

#150295B

SITE STATUS AND PLANNED ACTIONS

Former Koppers Facility
Cabot/Koppers Superfund Site
Gainesville, Florida

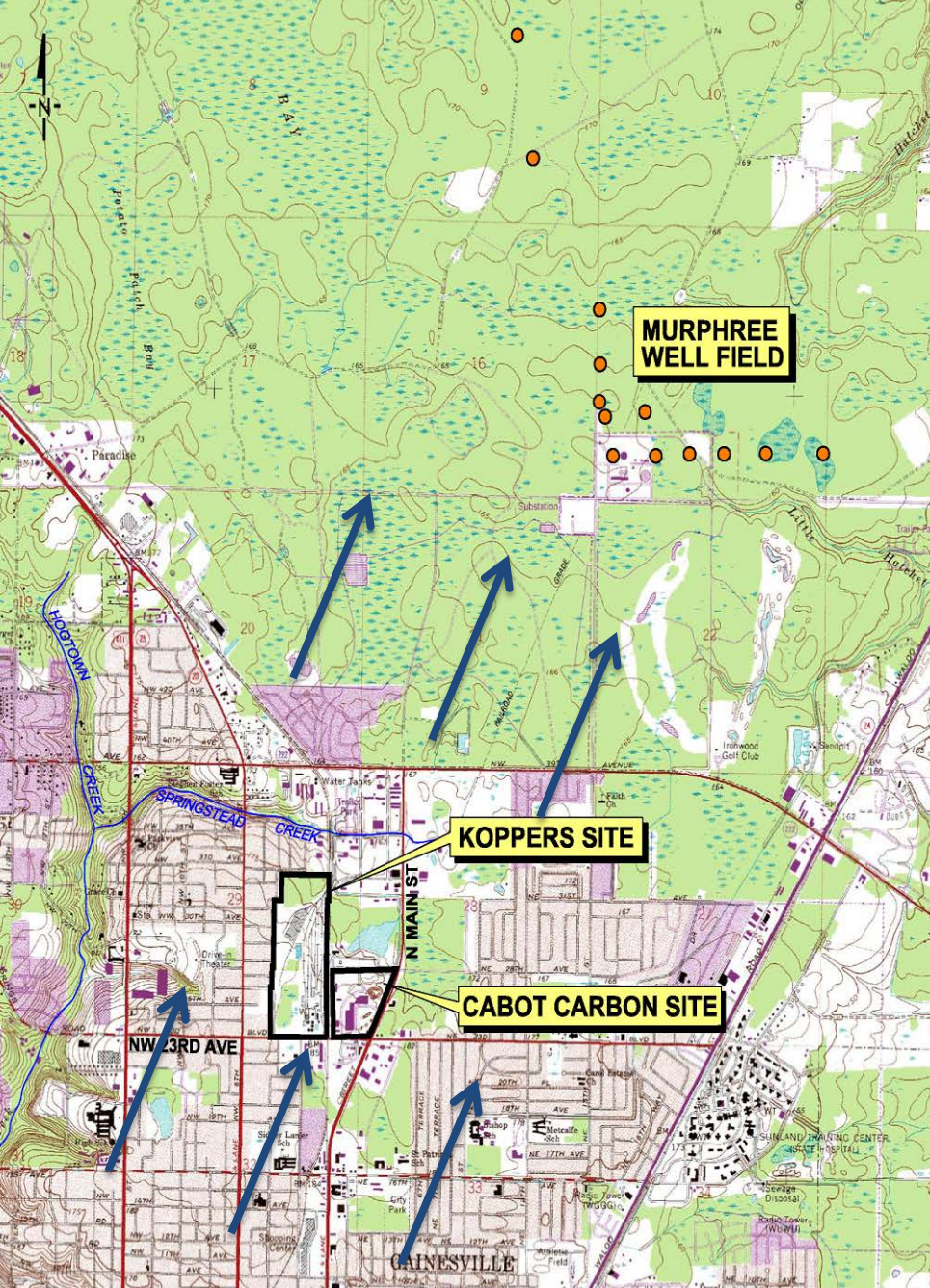
Presentation for the Gainesville City Commission
September 17, 2015

By: Beazer East, Inc.

Introduction

- Update since 2013 presentation
- Timeline of actions
- Stephen Foster neighborhood soil restoration project
- In-situ stabilization of creosote areas
- Long-term remedy design & implementation

Site Location



Groundwater
Flow Direction

SOURCE: U.S.G.S. QUADRANGLE GAINESVILLE
EAST, FLA 1966 (PHOTOREVISED 1988)



GAINESVILLE
APPROX. 1952-1953
OBLIQUE



Jan 2008

NW 31st Ln

NW 31st Ave

NW 30th Ave

NW 28th Ave

NW 27 Ave

NW 26 Ave

NW 4 Terrace

ve

20

N Main St

NE 1st Blvd

NE 5th Terrace

Google

120



Jan 2012

NW 31st Ln

NW 31st Ave

NW 30th Ave

NW 28th Ave

NW 27 Ave

NW 26 Ave

NW 4 Terrace

NE 1st Blvd

N Main St

NE 5th Terrace

20

120

Google



Recent Timeline for Remedial Design and Remedial Action

- Feasibility Study (May 2010)
- Proposed Plan (July 2010)
- Amended ROD (February 2011)
- Consent Decree (July 2013)
- Remedial Design Work Plan (December 2013)
- Off-Property Soil Remediation (OU-5)
 - Initial soil sampling plan (September 2008)
 - Pilot property plan (November 2013)
 - Remedial action plans (February-October 2014)
 - Implementation (March-November 2014)
 - Completion report (July 2015)
- Beazer/City settlement agreement (November 2014)
- Design and remediation (2015-2019)

