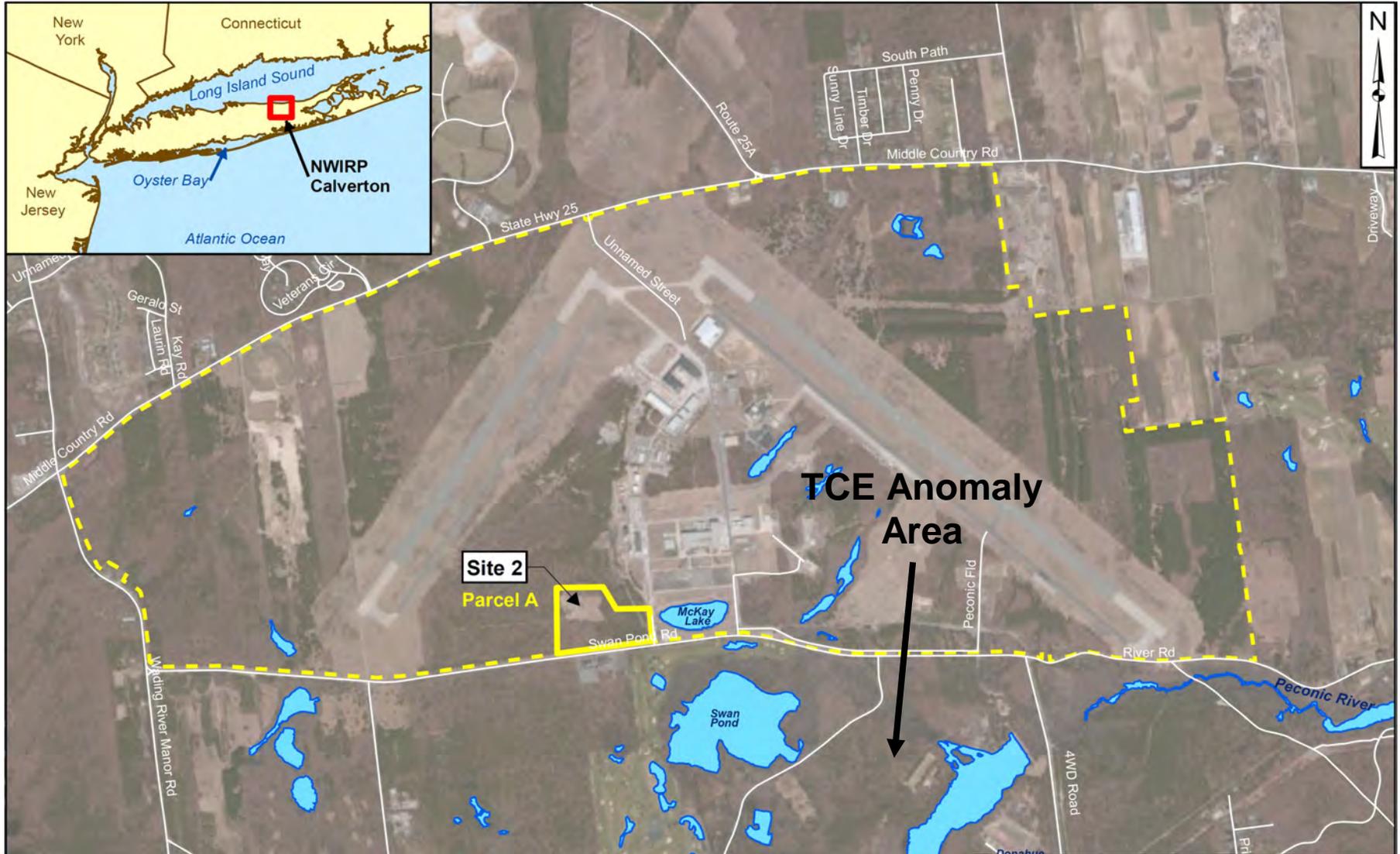




Evaluation of Site 2 – Fire Training Area and the TCE Anomaly Area

**Presented by:
Tetra Tech, Inc
NAVFAC Mid-Atlantic
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Facility Map



History of Site 2 – Former Fire Training Area



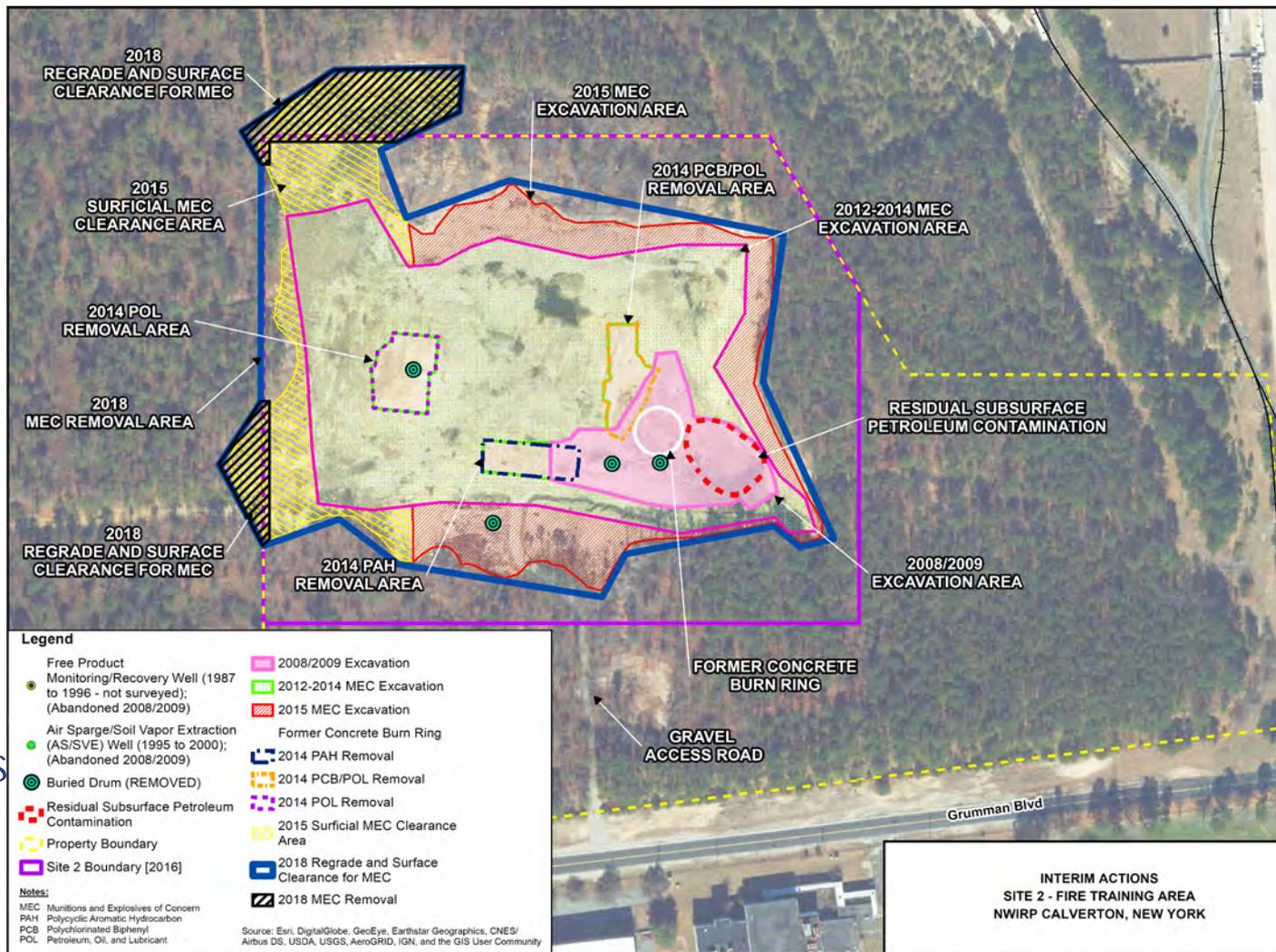
- Used from 1955 to 1996 for fire training. Flammable liquids (waste fuel, oil, and solvents) were ignited and teams of fire fighting personnel were trained to extinguish the fires.
- Prior to 1982, clearings and earthen berms built to contain fuels for fire training.
- After 1982, a concrete pit was constructed to contain liquids for fire training exercises.
- Aqueous fire-fighting foam, Halon, water, and dry chemical extinguishers used to extinguish fires.

History of Site 2 – Remedial Activities



• Remedial Activities (1986 to 2016):

- Spill cleanup of waste oil
- Removal of fuel storage tanks
- Operation of air sparge/soil vapor extraction system
- Excavation and off-site disposal of site structures and contaminated soil.



