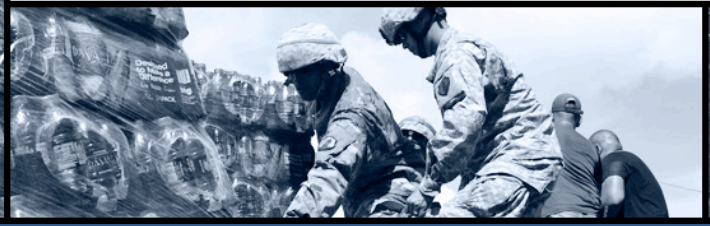
DEFENSE LOGISTICS AGENCY

THE NATION'S COMBAT LOGISTICS SUPPORT AGENCY

DFSP NORWALK

Second Semiannual 2018 Groundwater Monitoring Event

February 28, 2019



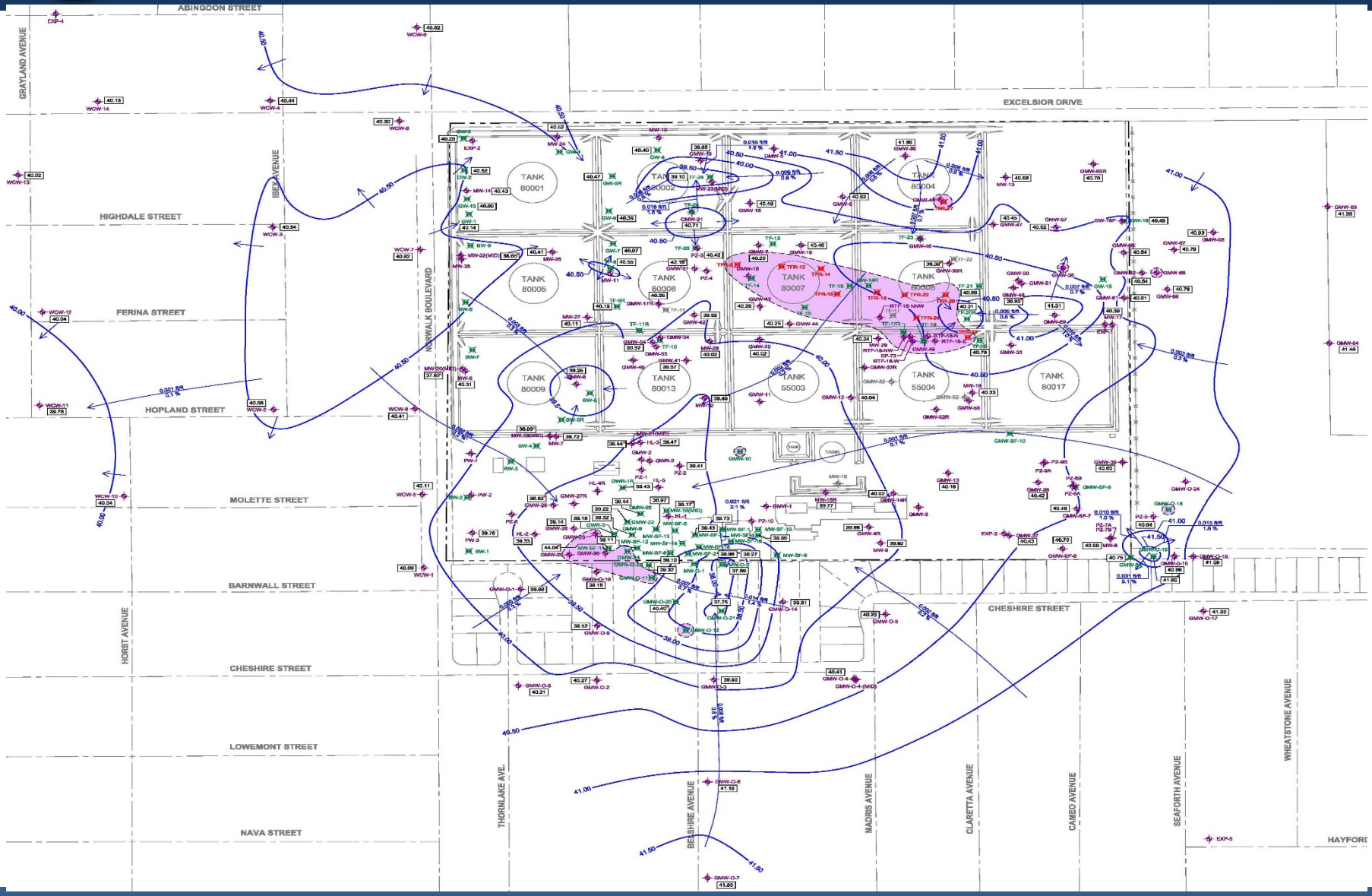
Overview

- Fieldwork was conducted November 5 – 15, 2018.
- Well gauging and groundwater sample collection was conducted by The Source Group, Blaine Tech, and SFPP.
- 181 wells were gauged (treatment systems were off line).
- 134 groundwater samples were collected from 115 wells using low-flow methodology (including duplicate, split, and confirmation samples)

Groundwater Elevations & Gradient – Uppermost Aquifer

- Depth to Groundwater ranged from 29.15 to 41.21 feet below top of well casings.
- Elevations dropped an average of 0.41 foot since the April 2018 monitoring event.
- The groundwater surface was generally characterized by a groundwater depression in the south-central area with gradients converging toward this depression.