Consent Decree

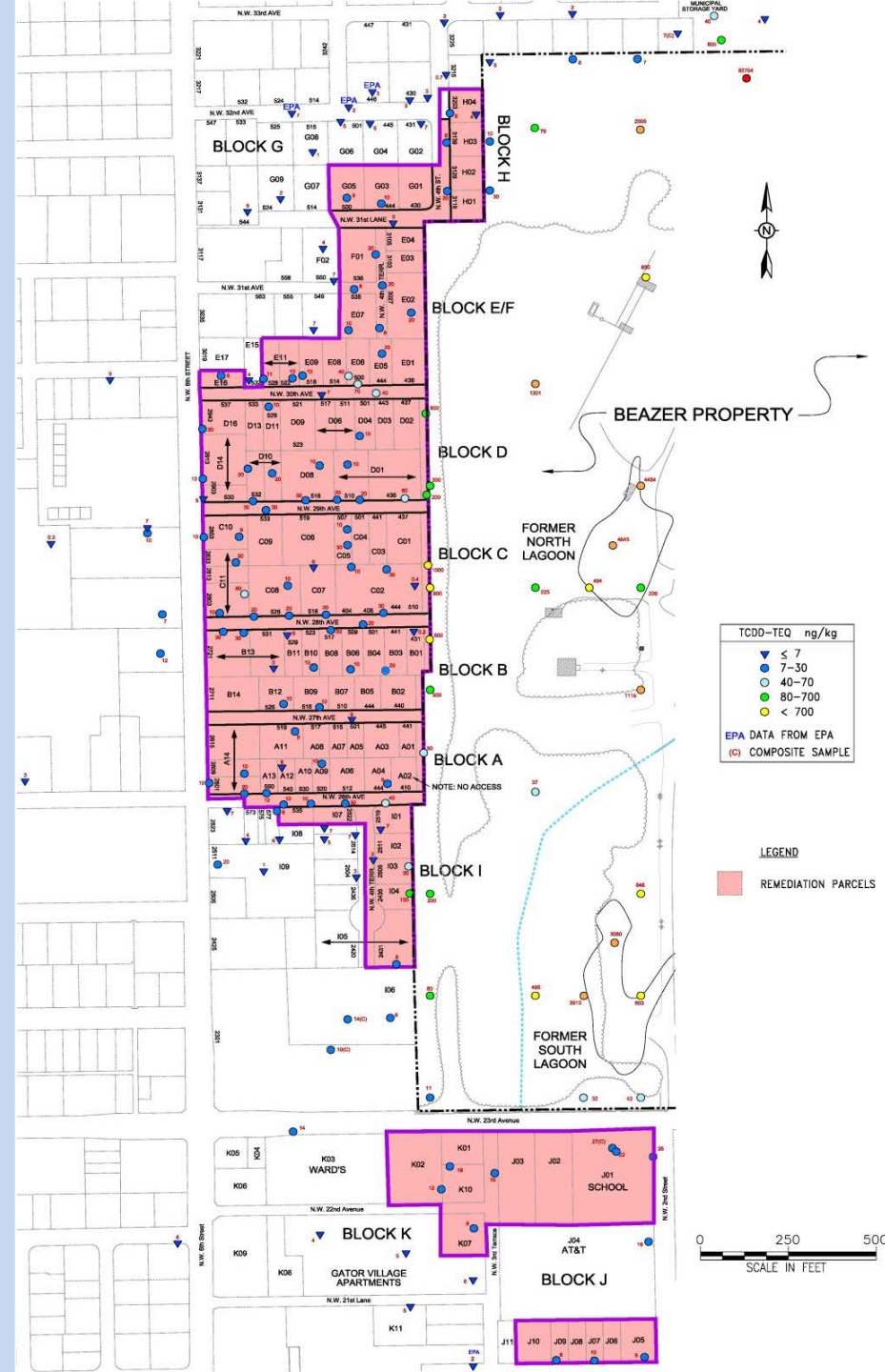
- Agreement between Beazer and US Govt. effective July 9, 2013
- Beazer will perform Remedial Design and Remedial Action with EPA oversight
- Five Operable Units (“OUs”)
- Beazer responsible for addressing impacts attributable to Koppers facility (parts of OU-2, OU-3, OU-4, and OU-5)

Operable Unit 5 (Off-Property)