Trichloroethene (TCE) Background



- **Uses**

- Industrial and commercial solvent that removes grease and oils
- Main use is for degreasing metal parts
- Consumer products: paint remover, adhesives, rug-cleaning fluids
- Dry cleaning solvent
- Automotive: brake cleaner

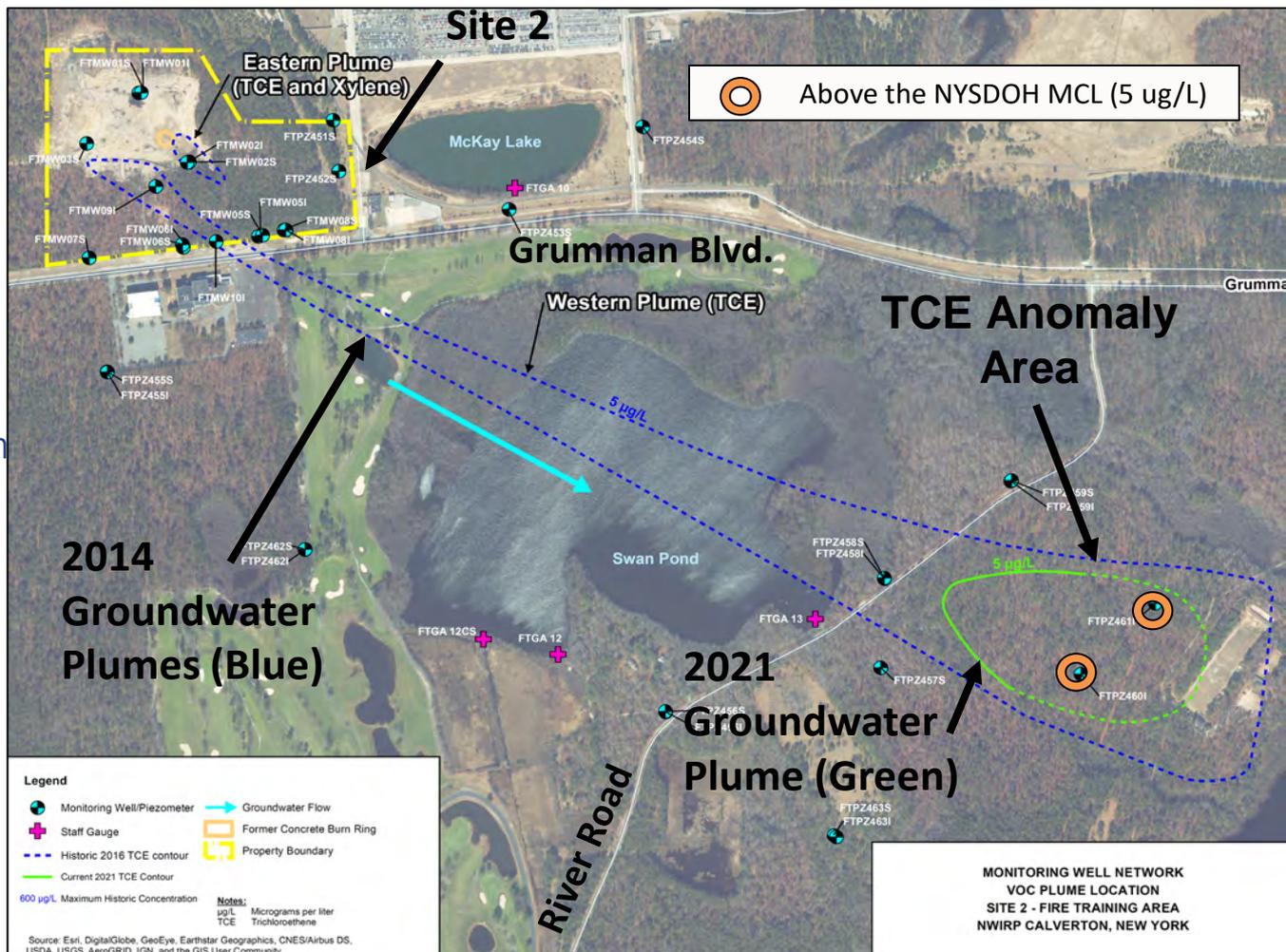
- **Properties**

- Colorless, volatile liquid
- Breaks down quickly in air
- Breaks down at a slower rate in soil and groundwater
- During the break down process, TCE (parent product) is converted into other chemicals (daughter products) such as 1,2-dichloroethene (DCE) and vinyl chloride.