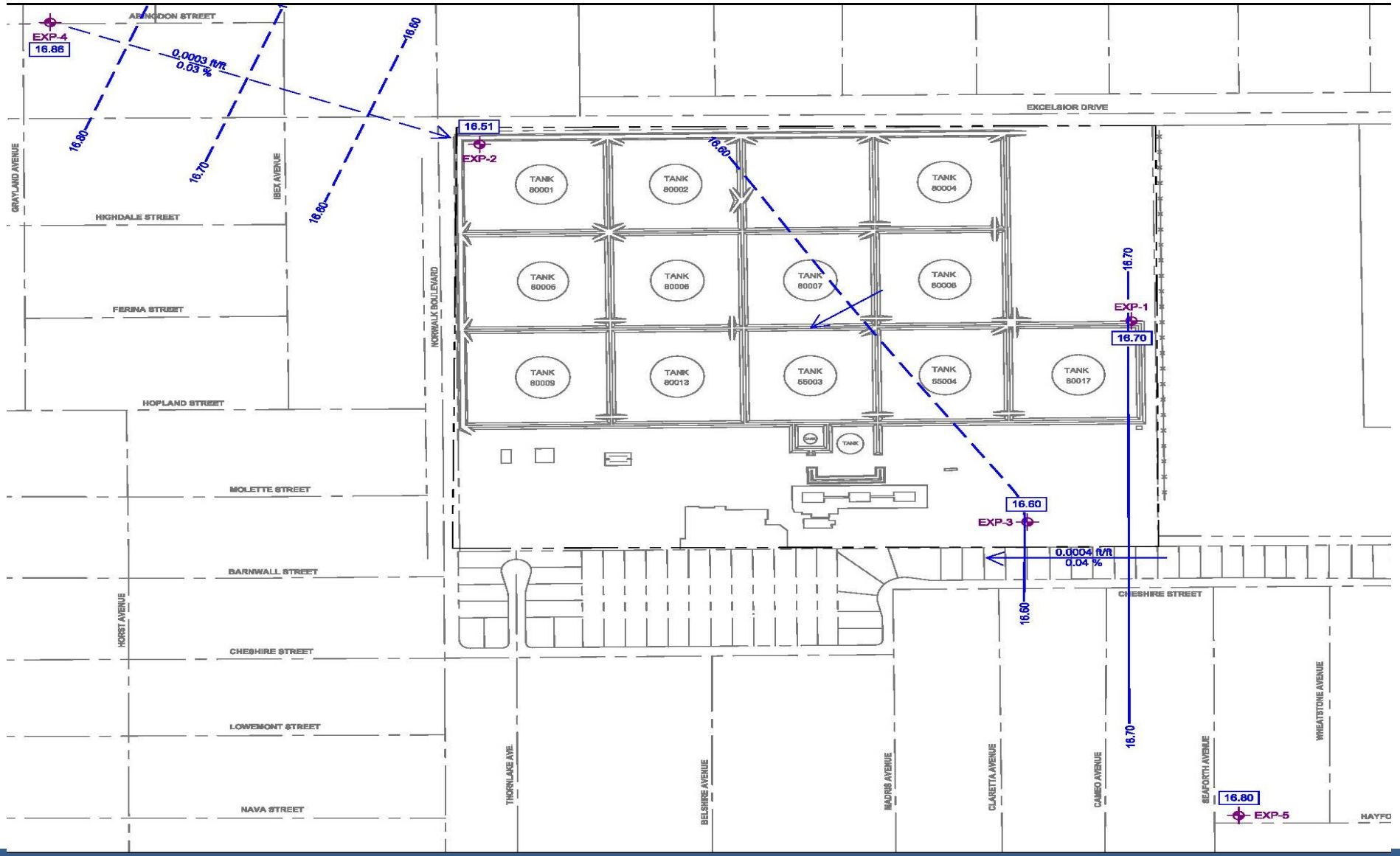
Groundwater Equipotential and Gradient Map – Uppermost Groundwater Zone – November 5, 2018



Groundwater Elevations and Gradient – Exposition Aquifer – November 5, 2018

- Depth to Groundwater ranged from 55.61 to 62.95 feet below top of well casings.
- Elevations dropped an average of 1.70 foot since the April 2018 monitoring event.
- The groundwater gradient beneath the site was generally flat with gradients converging toward the Site.