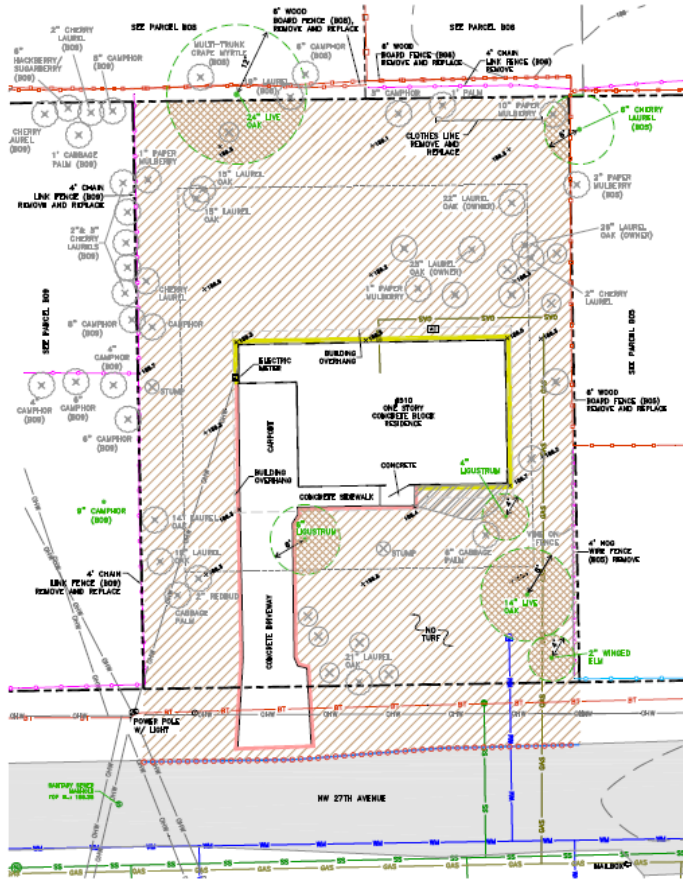
- Stephen Foster neighborhood
- Residential properties (and a few non-residential properties) that have dioxin concentrations greater than 7 parts per trillion
 - Remove top 1 foot of soil in yards
 - Replace with clean soil
 - Replace landscaping

Stephen Foster Remediation Overview

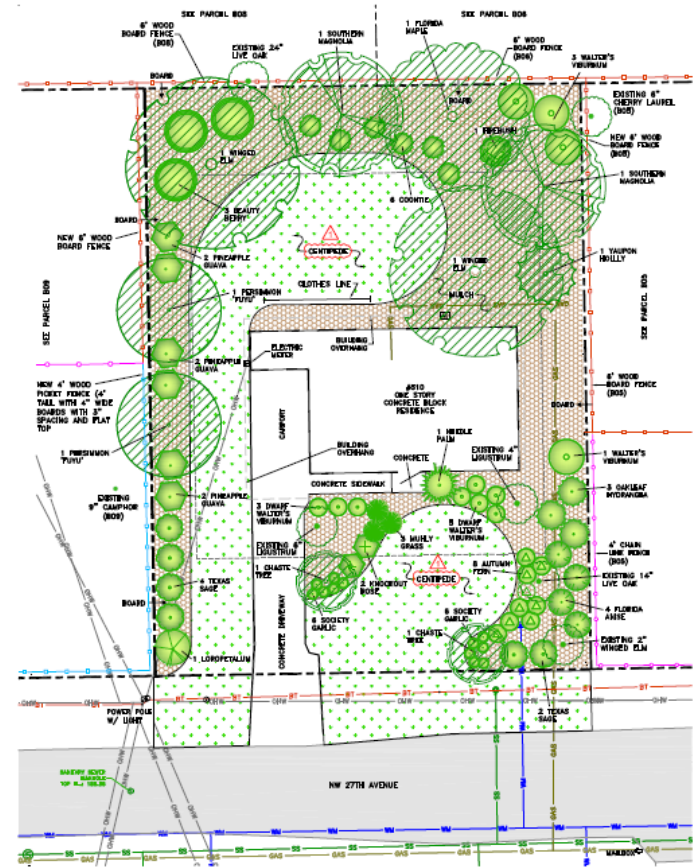
- 100 parcels – **100% participation**
- Tailored designs for property owners
- Replaced top 1 foot of soil
- Replaced some trees, dug around others
- New landscaping
- Irrigation
- Abandoned old septic tanks and wells
- Demolished an old trailer
- Temporary relocation assistance and cleaning stipend
- Dust and noise monitoring
- Stormwater drain on 28th Ave



Example Parcel Design



EXISTING CONDITIONS AND SOIL REMOVAL PLAN



RESTORATION PLAN

- LEGEND**
- PROPERTY LINE
 - BRUSH OR RAKE TOPSOIL TO ROOT MAT. REPLACE IMMEDIATELY. AREA = 805 S.F.
 - 1 FT SOIL REMOVAL AREA = 5,885 S.F.
 - EXISTING 4" CHAIN LINK FENCE
 - EXISTING 8" WOOD BOARD FENCE
 - PROPERTY SETBACK
 - LIMITED EXCAVATION WITHIN 2 FT OF PERMANENT BUILDINGS
 - LIMITED EXCAVATION WITHIN 1 FT OF PAVEMENT
 - SHRUB TO BE REMOVED
 - TREE OR SHRUB TO BE REMOVED
 - TEMPORARY BENCHMARK
 - PRE-CONSTRUCTION SURVEY DATA
 - TOPOGRAPHIC CONTOUR
 - TREE TO BE PROTECTED WITH PROTECTION RADIUS AND TREE PROTECTION AREA
 - JULIETTES**
 - OHV OVERHEAD UTILITY LINES
 - UNW UNDERGROUND SANITARY SEWER (APPROX.)
 - UNW UNDERGROUND WATER MAIN (APPROX.)
 - UNW UNDERGROUND NATURAL GAS (APPROX.)
 - UNW UNDERGROUND TELEPHONE (APPROX.)
 - UNW UNDERGROUND ELECTRIC (APPROX.)
 - UNK UNDERGROUND UNKNOWN (APPROX.)
 - SILT FENCE OR STRAW WATTLES DURING WORK LENGTH = 75 FT
 - HIGH VISIBILITY CONSTRUCTION FENCE DURING WORK LENGTH = 75 FT
 - SCALE IN FEET