History and Current Status of TCE Anomaly Area



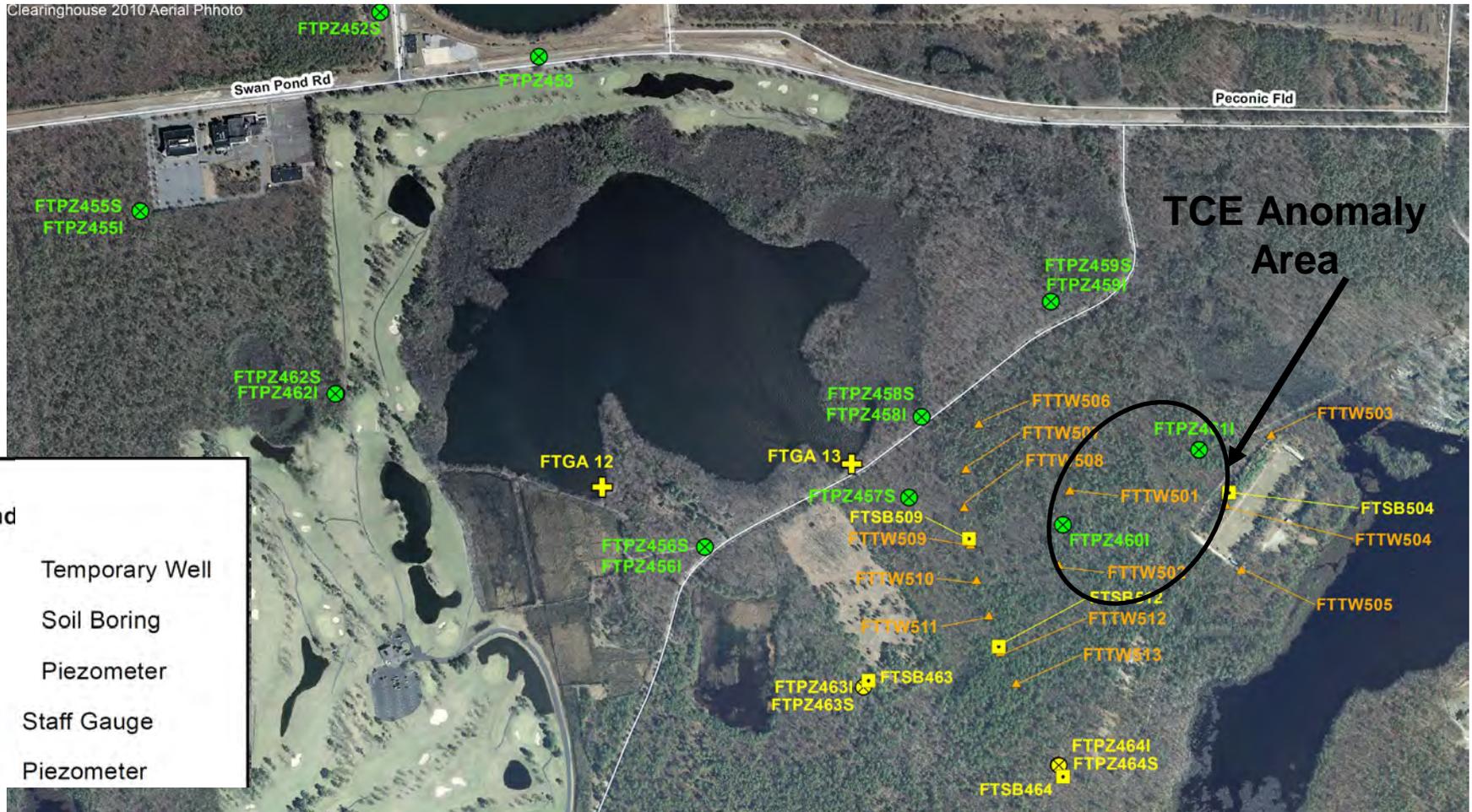
- TCE Anomaly Area discovered in 2012. TCE above New York State maximum contaminant levels (MCLs) at 2 off-property wells located downgradient of Site 2.
- Current Status:
 - Site 2 has been monitored annually.
 - Navy coordinates with Suffolk County for collection of split samples to allow county to conduct independent analysis.
 - TCE in 2 off-property wells remains above MCLs.
 - VOCs at other wells off-property do not exceed the MCLs.
 - VOCs on-property at Site 2 have not exceeded the MCLs since 2020.



TCE Anomaly Area Investigation



- Based on unexpected TCE concentrations above MCL in 2 off-property wells, the Navy conducted an additional investigation in 2013.