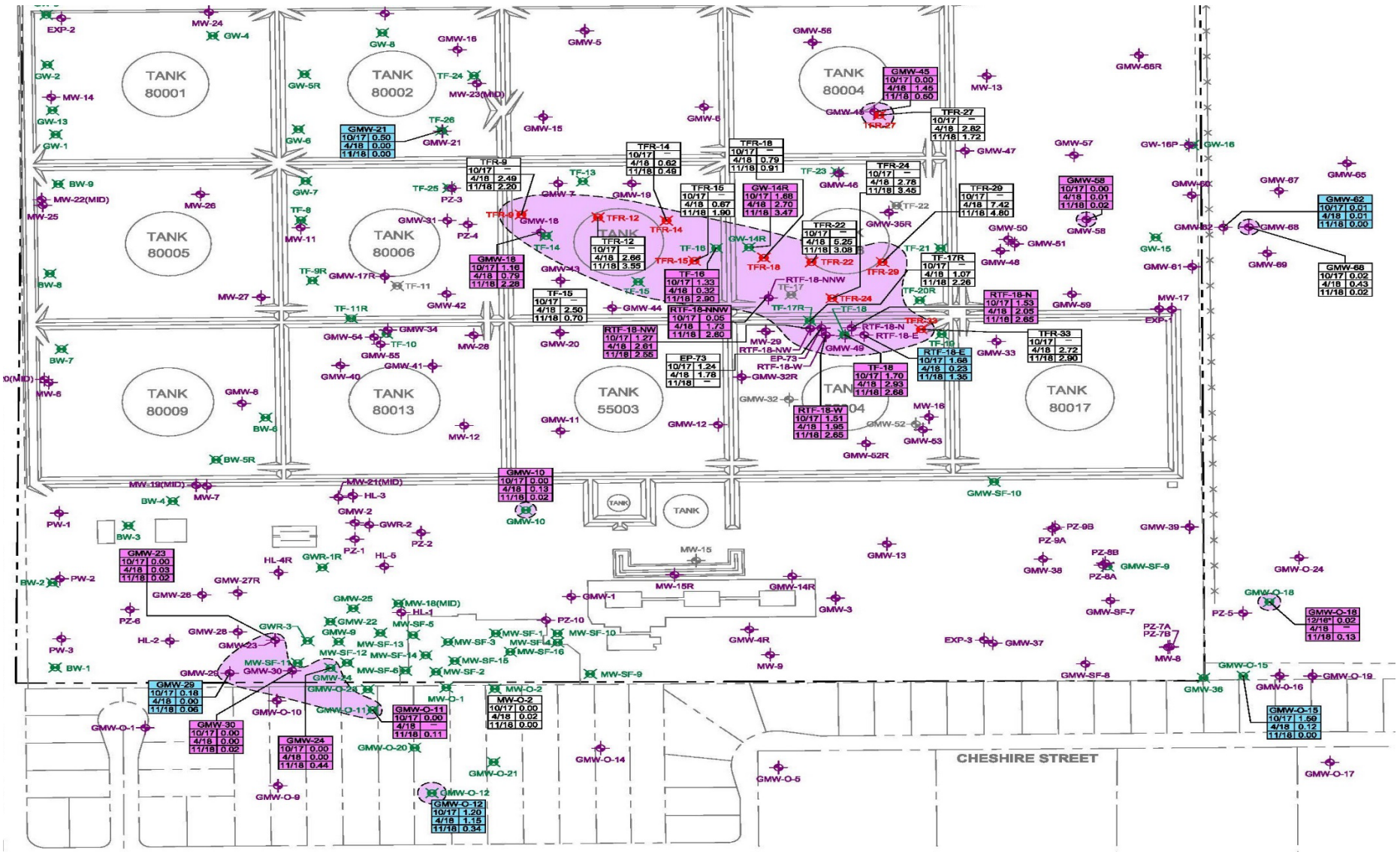
Groundwater Equipotential and Gradient Map – Exposition Aquifer – November 5, 2018