- LEGEND**
- CENTREPE SOD
 - PINE BARK MULCH
 - PROPERTY LINE
 - NEW 4" WIRE FENCE LENGTH = 250 FT
 - NEW 4" WOOD BOARD FENCE LENGTH = 150 FT
 - UTILITIES**
 - OHV OVERHEAD UTILITY LINES
 - UNW UNDERGROUND SANITARY SEWER (APPROX.)
 - UNW UNDERGROUND WATER MAIN (APPROX.)
 - UNW UNDERGROUND NATURAL GAS (APPROX.)
 - UNW UNDERGROUND TELEPHONE (APPROX.)
 - UNW UNDERGROUND ELECTRIC (APPROX.)
 - UNK UNDERGROUND UNKNOWN (APPROX.)
 - EXISTING TREE
 - NEW TREE
 - NEW TREE OR SHRUB
 - SCALE IN FEET

ISSUED FOR CONSTRUCTION

| DATE | REVISION |
|---------|-----------------|
| 8-13-16 | OWNER REVISIONS |
| | |
| | |

TITLE: 807 SOIL RESTORATION PLAN
 LOCATION: 510 NW 27th Avenue, Gainesville, Florida
 PROJECT: 117-2881818
 DATE: 8-13-16

TETRA TECH
 CONTROL: DP
 DATE: 8-13-16



OU-5 Off-Property Soils – Results





Community Comments

“We love it! And the neighborhood looks fantastic.”

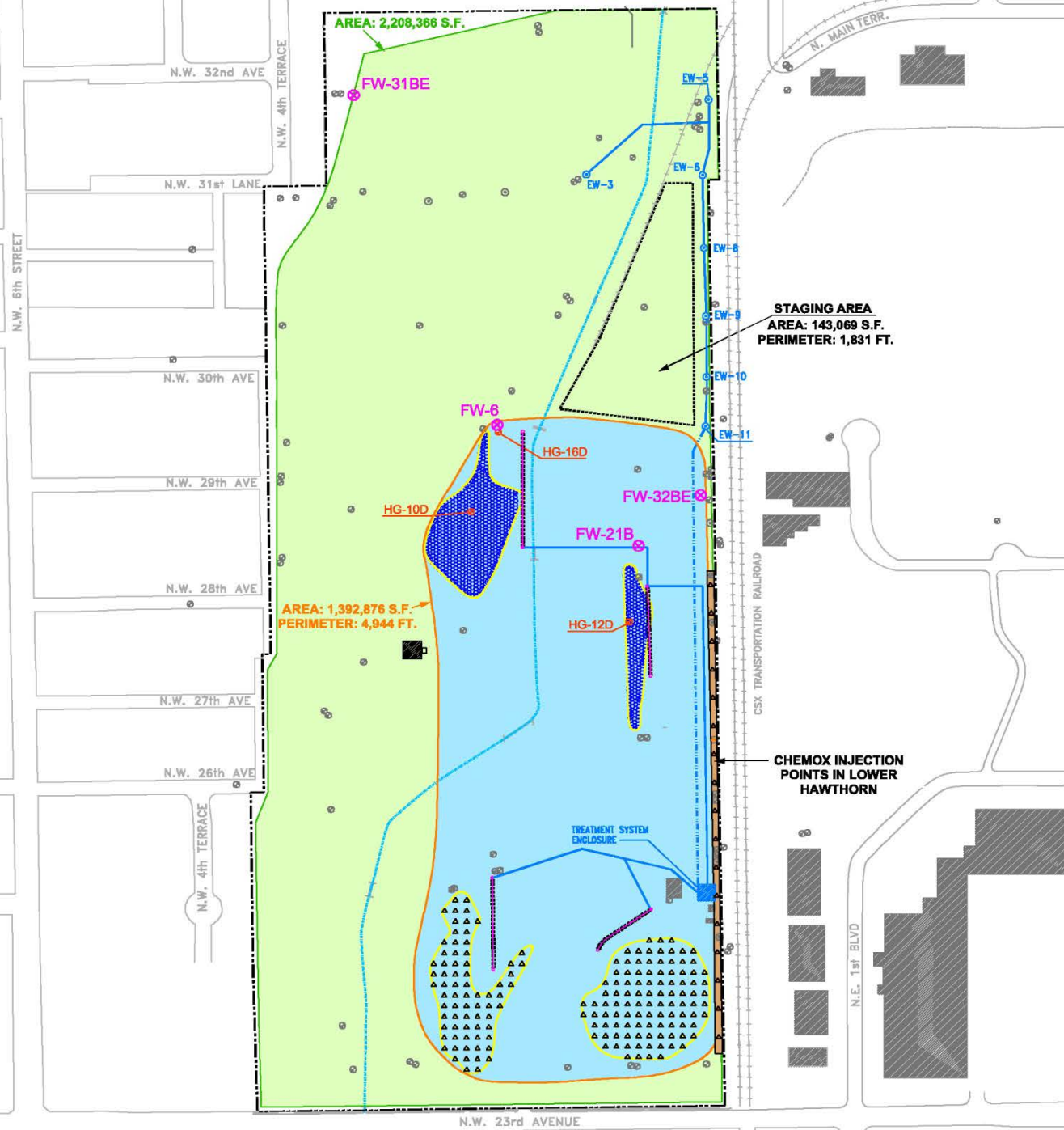
“We are very pleased with the results.”

“The plants in my yard are lovely. They did a great job. Thank you.”

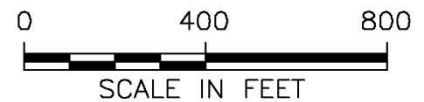
“The cleanup really looks fantastic.”

