mostly non-detections) are:

- 1,1-DCE
- trans-1,2-DCE
- Vinyl chloride
 - Only detections (of 419 analyses):
 - 5.09 µg/L in MW156 (9/15/14)
 - 54.3 µg/L in MW156 (12/2/14)
 - 13.5 µg/L in MW156 (12/18/17)
 - 4.07 µg/L in MW406-PRT5 (12/2/14)

Laboratory lower detection limits are often 100 µg/L or greater



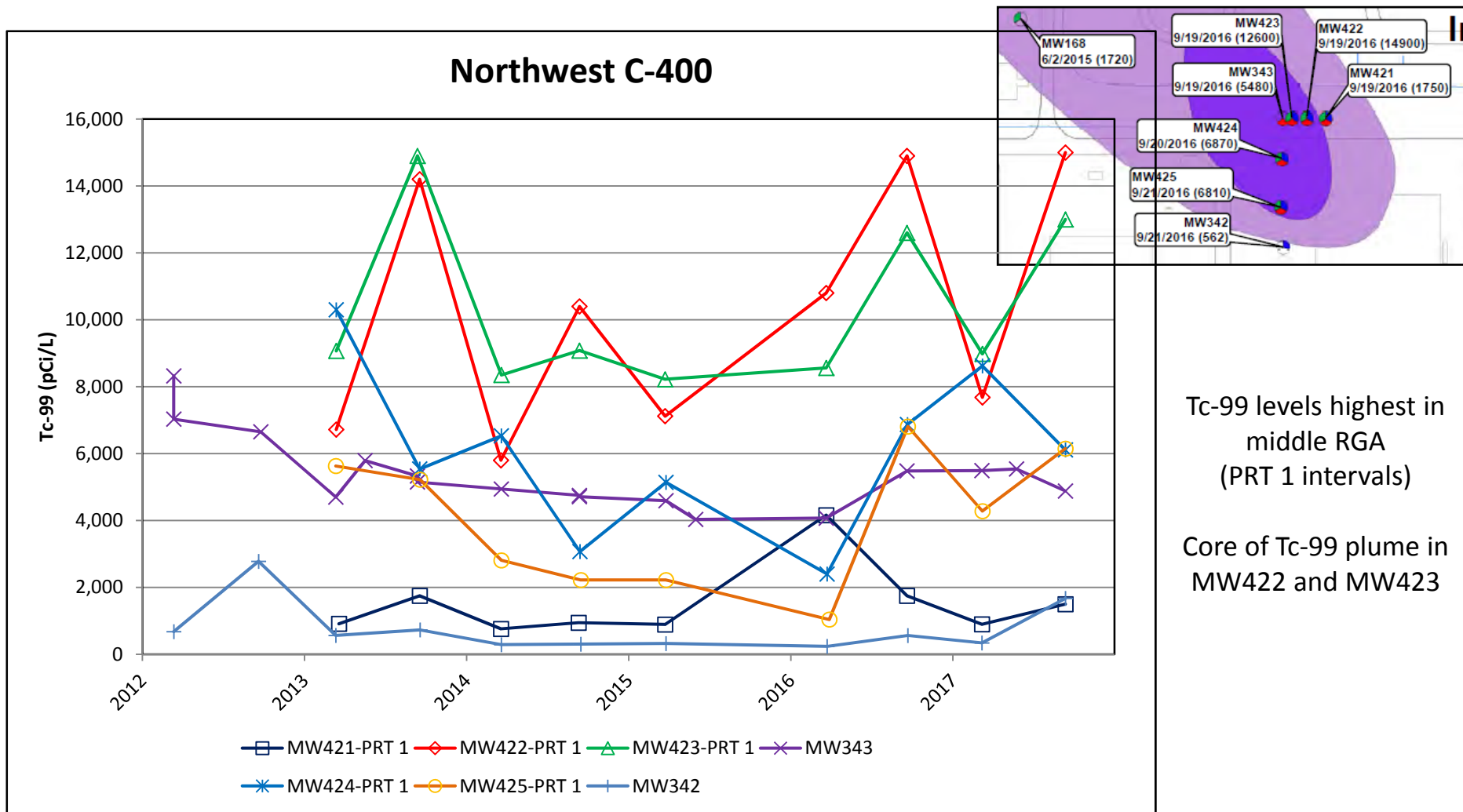
2016 Tc-99 Plume in the C-400 Area



REFERENCE: Trichloroethene and Technetium-99 Groundwater Contamination in the Regional gravel Aquifer for Calendar Year 2016 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FPDP-RPT-0079