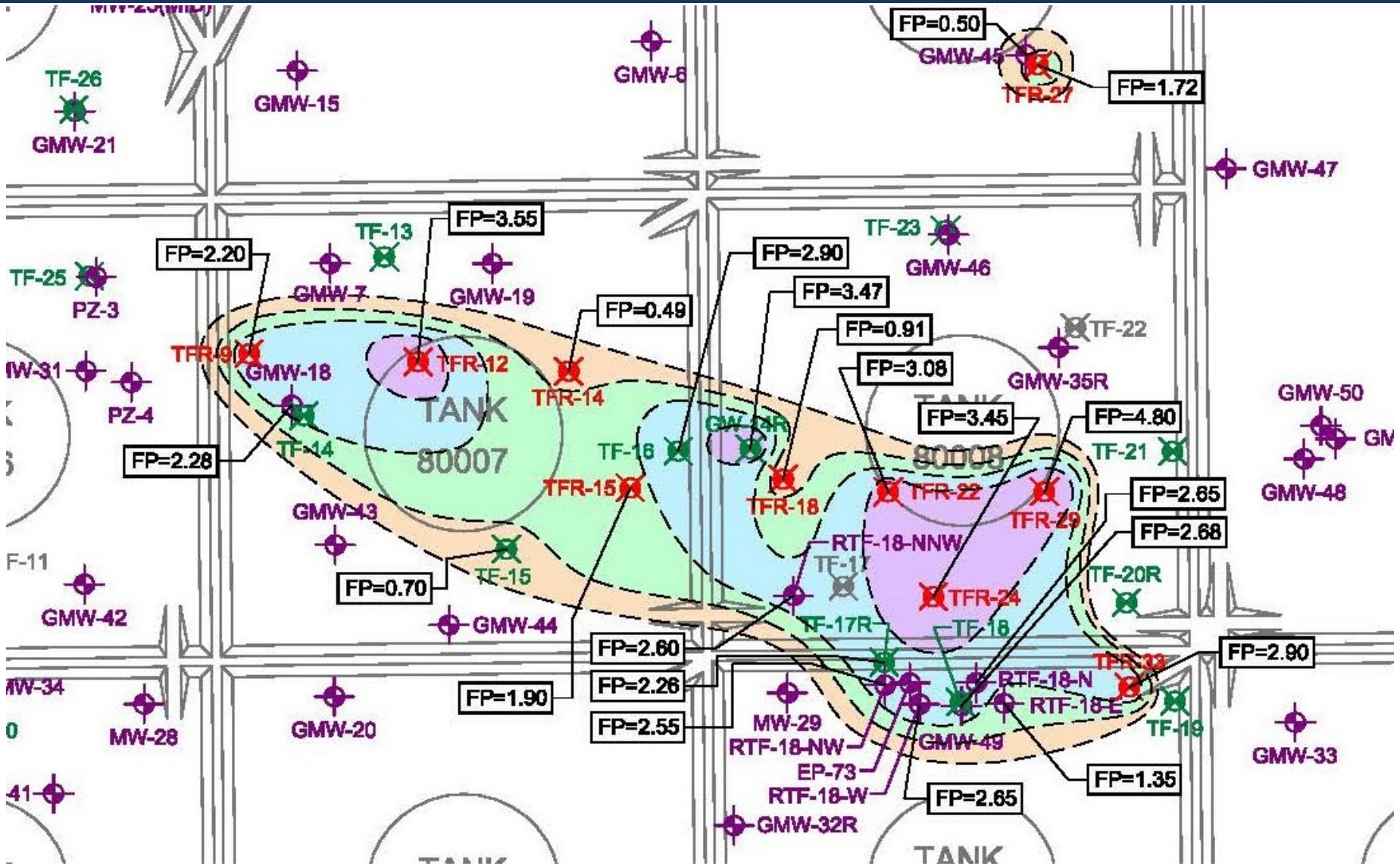
Floating Product

- Floating product was measured or observed in 32 of the 181 wells gauged during this monitoring event.
- Since April 2018, measured product thicknesses increased in 17 wells and decreased in 16 wells.
- Product was observed in four areas of the site:
  - North-Central Area: Floating product was measured in 22 wells ranging from 0.49 to 4.80 feet,
  - Eastern Area: Floating product was present in two wells (0.02 foot in GMW-58 and 0.02 foot in GMW-68),
  - South-Central Area: Floating product was measured in seven wells ranging from 0.02 to 0.44 foot, and
  - Southeastern Area: Floating product was measured in one well (0.13 foot in GMW-O-18).

