SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

March 19, 2025

Via Electronic Mail

C. David Brown, P.G.
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Southeast Regional Office
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Re: Interim Remedial Action Plan
Twin Oaks – Newark 14"-Diameter Pipeline
Upper Makefield Township, Bucks County

Dear David:

In accordance with paragraph 1.h of the Department's March 6, 2025 Order, Sunoco Pipeline L.P. ("SPLP") is providing the Department with this Interim Remedial Action Plan that describes soil, groundwater, surface water, and vapor intrusion remedial measures that have been completed to date and that are planned to be completed to protect human health and the environment, together with a corresponding implementation schedule.

Summary of Site Investigation and Characterization Activities

SPLP has performed the following site characterization and sampling activities to date:

- Week of January 20-27, 2025 – Photo ionization detection ("PID") monitor/probe readings taken to evaluate the presence of volatile organic compounds ("VOCs") along the pipeline right-of-way ("ROW").
- January 23, 2025 – Potable water sampling at eight (8) properties on Spencer Road, Glenwood Drive, and Walker Road; a light non-aqueous phase liquid ("LNAPL") sample was also taken one (1) property on Spencer Road.
- January 24-31, 2025 – Potable water samples taken at a total of thirty (30) properties in the Mt. Eyre neighborhood (with 33 samples collected).
- January 29, 2025 –LNAPL collected from two (2) wells on Spencer Drive.
- January 30, 2025 – Pipeline excavated at a location on Bruce Road and Glenwood Drive.
- January 31, 2025 – Continued excavation of pipeline along Glenwood Drive and discovery of release.

- February 2, 2025 – Excavation of impacted soils at the release location.
- February 3, 2025 – Ground Penetrating Radar (“GPR”) scanning used to confirm pipeline locations (*see* **Attachment 9**).
- February 3, 2025 – Geoprobe^{TM} soil borings taken at eight (8) locations along Glenwood Drive (*see* **Attachment 2**).
- February 4, 2025 – Post-excavation soil sampling performed (*see* **Attachment 5**).
- February 5, 2025 –Testing of product recovery potential at one (1) property on Glenwood Drive.
- February 6, 2024 – Mapping and review of photolinears/topographic linears (*see* **Attachment 14**).
- February 10, 2025 – Performed downhole geophysical logging of well at one (1) property on Glenwood Drive (*see* **Attachment 10**).
- February 11, 2025 – Additional post-excavation soil sampling performed (*see* **Attachment 5**).
- February 17-18 – Performed downhole geophysical logging of well at one (1) property on Spencer Road (*see* **Attachment 11**).
- February 20-28, 2025 – Electric Resistivity Imaging (“ERI”) performed to map locations of fractures in the Mt. Eyre neighborhood.
- February 25 - March 7, 2025 – Passive soil gas sampling performed to delineate the presence of VOCs in various locations in the Mt. Eyre neighborhood.
- February 28, 2025 – Subsurface utility location surveys performed along Spencer Road in connection with the location and installation of a recovery well (*see* **Attachment 12**).
- March 4-7, 2025 – Additional ERI performed to map locations of fractures in Mt. Eyre neighborhood.
- March 11-17, 2025 – Packer testing performed at one (1) property on Spencer Road to obtain analytical and flow data of groundwater zones.
- March 14, 2025 – Additional subsurface utility location surveys performed along Glenwood Drive for the location and installation of a recovery well (*see* **Attachment 13**).
- March 18-21, 2025 – Installed recovery well at one (1) property on Spencer Road.
- Potable water sampling and indoor air sampling results have also been evaluated from various locations on various dates for site characterization purposes.
- USGS publications and mapping regarding groundwater in Bucks County have been reviewed and analyzed.
- An evaluation of available data to determine the locations for additional groundwater monitoring wells is ongoing.