Site 2 as a Potential Source Area



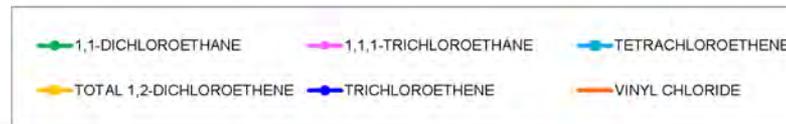
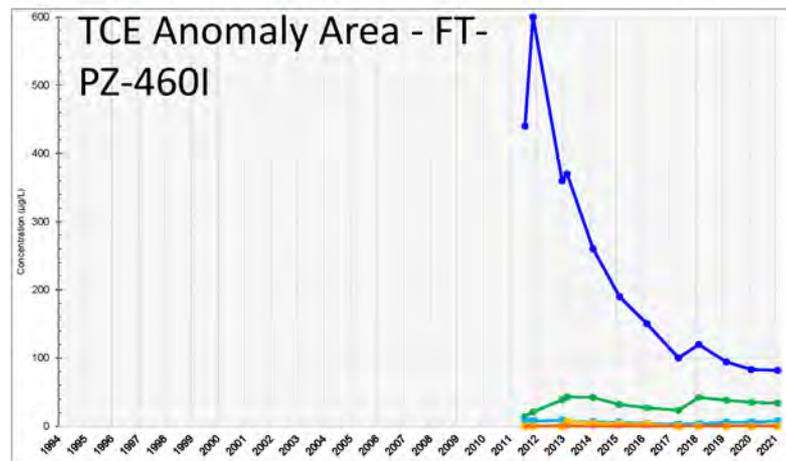
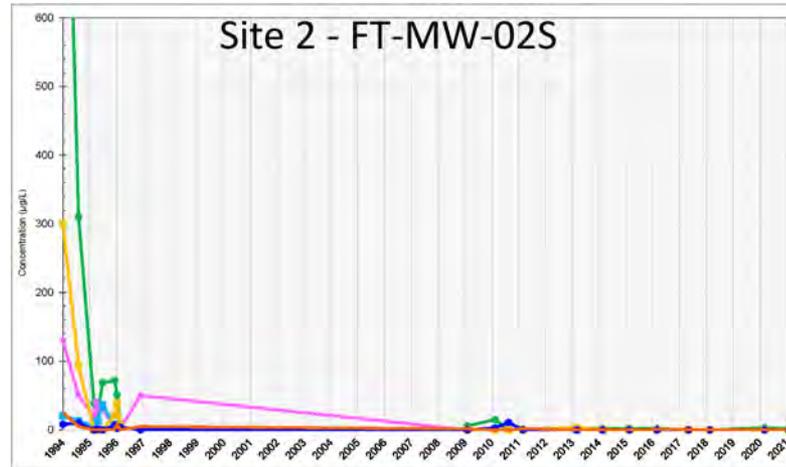
- Site conditions that would support Site 2 as the source of TCE at the TCE Anomaly Area:
 - The chemical signature or composition of the plume including the parent product (TCE) and daughter products would be similar.
 - Concentrations of the chemicals would be higher near the source area and decreasing with distance from the source area.

Comparison of TCE Anomaly Area to Site 2 Former Fire Training Area



- 2013 investigation findings:
 - Chemical signature or composition of plume is different:
 - Site 2 plume was primarily a release of TCA. Plume consisted of TCA and TCA daughter products. Relatively low levels of TCE were detected at source area.
 - In 2012, TCE Anomaly Area plume consisted of almost pure TCE. Currently, the plume consists of TCE and TCE daughter products. Since 2012 concentrations of TCE are rapidly decreasing and daughter products are increasing as expected in the aquifer.
 - Concentrations of TCE at the TCE Anomaly Area are significantly higher than detected at Site 2:
 - Maximum concentration of TCE at Site 2 – 87 ug/L.
 - Maximum concentration of TCE at TCE Anomaly Area – 600 ug/L.
- Based on differences in the chemical signature and higher concentrations of TCE downgradient of site, the investigation concluded that anomaly area is not related to Site 2 or NWIRP Calverton.

Comparison of TCE Anomaly Area to Site 2 Former Fire Training Area



- All wells, with the exception of the TCE Anomaly Area, are currently below the cleanup goals.
- The Navy will continue to investigate other chemicals at Site 2:
 - PFAS – Currently in Remedial Investigation
 - 1,4-Dioxane – Currently in Site Inspection
- Once investigations are complete, the Navy will generate a decision document to identify the selected cleanup remedy.

QUESTIONS?