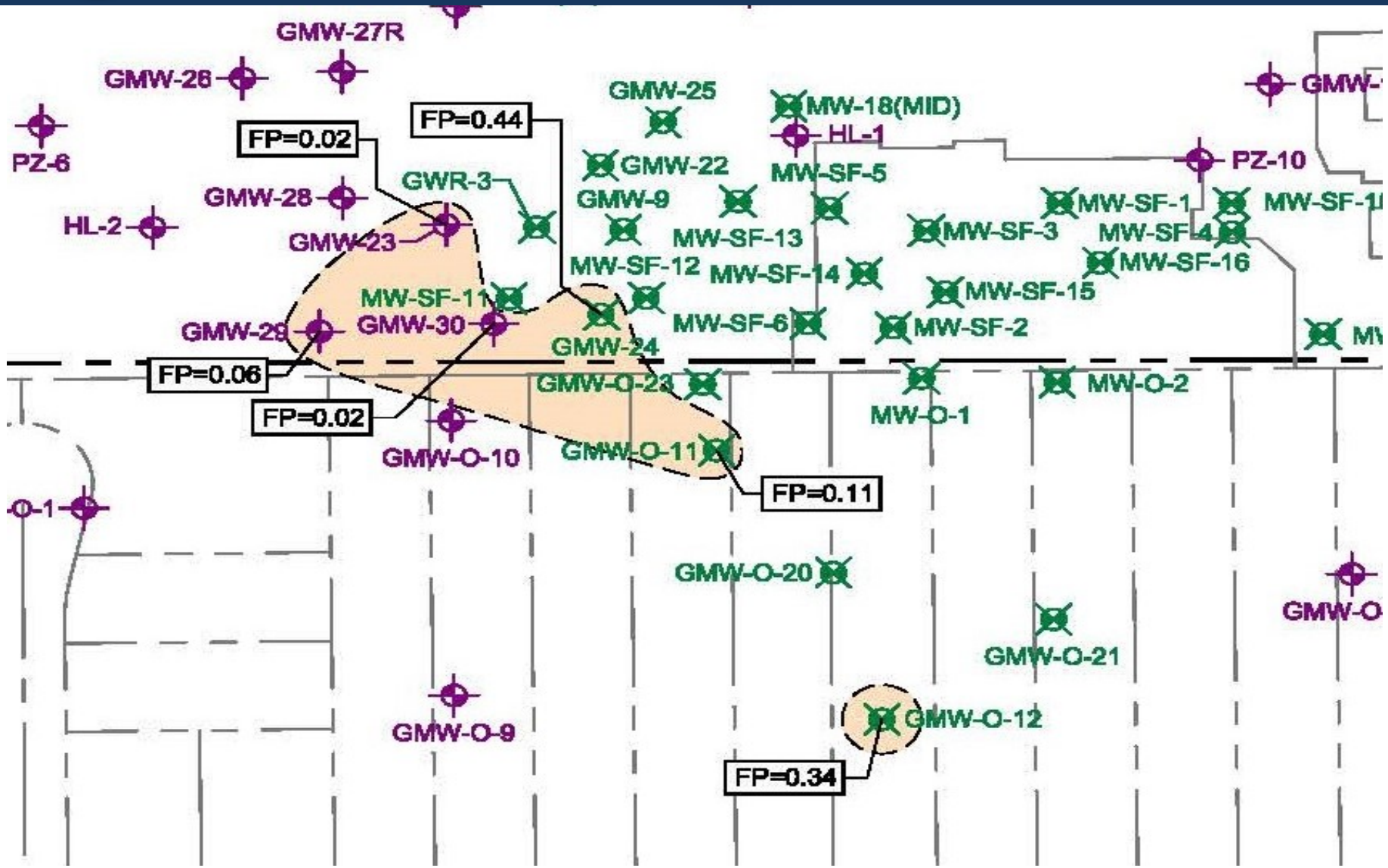
Floating Product Plumes – November 2018



Floating Product Plume – Large Plume



Floating Product Plume – S. Central Plume



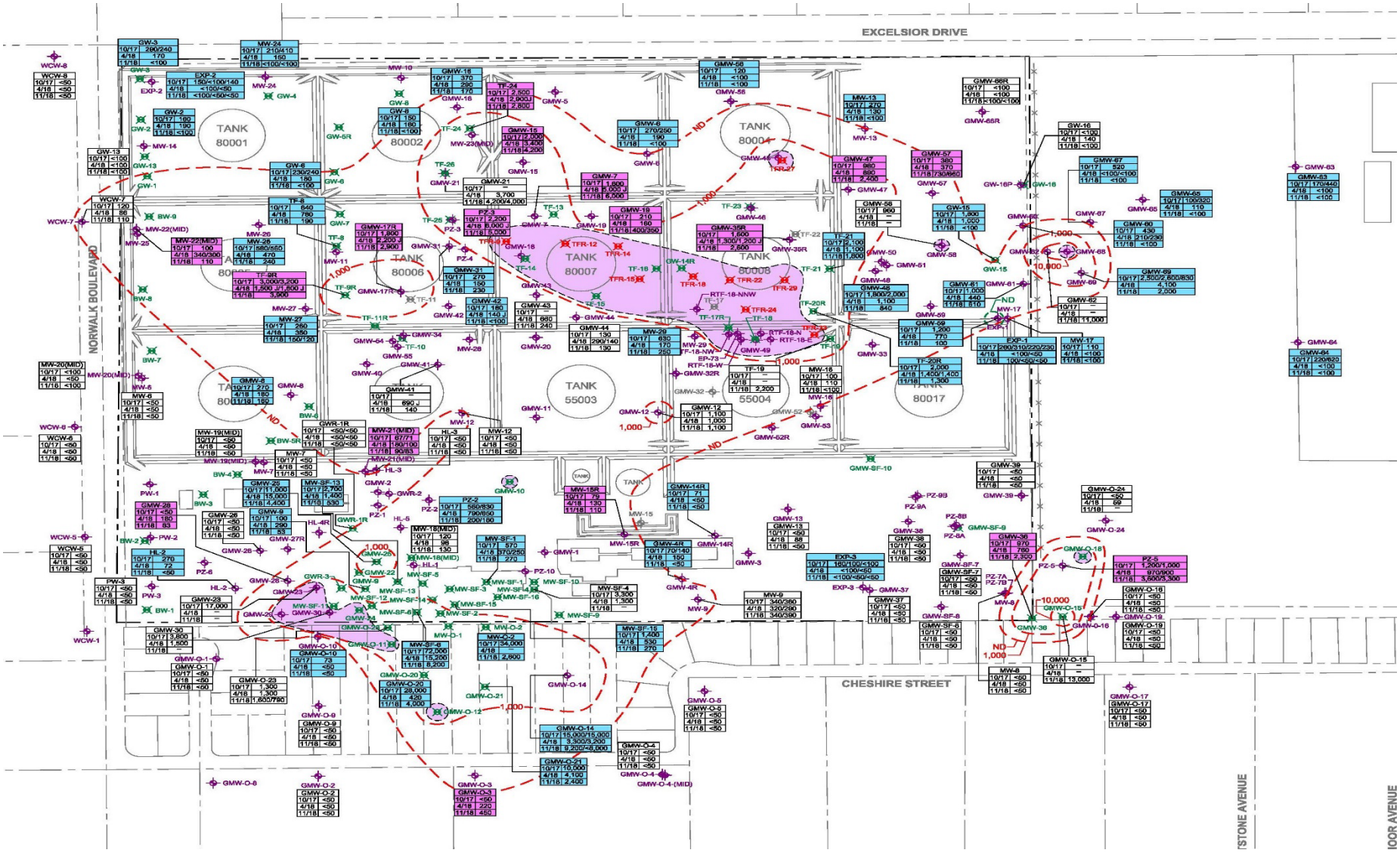
Groundwater Sampling – Uppermost Groundwater Zone

- Overall, results were similar to previous sampling events.
- TPH as Gasoline were reported in 24 of the 115 sampled wells (maximum: 11,000 µg/L in GMW-O-15).
- TPH as Diesel were reported in 53 of the 115 sampled wells (maximum: 8,200 µg/L in MW-SF-6).
- Benzene was reported in 24 of the 115 sampled wells (maximum: 5,100 µg/L in GMW-O-14).
- 1,2-DCA was reported in 12 of the 115 sampled wells (maximum: 5.0 µg/L in WCW-7).
- MTBE was reported in 24 of the 115 sampled wells (maximum: 650 µg/L in GMW-O-15).
- TBA was reported in 16 of the 115 sampled wells (maximum: 67,000 µg/L in PZ-5).