Northwest C-400 Tc-99 Trends: Downgradient Plume

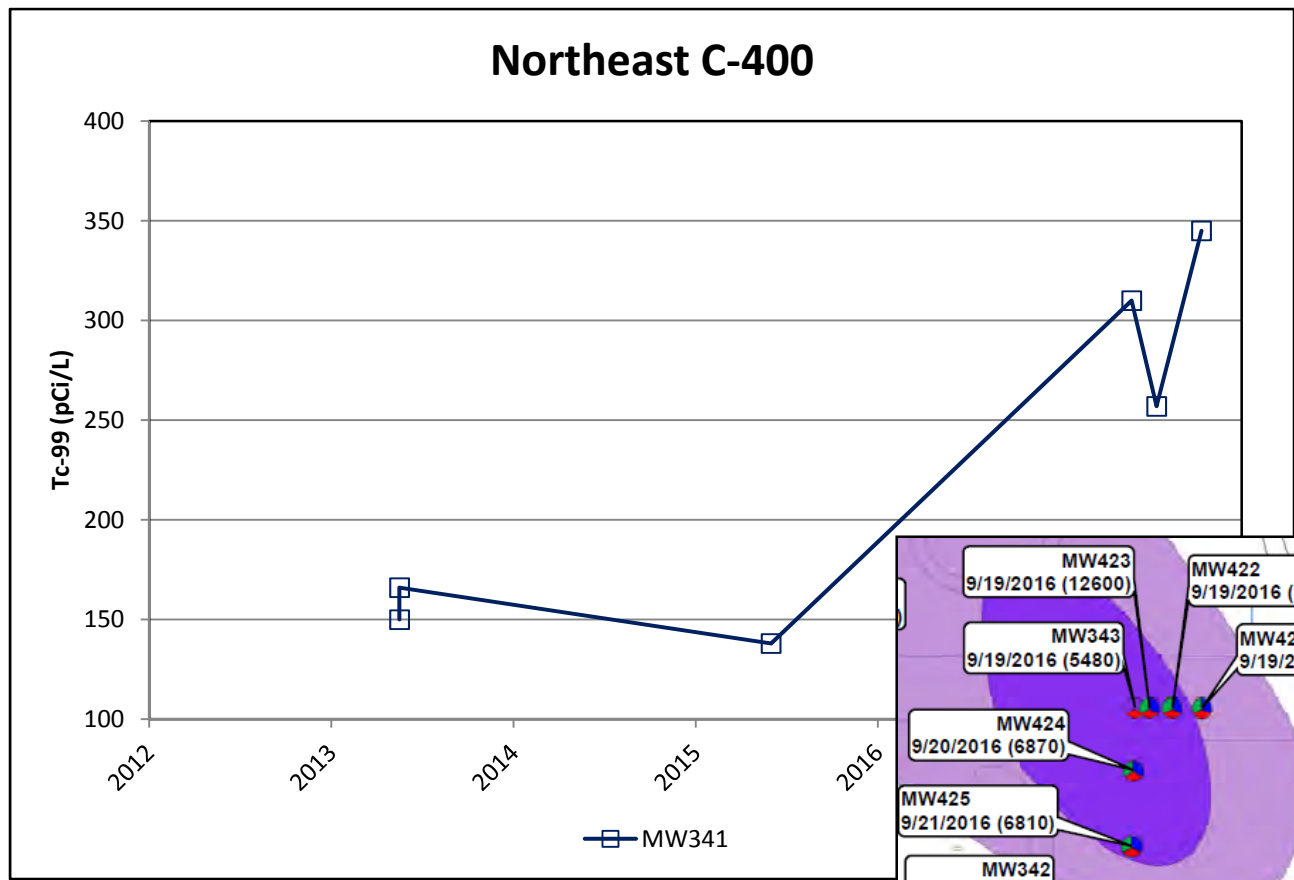


Tc-99 levels highest in middle RGA (PRT 1 intervals)

Core of Tc-99 plume in MW422 and MW423



Northeast C-400 Tc-99 Trends: Downgradient Plume



MW341 is screened over the depth interval 75.5 to 85.5 ft bgs

The HU5 interval occurs over the depth interval 60.0 to 90.0 ft bgs