“I am meeting people that I didn't know from other streets walking in the evenings to see the changes. I'm excited about the final results. ... It's like a new beginning. I've lived there 44 years.”

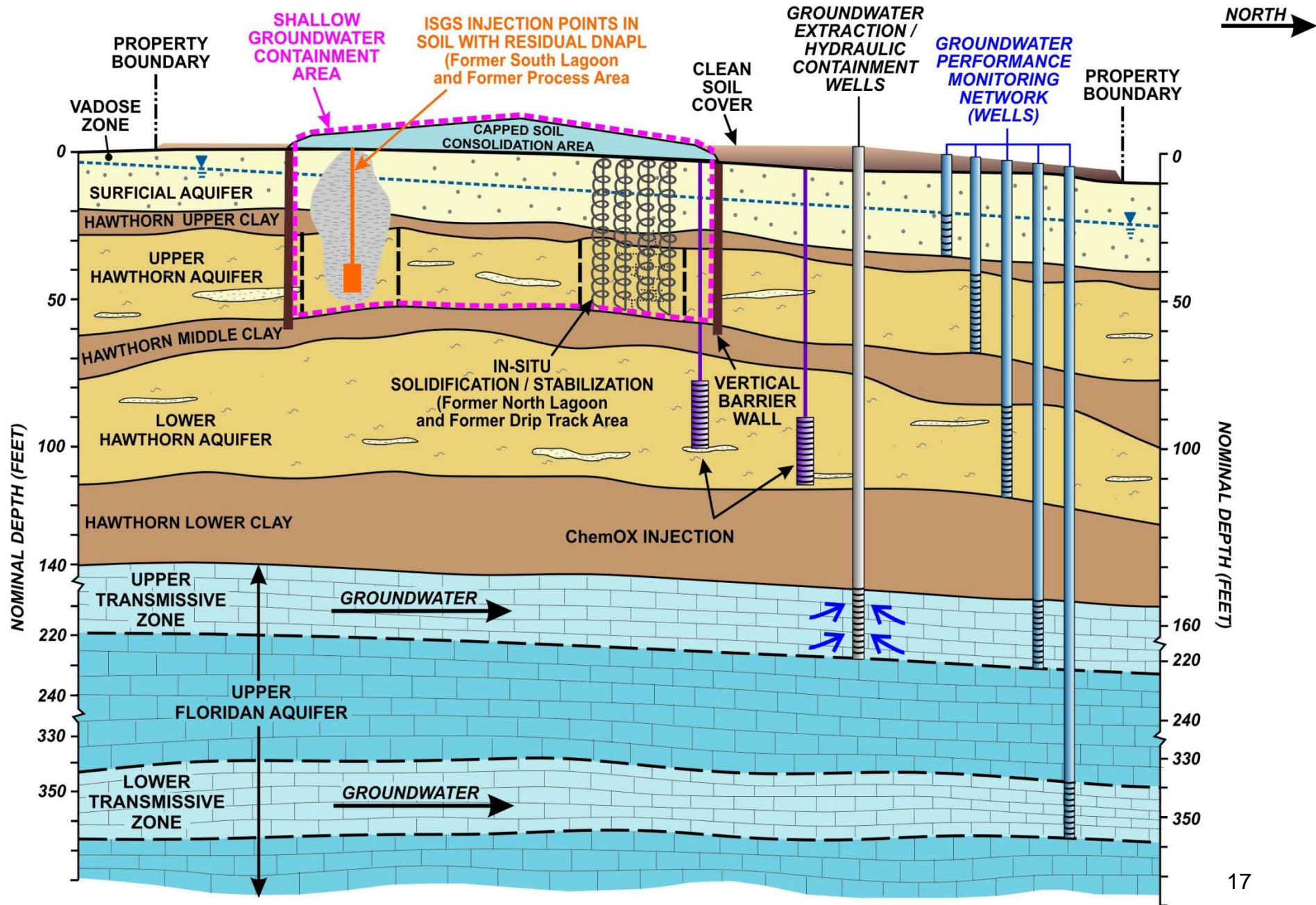
On-Property Remedy Overview OU-2 – OU-4



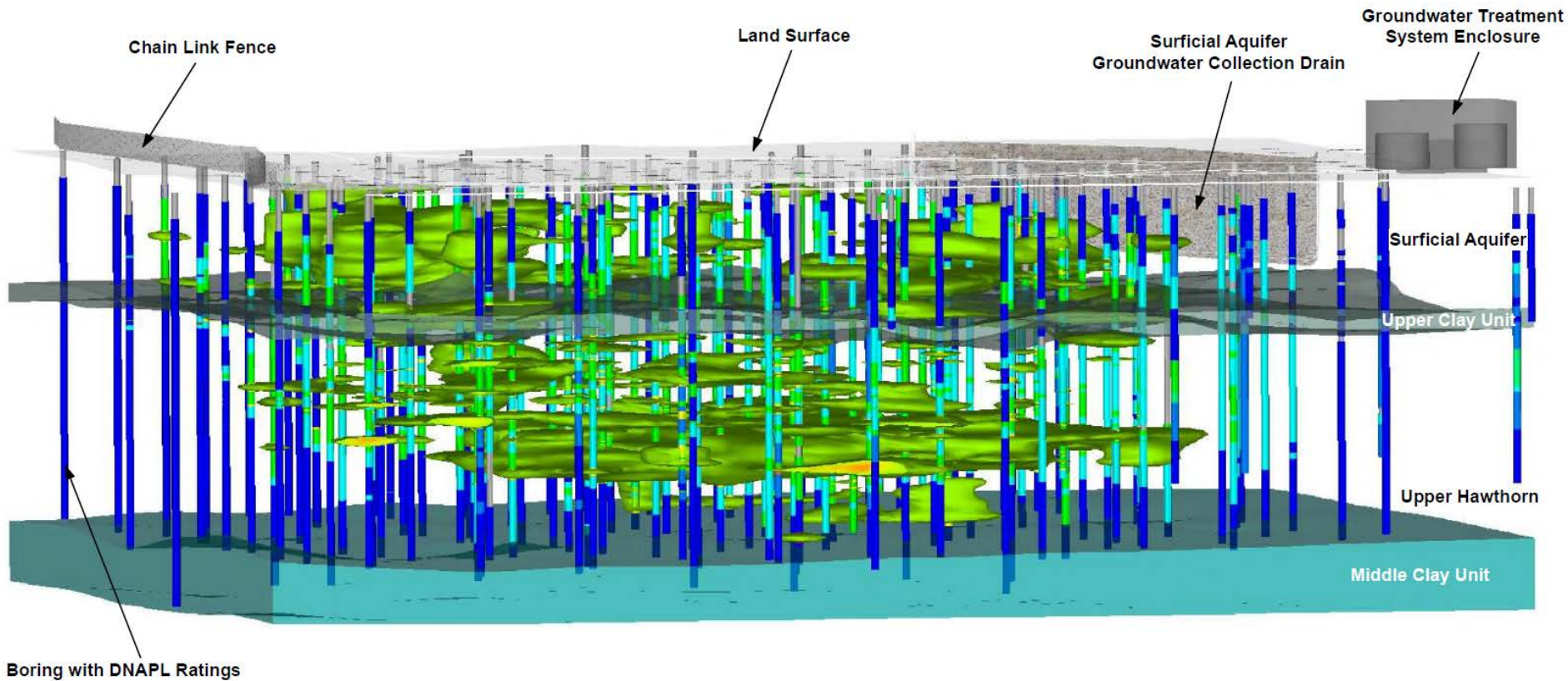
- LEGEND**
- SITE BOUNDARY
 - RAILROAD
 - MONITORING WELL
 - SOURCE AREA
 - ▨ EXISTING BUILDING STRUCTURE