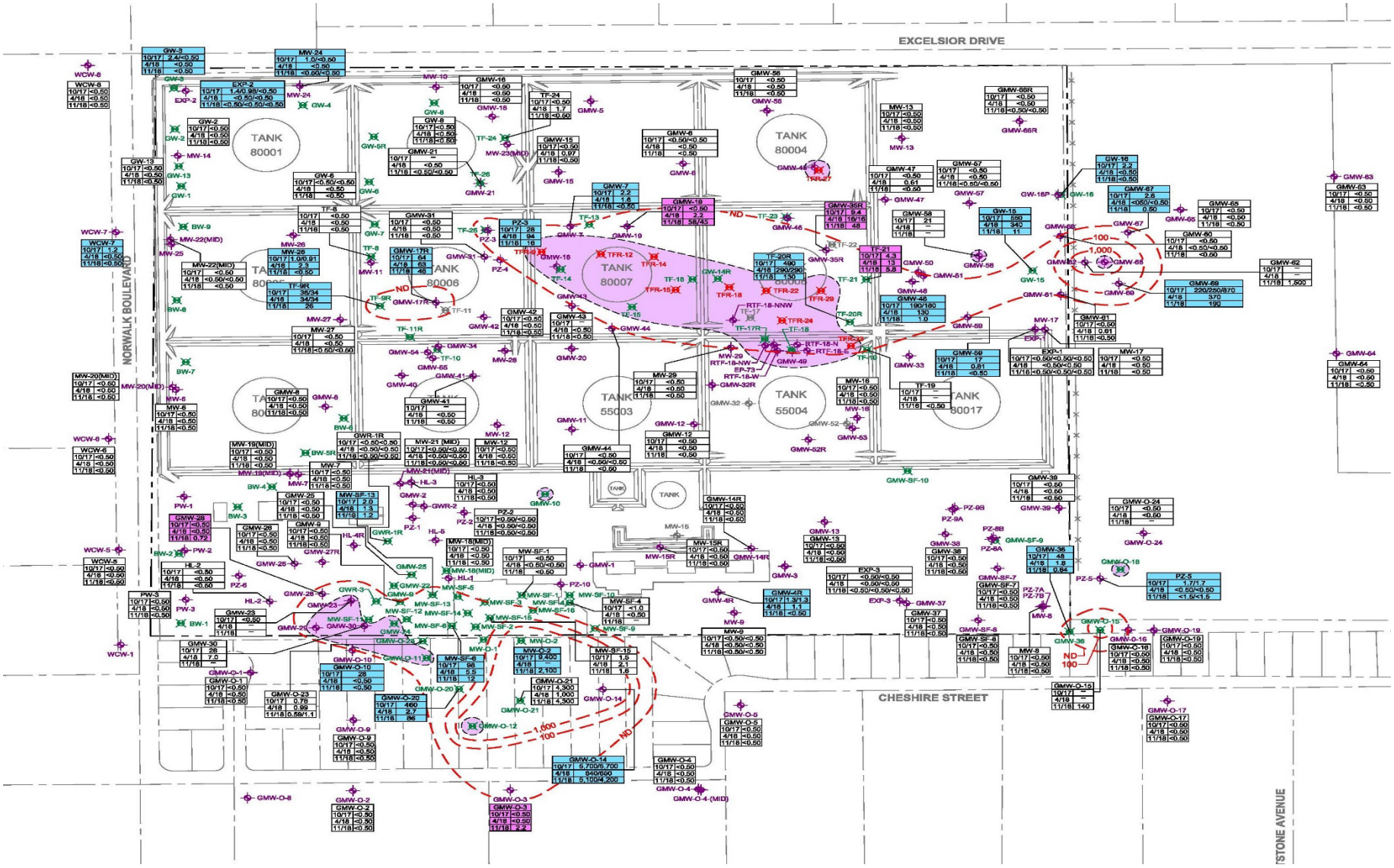
Groundwater Sampling – Exposition Aquifer

- Split samples were collected from EXP-1, EXP-2, and EXP-3 by both The Source Group and Blaine Tech.
- Samples were collected from EXP-4 and EXP-5 by Blaine Tech.
- 100 µg/L TPH as diesel were reported in one sample collected from EXP-1, but was not detected (<50 µg/L) in the two duplicate samples from EXP-1.
- 0.52 µg/L MTBE were reported in one sample collected from EXP-2, but was not detected (<0.50 and <1.0 µg/L) in the two duplicate samples from EXP-2.
- Samples from EXP-3, EXP-4, and EXP-5 were non-detect for all analytes.

