

Note:

The topographic map was acquired through the Esri Imagery Web Service. Topographic Map dated 2013.

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April 2025

Twin Oaks – Newark 14" Diameter Pipeline-
LNAPL Incident : Site Characterization Work Plan

Figure

Figure 1 Site Location Map

Upper Makefield Township
Bucks County, Pennsylvania

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Legend

 Bucks County Parcels

Note:
The aerial photo was acquired through the Esri Imagery Web Service.
Aerial photography dated 2024.



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April 2025
Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan
Figure 2
Site Area Layout Map
Upper Makefield Township
Bucks County, Pennsylvania

Figure
2

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April 2025

Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan

Figure

Figure 3 - Post-Excavation
Sample Location Map

3

Upper Makefield Township
Bucks County, Pennsylvania

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April 2025
Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan
Figure 4 -
LNAPL Detections in WSWs
Upper Makefield Township
Bucks County, Pennsylvania

Figure
4

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April 2025
Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan
**Figure 5 - Dissolved Phase
Detections in WSWs-April 2025**
Upper Makefield Township
Bucks County, Pennsylvania

Figure
5

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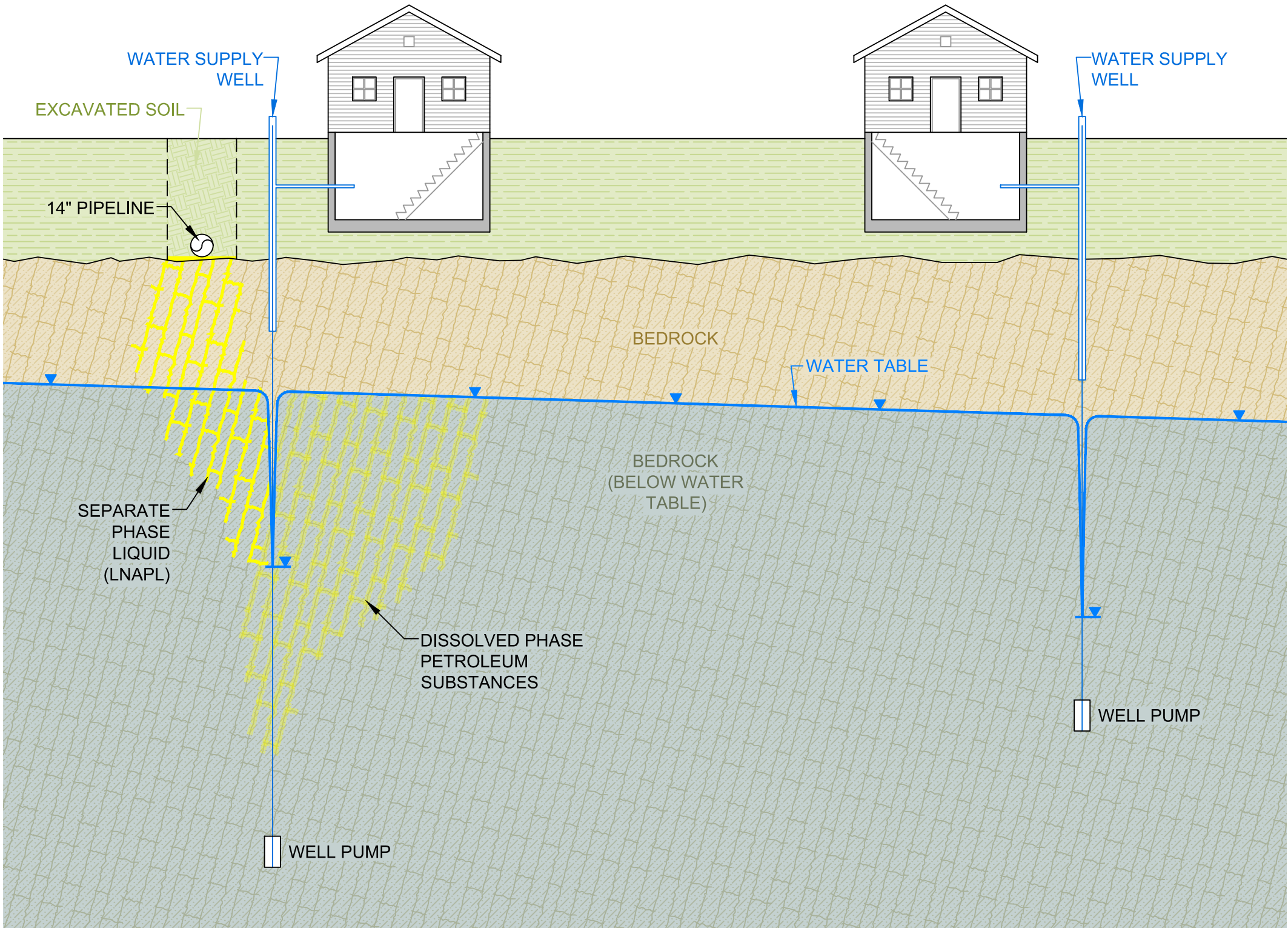