 - ACTIVE EXTRACTION WELL AND ASSOCIATED PIPING
 - ONE-PASS TRENCH AND ASSOCIATED PIPING
 - HG-10D CHEMOX DELIVERY WELL
 - VERTICAL BARRIER
 - REGRADE/COVER AREA
 - CONSOLIDATION AREA
 - NEW PIPING
 - ▲ 175 ISGS INJECTION POINTS
 - 1619 ISS/S AUGER POINTS
 - ⊗ UPPER FLORIDAN AQUIFER GW EXTRACTION WELL
 - CHEMOX INJECTION POINTS



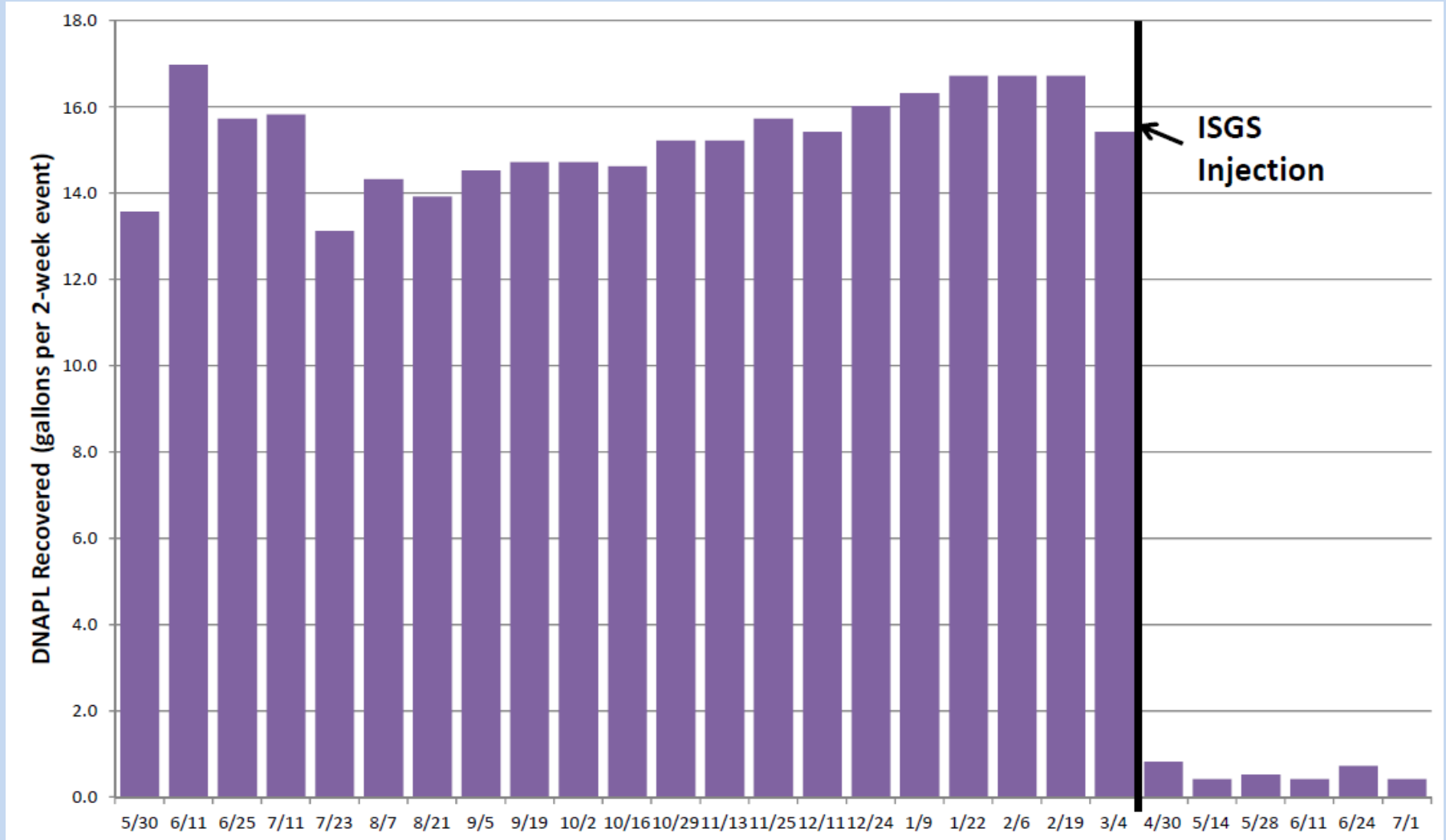
On-Property Remedial Action Components (OU-2 – OU-4)