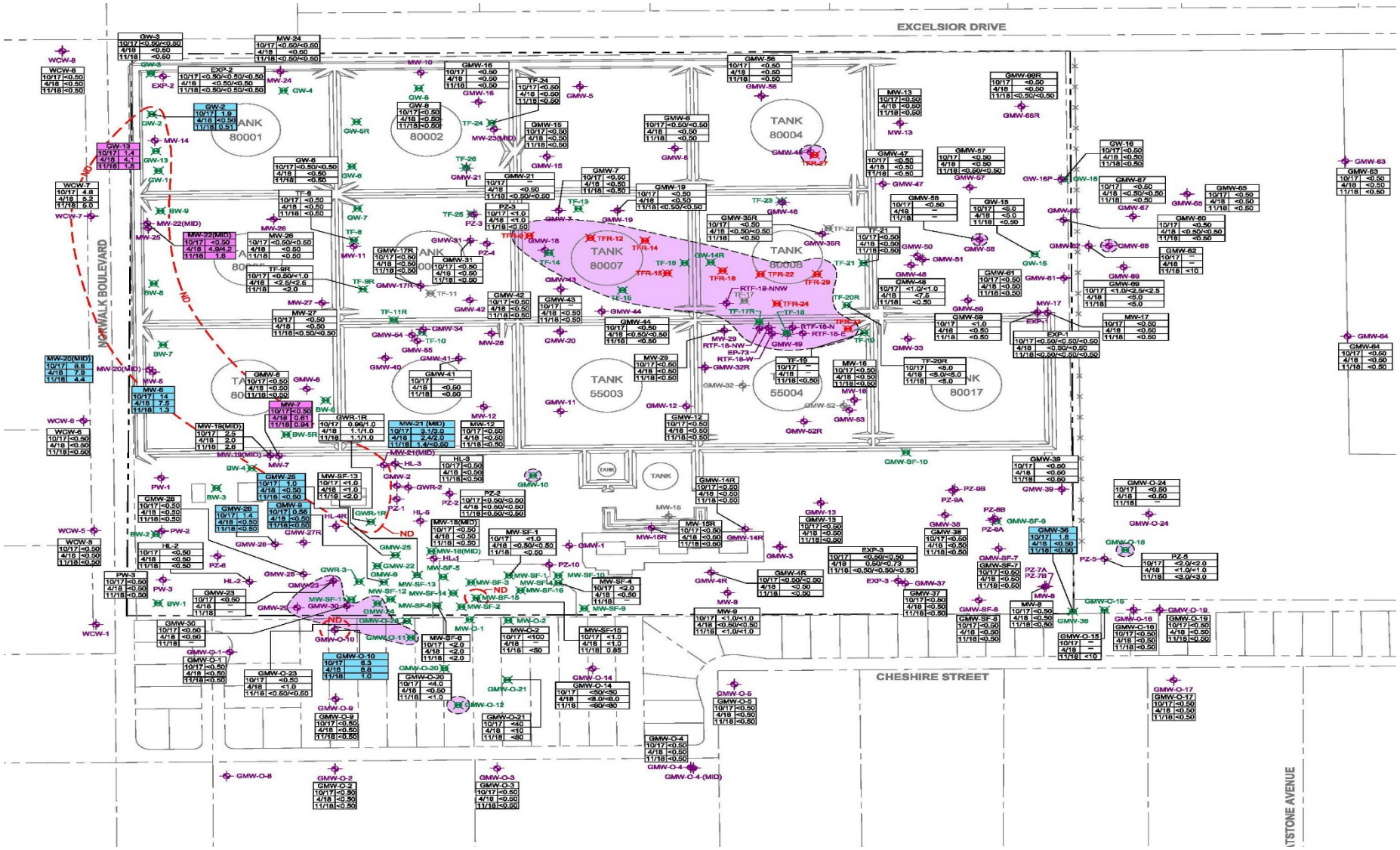
F6: Total Petroleum Hydrocarbons in Groundwater – November 2018



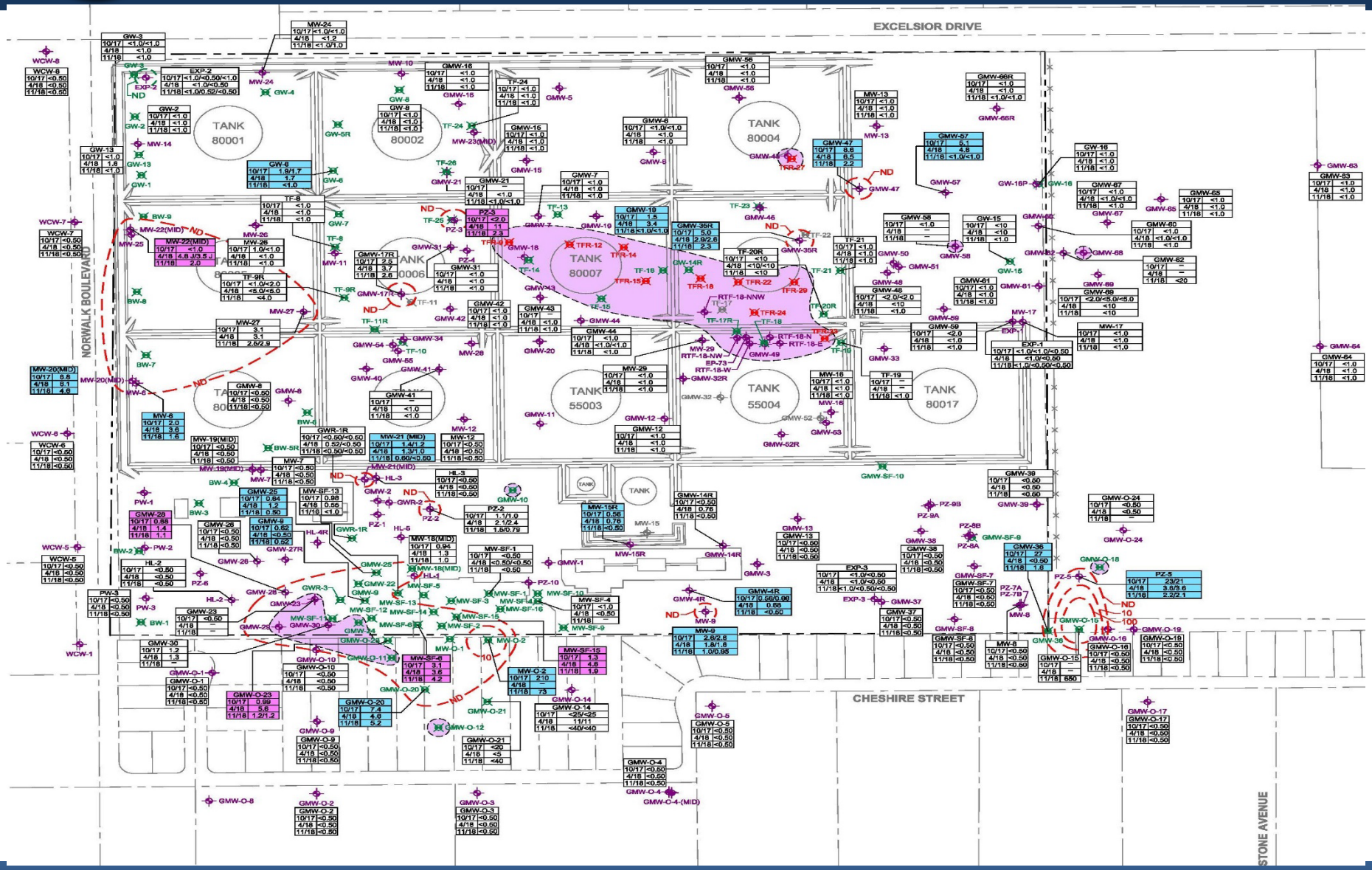
F7: Benzene in Groundwater – November 2018