SPLP will continue to perform additional characterization efforts pursuant to the Work Plan that will be submitted to the Department by April 18, 2025, in accordance with Paragraph 2.b.i of the Order. More detailed information about the soil, groundwater, surface water, and vapor intrusion remedial measures that have been completed to date and that are planned to be completed to protect human health and the environment, and an implementation schedule, are provided below.

Soil Interim Remedial Measures

Beginning the week of January 20, 2025, and continuing through the week of January 27, 2025, SPLP inspected the pipeline ROW, located the pipeline center line, and used a T-bar that was inserted to the top and down both sides of the pipeline to create holes through which a PID monitor/probe was inserted to monitor for the presence of VOCs (*see* **Attachment 1**). This probing and use of PID monitor/probe was completed in over 1,000 locations, at intervals of approximately ten (10) feet, and included not only vegetated areas of the pipeline ROW but also areas where the ROW was beneath pavement. This PID field screening effort was used to investigate whether a release had occurred and will also inform SPLP's further soil characterization efforts throughout the Mt. Eyre neighborhood.

Upon discovering the release on January 31, 2025, through these field efforts SPLP performed targeted soil excavation and corresponding limited soil characterization (i.e., visual observations and screening using a PID instrument) in the immediate area of the release location at one (1) property on Glenwood Drive. On February 2, 2025, SPLP removed impacted soils in the immediate vicinity of the release location and subsequently excavated an additional area laterally down the pipeline (*see* **Attachment 3**). A total of approximately 400-450 cubic yards of soil were removed for off-site disposal.[1]

The following additional soil characterization and sampling activities were conducted on February 3, February 4, and February 11, 2025:

- On February 3, 2025, eight (8) soil borings (SB-1 through SB-8) were installed along Glenwood Drive past the intersection with Spencer Road (*see* **Attachment 2**). Geoprobe™ direct push drilling technology was utilized to perform the soil borings, and the borings were extended to bedrock, which was encountered at depths ranging from 4-7 feet below ground surface (bgs). The Geoprobe™ borings were screened with a PID instrument for the potential presence of VOCs. No PID readings were detected except for in one boring which was located in an area closest to the excavation at the release location on Glenwood Drive. This boring had a PID reading of 50 parts per million (ppm) at 6.5 feet bgs, and a PID reading of 19.5 ppm at 7 feet bgs, which was the final depth of the boring at that location.

[1] Samples were also taken from the stockpiled soils for the purpose of characterization for off-site disposal, which were submitted for laboratory analysis (*See* **Attachment 4**).

- On February 4, 2025, eight (8) post-excavation soil samples (PE-1 through PE-8) were collected in a biased method (i.e., in the locations of the highest PID readings), in accordance with PADEP’s Act 2 Technical Guidance Manual, at the bottom and sidewalls of the exposed excavation of the pipeline in the vicinity release on Glenwood Drive (*see* **Attachment 3**).

- On February 11, 2025, following additional excavation activities in a nearby area along the pipeline, an additional eight (8) post-excavation soil samples (PE-9 through PE-16) were collected, using the same biased methods, at the bottom and sidewalls of the exposed excavation of the pipeline (*see* **Attachment 3**).

The soil analytical data for the post-excavation soil samples taken on February 4 and 11, 2025 (*see* **Attachment 5**) indicate limited impacts in the following locations:

- Only one location showed a potential exceedance of the Act 2 Soil to Groundwater Medium Specific Concentrations (“MSCs”) for benzene in unsaturated soil in a residential, used aquifer (i.e., sample PE-1), but the method detection limit (“MDL”) did not allow for the determination of a specific numeric result.

- Naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were only detected at concentrations above the Act 2 Soil to Groundwater MSCs in sample PE-1.

- 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were only detected at concentrations above the Act 2 Soil to Groundwater MSCs in sample PE-7.

- Only one location showed a potential exceedance of the Act 2 Soil to Groundwater MSC for 1,2-Dichloroethane (i.e., sample PE-1), but the MDL did not allow for the determination of a specific numeric result.