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June 2025
Twin Oaks – Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan
Figure 6
Inferred Fracture Traces
Upper Makefield Township
Bucks County, Pennsylvania

Figure
6

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PRELIMINARY CONCEPTUAL SITE MODEL SCHEMATIC

TWIN OAKS-NEWARK 14" - DIAMETER PIPELINE LNAPL
INCIDENT: SITE CHARACTERIZATION WORK PLAN

UPPER MAKEFIELD TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

DESIGNED BY JPB	DRAWN BY JPB	CHECKED BY JNK	PROJECT NO. 34328
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DATE	4/16/2025
SCALE	N.T.S.
FIGURE	7

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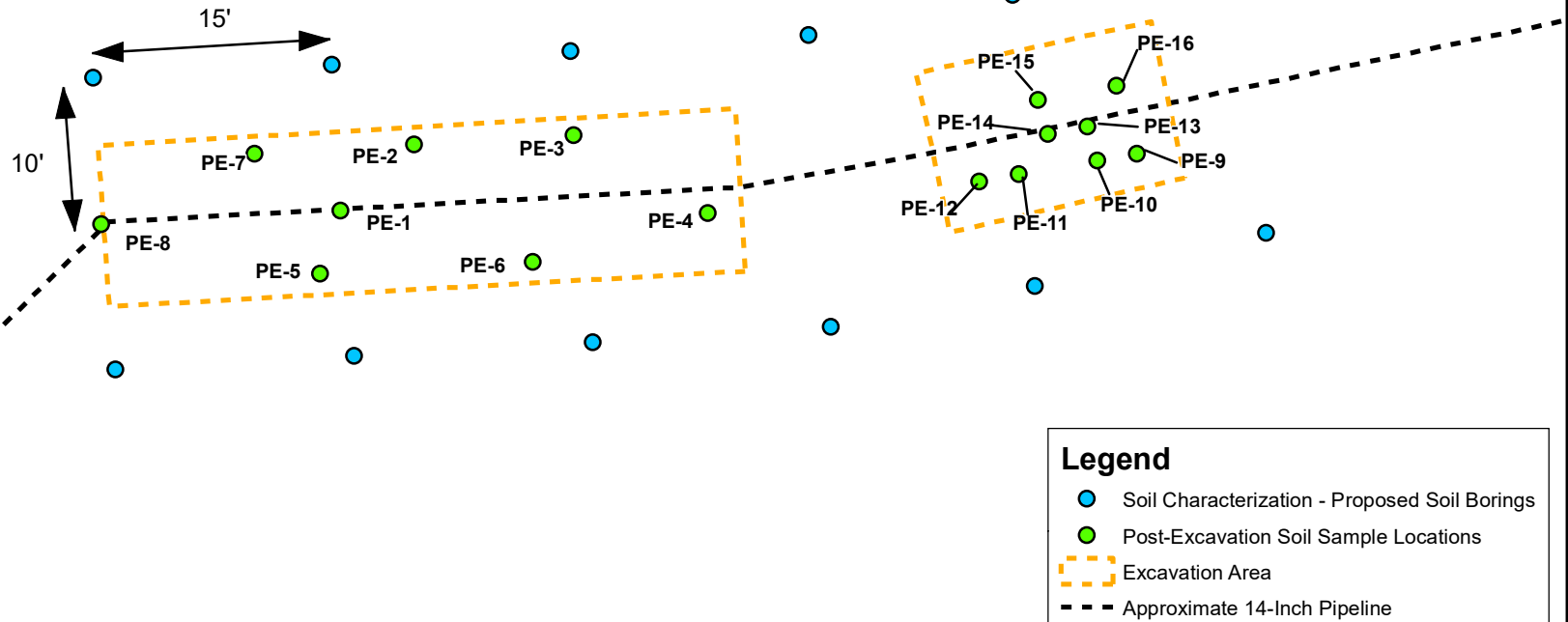
211 NORTH 13TH STREET, SUITE 503
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TEL. 215.545.7295

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June 2025	
Twin Oaks – Newark 14"-Diameter Pipeline- LNAPL Incident: Site Characterization Work Plan	Figure
Figure 8 - ERI Survey and Seismic Refraction Survey Transects	8
Upper Makefield Township Bucks County, Pennsylvania	



Notes:
Post-Excavation Soil Sample Locations and
Excavation Area boundaries were provided by
Groundwater & Environmental Services, Inc.
The figure is not drawn to scale.