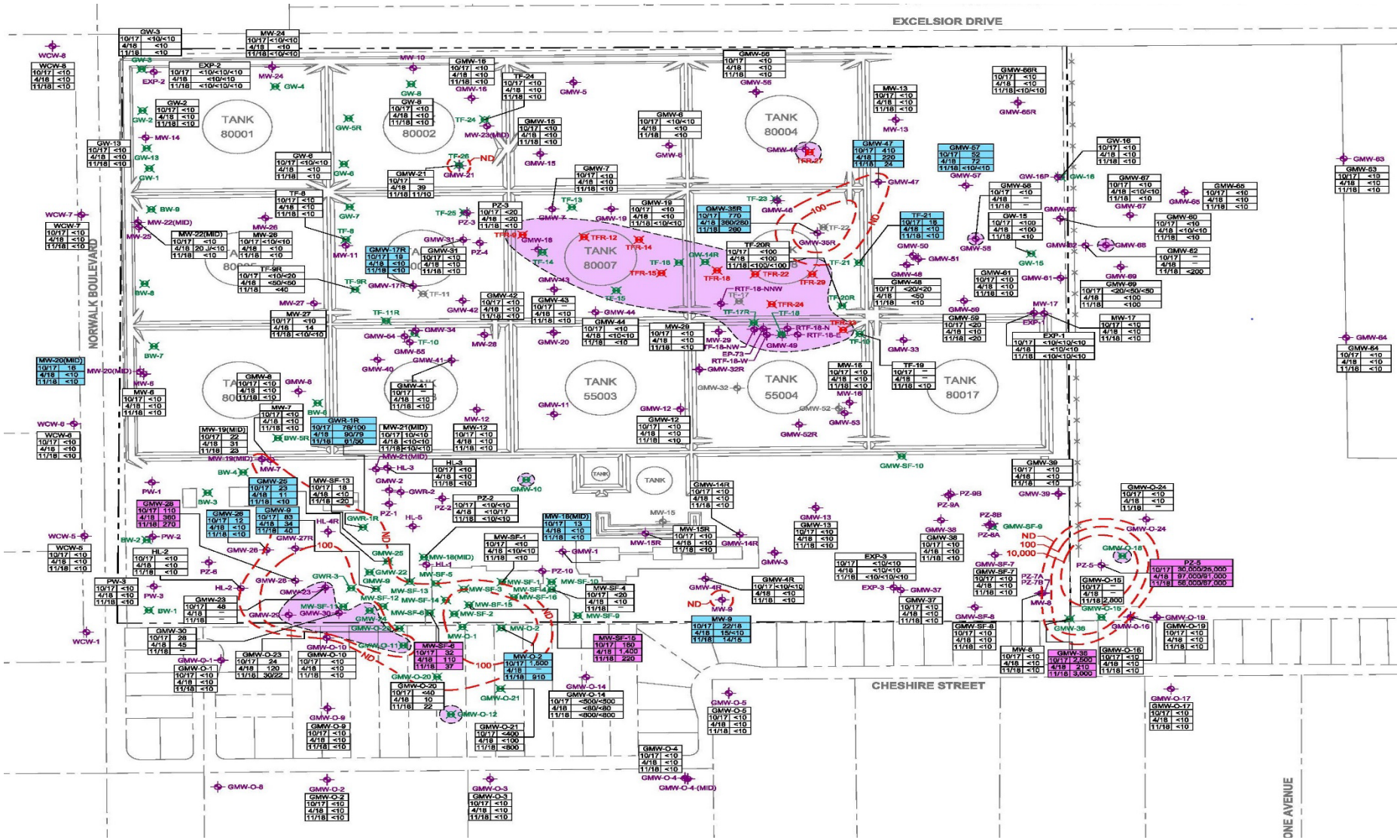
F8: 1,2-Dichloroethane in Groundwater – November 2018



F9: Methyl tertiary-Butyl Ether in Groundwater – November 2018



F10: tertiary-Butyl Alcohol in Groundwater – November 2018

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