- All but one location showed a potential exceedance of the Act 2 Soil to Groundwater MSC for 1,2- Dibromoethane (sample PE-2), but the MDL did not allow for the determination of specific numeric results for these other locations.

Only one compound (naphthalene) exceeded the PADEP Residential Direct Contact Numeric Value in one location (PE-1). There is also a potential exceedance of the PADEP Residential Direct Contact Numeric Value at this location for 1,2- Dibromoethane, but the MDL did not allow for the determination of a specific numeric result. Sample PE-1 was collected at a depth of 7 feet, and in an area that has since been backfilled with clean fill. This area will be the subject of additional characterization activities.

Based on the soil data summarized above and included in **Attachment 5**, SPLP will perform additional soil characterization activities in the immediate area of the release, as well as potentially in additional areas identified during further site characterization activities, which will

be detailed in the Work Plan that will be submitted to the Department by April 18, 2025. Upon completion of soil characterization to delineate any remaining soil impacts, additional remedial activities will be evaluated and implemented to achieve residential Statewide Health Standards in soil.

Groundwater Interim Remedial Measures

To date, SPLP has implemented the following interim remedial measures to address potential impacts to groundwater and to protect human health and the environment:

- Providing bottled water to residents;
- Sampling potable water at residences within approximately one (1) mile of the release location upon landowner’s request;
- Performing visual observations for the presence or absence of LNAPL in residential wells for any property within approximately one (1) mile of the release location;
- Screening wellheads with PID monitors;
- Gauging and removing LNAPL from wells at five (5) properties where LNAPL is (or was previously) present;
- Installing point of entry treatment (“POET”) systems on residential wells; and,
- Installing a recovery/monitoring well at one (1) location on Spencer Road.

Upon completion of groundwater characterization to delineate any remaining groundwater impacts, additional remedial activities will be evaluated and implemented to achieve residential Statewide Health Standards in groundwater. A summary of each interim remedial activity identified above for groundwater is provided in detail below.

Bottled Water

Beginning on January 27, 2025, during SPLP’s investigation of the initial odor complaints, SPLP offered and provided bottled water to residents in the Mt. Eyre neighborhood (*See* **Attachment 6**). SPLP delivers bottled water to residents in the Mt. Eyre neighborhood that submitted requests made through the company’s dedicated incident response hotline. SPLP also directly offered or delivered bottled water to each of the six (6) impacted properties in the Mt. Eyre neighborhood (*see* **Attachment 6**). According to the landowners’ preference, bottled water is either delivered directly to residences or it is available for pick up at the landowners’ convenience

at SPLP’s Community Support Center located at the Bucks Pump Station at 1798 Dolington Road, Yardley, PA (*see* **Attachment 7**). SPLP has also reimbursed residents for bottled water that the residents have purchased themselves.

Importantly, SPLP has not restricted bottled water pick-up, delivery, or reimbursement for bottled water to only those residents in the Mt. Eyre neighborhood topographic watershed plus 500-foot buffer, or to only those with water samples with a VOC result at concentrations above background. Rather SPLP has made bottled water available to any resident in the Upper Makefield community upon request.

Since January 27, 2025, SPLP has provided bottled water to residents more than 202 separate times, which includes multiple deliveries or pickups by certain residents in the Mt. Eyre neighborhood (*see* **Attachments 6-7**).

Residential Water Sampling

SPLP has offered to perform potable water sampling at all residences within approximately one (1) mile of the release location upon the landowner’s request. As of the daily report submitted to the Department on March 18, 2025, SPLP has performed 612 water sampling events at 331 individual properties (*see* **Attachment 8**). Of the water sampling performed through March 18, 2025, only six (6) locations have had results with either VOCs above MSCs or LNAPL present; one (1) of those locations is now non-detect for VOCs and no longer has LNAPL present. Daily updates on residential water sampling activities will continue to be provided to the Department on a daily basis in accordance with Paragraph 1.e of the Order. SPLP is also providing the Department with copies of each laboratory analysis package for the water sampling that has been performed in accordance with paragraphs 1.f-g. of the Order.