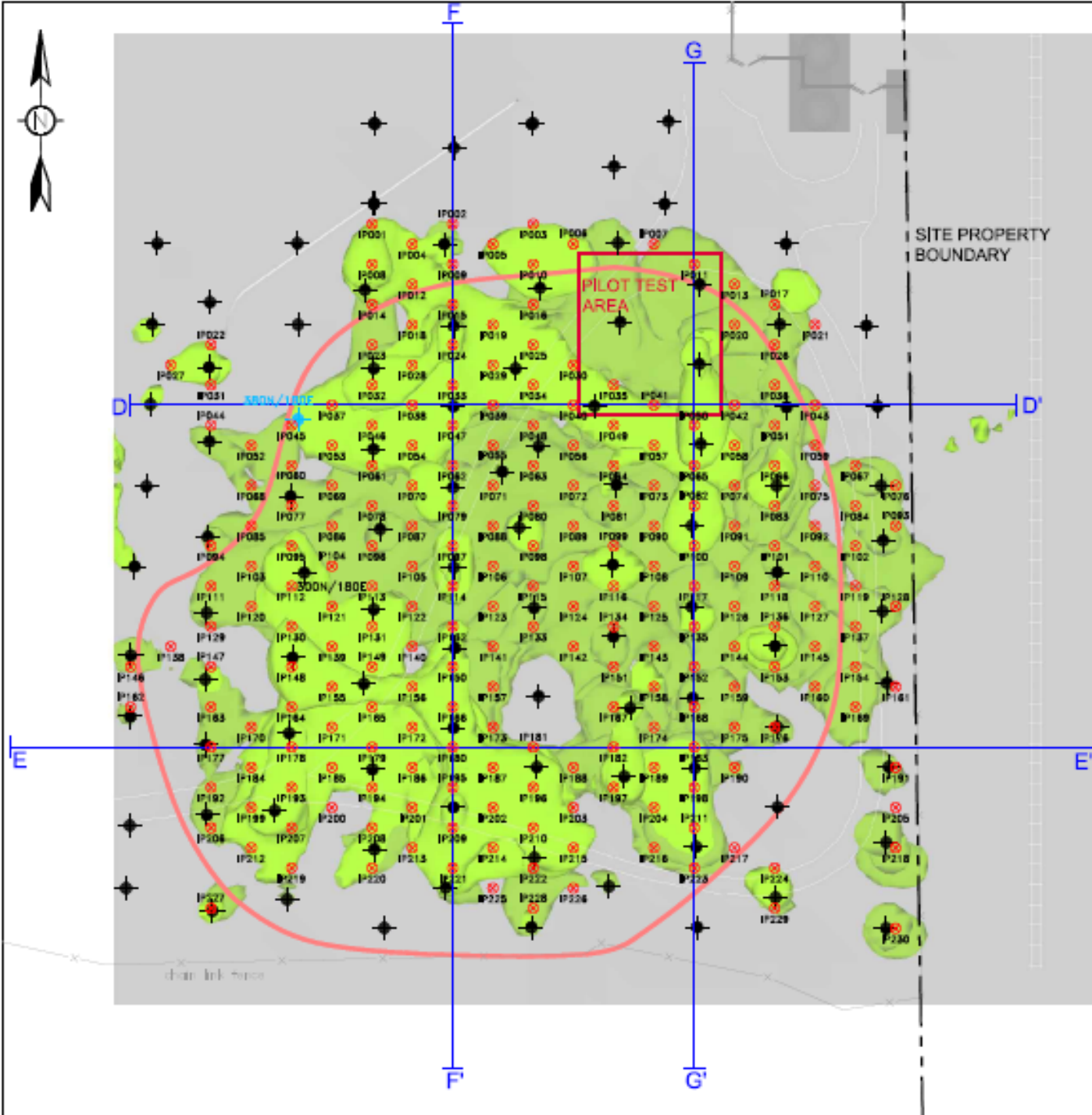
In-Situ Geochemical Stabilization (ISGS): Process Area Characterization