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April 2025

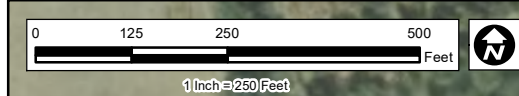
Twin Oaks - Newark 14"-Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan

**Figure 9 - Soil Characterization
Proposed Soil Borings**

Upper Makefield Township
Bucks County, Pennsylvania

Figure

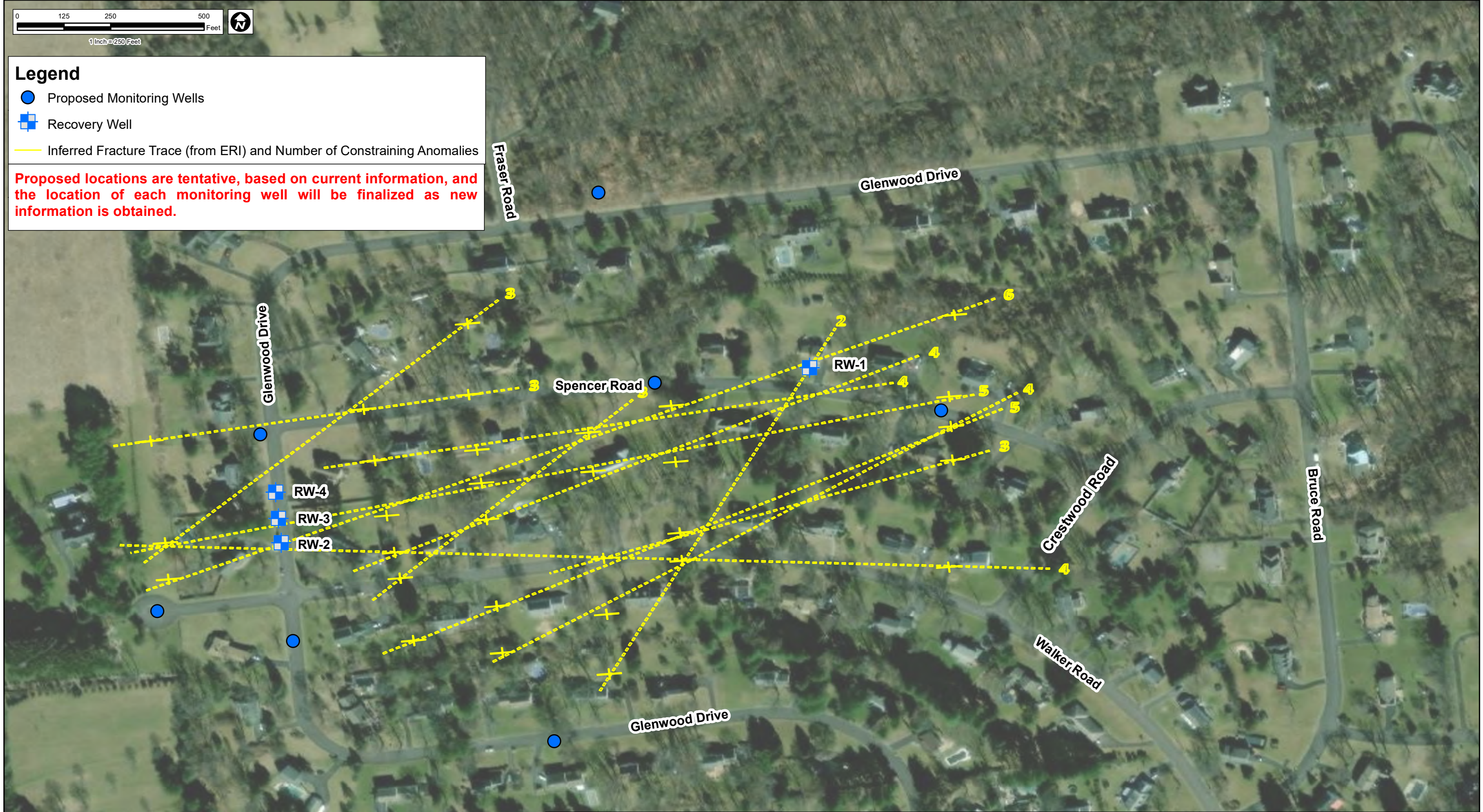
9



Legend

- Proposed Monitoring Wells
- Recovery Well
- Inferred Fracture Trace (from ERI) and Number of Constraining Anomalies

Proposed locations are tentative, based on current information, and the location of each monitoring well will be finalized as new information is obtained.



Notes:
The aerial photo was acquired through the Esri Imagery Web Service.
Aerial photography dated 2024.
Inferred Fracture Traces were provided by RETTEW Field Services, Inc.



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June 2025

Twin Oaks – Newark 14" Diameter Pipeline-
LNAPL Incident: Site Characterization Work Plan

Proposed Monitoring Wells

Upper Makefield Township
Bucks County, Pennsylvania

Figure

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