Visual Observation for LNAPL at Wellhead

During potable water sampling events, SPLP’s consultants draw an aliquot of water from the well (if and when accessible) and perform a visual observation to determine the potential presence of LNAPL. A summary of the visual observations of the presence or absence of LNAPL is provided to the Department on a daily basis, with the daily reports that are submitted in accordance with Paragraph 1.e of the Order (*see* **Attachment 8**). Daily updates on visual observations of the presence of absence of LNAPL at wellheads will continue to be provided to the Department on a daily basis in accordance with Paragraph 1.e of the Order.

Wellhead PID Screening

SPLP also performs screening with a PID monitor at residential wellheads as a part of residential water sampling activities. A summary of the wellhead PID screening is provided to the Department on a daily basis, with the daily reports that are submitted in accordance with Paragraph 1.e of the Order. A copy of the March 18, 2025 daily report, which contains the most recent wellhead PID screening summary through March 17, 2018, is provided in **Attachment 8**. Daily updates on wellhead PID screening results will continue to be provided to the Department on a daily basis in accordance with Paragraph 1.e of the Order.

Gauging and Removal of LNAPL

At the five (5) properties where LNAPL is (or was previously) present, SPLP performs gauging and bailing/removal of LNAPL, if and as necessary. SPLP has also utilized absorbent socks in three (3) properties to remove LNAPL from water in the wells. A summary of the gauging and bailing/removal of LNAPL at these properties has been provided to the Department on a daily basis, and will continue to be reported to the Department in the daily reports that are submitted in accordance with Paragraph 1.e of the Order (*see* **Attachment 8**).

Through March 17, 2025, SPLP’s has removed a total of 74.78 gallons of LNAPL from the wells at these five (5) properties, as reported to the Department in the daily report on March 18, 2025 (*see* **Attachment 8**). To date, LNAPL has not been observed at any other wells.

POET Installations, Upgrades, and Reimbursement

SPLP either installed or upgraded POET systems at each of the six (6) properties that had results with VOCs above the MSCs or LNAPL present. The POET installations and/or upgrades at these 6 properties were completed between February 7-19, 2025.

Beginning on February 20, 2025, SPLP made written offers to install or upgrade POET systems to landowners of all properties in the Mt. Eyre neighborhood topographic watershed plus a minimum 500-foot buffer, and to fund the costs of maintenance, servicing, and follow-up sampling of the POET systems on a quarterly basis for a minimum of ten (10) years at SPLP’s sole cost and expense. SPLP has installed POET systems or reimbursed landowners for the installation of POET systems throughout the Mt. Eyre neighborhood topographic watershed plus 500-foot buffer, and beyond, even though to date there are no additional properties with sample results reflecting VOCs above the MSCs.

SPLP has performed post-installation sampling for properties where POETs have been installed or upgraded to confirm that the POET systems are working as designed to address the presence of VOCs, if any, in groundwater at each residence (*see* **Attachment 8**).

A list of all properties with POET system installations, upgrades, or reimbursements is being provided to the Department on a daily basis as a component of the daily reporting performed in accordance with Paragraph 1.e of the Order. As of the March 18, 2025 daily report, SPLP has installed, upgraded, or provided reimbursement to residents for a total of 88 POET systems, with an additional 41 POET installations planned to be completed in the near future (*see* **Attachment 8**). Daily updates on POET installations will continue to be provided to the Department on a daily basis in accordance with Paragraph 1.e of the Order.

Recovery/Monitoring Well Installation

During the week of March 17, 2025, SPLP began installing a recovery/monitoring well at one (1) property on Spencer Road to assess and address residual impacts in groundwater. During the installation of the recovery/monitoring well, SPLP’s environmental consultants are performing noise and real-time handheld air monitoring for VOCs, carbon monoxide, and $PM^{2.5}$, and also performing air sampling utilizing evacuated canisters to evaluate the presence of VOCs in ambient air near the worksite.