ISGS – Pilot Test Results



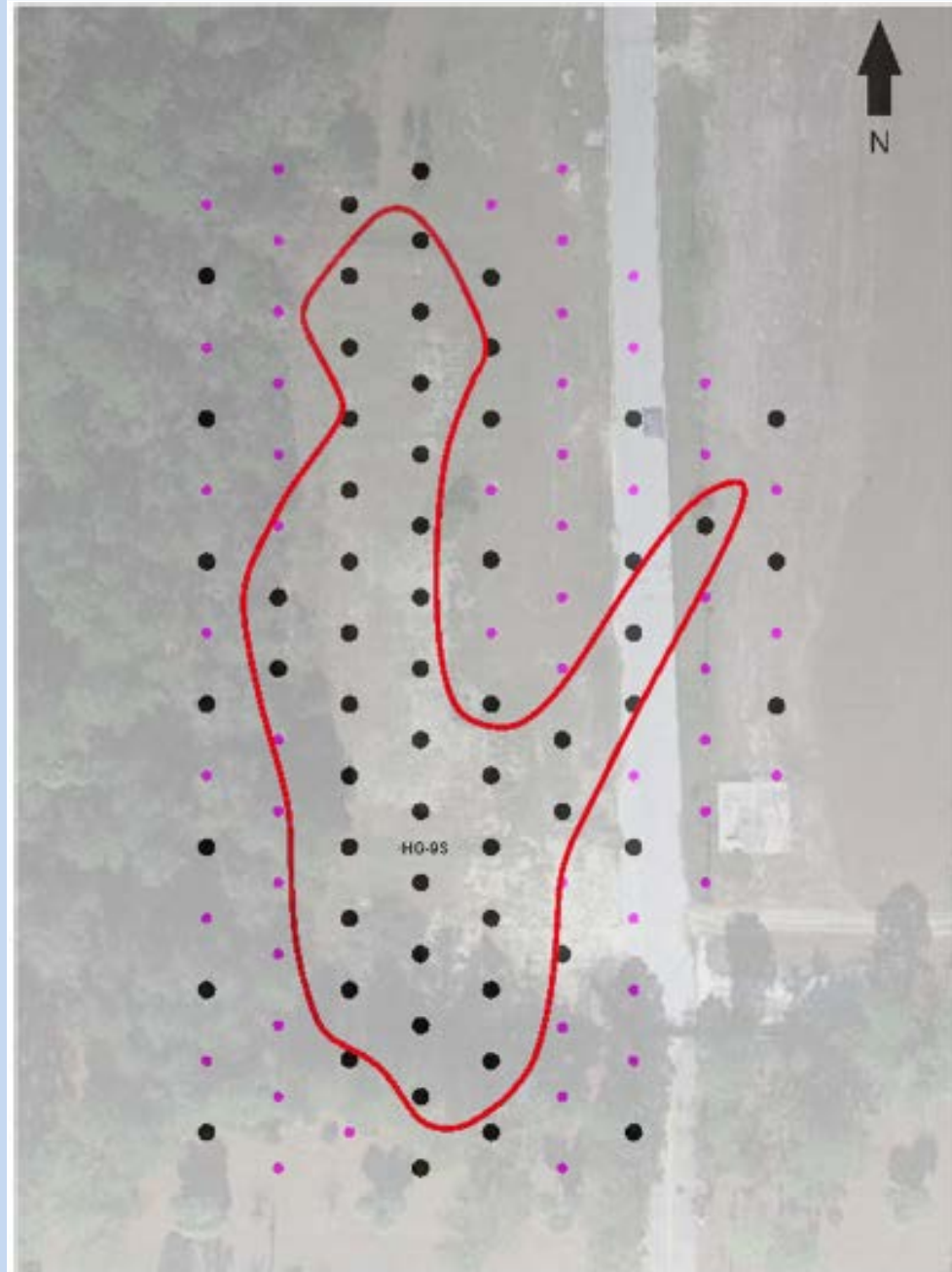
ISGS: Full-Scale Treatment in Process Area



EXPLANATION

- FULL-SCALE ISGS INJECTION POINT
- TIP FOR FULL-SCALE ISGS INJECTION
- TEMPORARY INJECTION POINT (TIP)
- PRE-2012 PROJECTED DNAPL SOURCE AREA
- CROSS-SECTION LOCATION

ISGS: South Lagoon Characterization Plan



Proposed Primary Borehole



Proposed Borehole Contingent Upon Results of Primary Boreholes

Subsurface Barrier Wall, Stormwater Management, Off-Property Sediment Removal (Design Track 2)

- Design Tasks (2015-2016)
 - Pre-Design Work Plan approved August 28, 2015
 - Borings along cutoff wall route
 - Soil testing and slurry mix testing
 - Borings at potential stormwater facility locations
 - Soil pile sampling in Municipal Storage Yard
 - Sediment sampling to define limits of excavation
 - Preliminary, Pre-Final, and Final Design submittals
 - Remedial Action Work Plan
- Implementation (2016-2017)

Future Remedial Design and Remedial Action

- In-Situ Solidification/Stabilization (Design Track 4: 2016-2019)
 - Soil borings in North Lagoon and Drip Track areas
 - Soil testing and treatability testing
 - Pilot test
 - Preliminary, Pre-Final, and Final Design
 - Remedial Action Work Plan
 - Implementation
- Other remediation components (Design Track 5: 2017-2019)
 - Low-infiltration cap for soil consolidation area
 - Excavation and fill for site grading
 - Soil covers
 - ISGS or chemical oxidation at Hawthorn Group wells
 - Surficial aquifer hydraulic containment
 - Upper Floridan Aquifer hydraulic containment