SPLP is also in the process of evaluating potential locations for the installation of additional recovery/monitoring wells in the Mt. Eyre neighborhood. These recovery/monitoring well(s) will be utilized to complete further site characterization and remediation activities as part of the Act 2 demonstration of attainment of residential Statewide Health Standards.

Surface Water Interim Remedial Measures

SPLP developed a Visual Assessment Plan, and since February 21, 2025, SPLP’s environmental consultant has been performing visual, olfactory, and PID assessments of surface waterbodies near the release location, including in the Delaware Canal, the Delaware River, and nearby streams, once or twice per day at publicly-accessible locations that are identified in the Visual Assessment Plan. To date, there have been no observations of any surface water impacts that are attributable to the pipeline release.

In addition, SPLP developed and is implementing a Surface Water Sampling and Analysis Plan, pursuant to which SPLP’s environmental consultant is collecting surface water samples at selected locations along the Delaware Canal and the Delaware River at publicly-accessible locations that are identified in the Surface Water Sampling and Analysis Plan. To date, one round of surface water samples were taken on March 16, 2025, and sample results are pending.

SPLP will continue to implement the Visual Assessment Plan and Surface Water Sampling Plan as additional site investigations and characterization efforts continue.

Vapor Intrusion Interim Remedial Measures

SPLP developed an Indoor Air Sampling and Analysis Plan (dated Feb. 21, 2025), which was submitted to the Department and the Pennsylvania Department of Health for review and comment. Pursuant to the Indoor Air Sampling and Analysis Plan, SPLP’s environmental consultants performed an initial round of indoor air sampling at five (5) properties in the Mt. Eyre neighborhood on February 25 through 26, 2025. The results of that sampling were provided directly to each particular landowner on March 15, 2025, with copies provided to the Department via email on March 17, 2025. SPLP performed indoor air sampling at an additional property on March 15-16, 2025, and results for that property are pending. A second round of sampling at each of the six (6) properties will be performed in the near future.

SPLP will continue to perform indoor air sampling in accordance with the Indoor Air Sampling and Analysis Plan and provide the results of that sampling to landowners and to the Department. SPLP will also prepare and submit the requested vapor intrusion investigation progress report required by Paragraph 1.i of the Order to the Department by April 2, 2025.

Implementation Schedule

The site characterization and short-term measures to protect human health and the environment that SPLP has already performed to date are summarized in detail above. SPLP is providing daily updates to the Department regarding its implementation of these activities in accordance with paragraph 1.e of the Order. SPLP will continue to evaluate the need for any additional short-term measures to protect human health and the environment as SPLP continues to implement and complete site characterization activities pursuant to the Work Plan that SPLP will submit to the Department by April 18, 2025, in accordance with Paragraph 2.b.i of the Order.

Thank you,

Gus Borkland
Sr. Director/Environmental Compliance and Asset Security
Energy Transfer

Attachments

1. January 20-27, 2025 PID Results
2. Geoprobe™ Soil Boring Locations (SB-1 to SB-8) Map (2/3/2025)
3. Post-Excavation Soil Sampling Figure (2/4/2025 and 2/11/2025)
4. Waste Characterization Sampling (2/5/2025)
5. Post-Excavation Soil Sampling Summary Table
6. Bottled Water Tracking List (1/27/2025- 2/14/2025)
7. Bottled Water Tracking List (2/15/2025-3/19/2025)
8. Daily Report (3/18/2025)
9. GPR Results Figure (2/3/2025)
10. Glenwood Drive Geophysical Log Report (2/10/2025)
11. Spencer Road Geophysical Log Report (2/17-18/2025)
12. Spencer Road Subsurface Utility Survey (2/28/2025)
13. Glenwood Drive Subsurface Utility Survey (3/14/2025)
14. Map of Photolinears/Topographic Linears (2/6/2025)