

September 29, 2026

Mr. Bradford L. Fish
Energy Transfer
100 Green Street
Marcus Hook, PA 19061

Re: Letter of Deficiency for Remedial Action Plan
SPLP Pipeline Release
eFACTS PF No. 881609
eFACTS Activity No. 60986
Glenwood Drive and Walker Road
Upper Makefield Township
Bucks County

Dear Mr. Fish:

The Department of Environmental Protection (DEP) has reviewed the June 19, 2026 document titled “Remedial Action Plan” (RAP) for the Sunoco Pipeline, LP (SPLP) Twin Oaks – Newark 14” Diameter Pipeline Release response. The RAP was prepared by Verdantas LLC and submitted in accordance with DEP’s March 6, 2025 administrative order (Order) and the approved Implementation Schedule.

DEP also reviewed SPLP’s response to public comments documented in the July 8, 2026 transcript titled “Public Comment Meeting Regarding Sunoco Pipeline LP Twin Oaks Newark 14” Diameter Pipeline Release Remedial Action Plan (RAP)” (Public Meeting Transcript) and the September 4, 2026 document titled “Comment-Response Document Remedial Action Plan (June 19, 2026)” (CRD).

The purpose of the RAP was defined in Paragraph 2.b.iii of the Order as follows:

... a plan addressing all remedial actions to address the release of regulated substances released into the environment from the Pipeline Release to meet the remediation standard(s) of Act 2.

The purpose of the RAP was further defined in Comment #4 of DEP’s April 8, 2025 Letter of Deficiency for the Proposed Implementation Schedule as follows:

This remedial action plan will account for site knowledge at the time, and it may be subject to revision as additional characterization, monitoring, and pathway investigation is performed.

In DEP's April 22, 2026 Approval of Interim Site Characterization Report (ISCR) letter, DEP noted the following:

Pursuant to SPLP's April 10, 2025 implementation scheduled, approved by DEP on April 14, 2025, and as required by DEP's order (Paragraph 2.c), SPLP shall submit a remedial action plan within 60 days of DEP's approval of the ISCR. The remedial action plan will account for site knowledge at this time, and it will describe all actions to address soil and groundwater contamination caused by the pipeline release. The remedial action plan must contain sufficient detail to establish how the proposed remedial measures will be effective at achieving the Statewide health standard, which was selected by SPLP in your Act 2 notice of intent to remediate submitted February 13, 2025 and revised March 17, 2025. It should include adequate design plans and specifications to evaluate the proposed remedies, consistent with Act 2 procedures. The remedial action plan may be subject to revision as additional characterization, monitoring, and pathway investigation is performed.

Upon review of the RAP and SPLP's responses to public comments provided in the Public Meeting Transcript and CRD, DEP notes the following deficiency:

The RAP identified eight remedial technologies for light non-aqueous phase liquid (LNAPL) and eight remedial technologies for groundwater. Following screening and comparative evaluation of these technologies, SPLP selected multiphase extraction (MPE) as the proposed remedy for both LNAPL and groundwater. Section 6 of the RAP then described a proposed remedial pilot test to determine the effectiveness and technical feasibility of MPE as the remedy to address LNAPL and groundwater contamination.

As defined in the Order, the RAP should address all remedial actions to address the release of regulated substances released into the environment from the Pipeline Release to meet the remediation standard(s) of Act 2. As noted in DEP's April 22, 2026 Approval of ISCR letter, the remedial action plan must contain sufficient detail to establish how the proposed remedial measures will be effective at achieving the Statewide health standard selected by SPLP.

The RAP, as submitted, constitutes a pilot testing workplan for MPE as a potential remedy to address the release of regulated substances released into the environment from the Pipeline Release. The proposed remedial pilot testing plan is time-limited, and it does not describe how the selected remedial action, MPE, will be utilized to attain the selected Act 2 Statewide health standard.

DEP also provides the following comments on the RAP.

1. **Soil Remediation**

DEP concurs with SPLP's conclusion that no further remedial action is needed for soil, based on the characterization data. SPLP will collect soil attainment samples to

demonstrate attainment of the Statewide health standard, consistent with 25 Pa. Code § 250.703.

2. **Pilot Test as Interim Action**

DEP supports the concept of performing a pilot test for the multiphase extraction groundwater remediation technology, but, as indicated below, several aspects of the pilot test workplan should be revised.

3. **Residential Supply Well Monitoring**

The following is stated in RAP Section 6.2 – MPE Pilot Test Operation and Monitoring:

Nearby potable water supply wells will also be monitored during the pilot testing.

The MPE pilot test workplan provided in the RAP does not include information detailing which residential potable supply wells will be monitored nor how these wells will be monitored during the implementation of the proposed pilot test. SPLP notes in the CRD that this information was included as an attachment in the Road Occupancy Permit Application Package submitted to Upper Makefield Township on August 16, 2026. This application package was not submitted to DEP and was not included in DEP’s review of the RAP.

All information related to the selection of a final remedial action, including details of proposed pilot testing to determine the effectiveness and technical feasibility of a remedial technology, should be included in the RAP for both DEP and public review.

4. **Metrics for the Pilot Test**

The definition of “success” relating to the MPE pilot test is left undefined in the RAP. DEP understands that determining the “success” of a pilot program depends, in part, on an evaluation of data collected during pilot testing. DEP expects that SPLP has a set of internal technical criteria that will be used to determine whether the data collected during the proposed pilot study demonstrates that MPE is an effective and technically feasible technology for long-term remediation of contaminants released into the environment from the pipeline release. The proposed pilot test workplan in the RAP should identify these technical criteria so it can be reviewed by both DEP and the public.

5. **Implementation Schedule**

The following is stated in RAP Section 6.4 – Anticipated Implementation Schedule:

As stated previously, smear zone dewatering is critical to MPE success. Therefore, the MPE pilot test is planned for the summer or fall to take advantage of the general seasonal water table decline. Performing the test during this timeframe should maximize the exposure of the smear zone.

The proposed MPE pilot test is planned to evaluate the effectiveness and technical feasibility of MPE as a remedy to address LNAPL and groundwater contamination. If

MPE is determined to be an effective and technically feasible remedy, DEP's expectation is that the full-scale MPE system would be designed to operate during both optimal and suboptimal conditions to address LNAPL and groundwater contamination related to the pipeline release.

DEP understands that smear zone dewatering is an important aspect of a successful MPE remedy. The ultraviolet logging performed by SPLP in six wells indicated that LNAPL-producing fractures or open bedding planes were present between 10 and 45 feet deep. The proposed MPE pilot test plans to implement MPE in recovery wells RW-2 and RW-3 in addition to Well A and Well C. Gauging data provided for these wells in the RAP indicates that, except for the seasonally high water table observed in late February through early April 2026, average depth to LNAPL/depth to water in these four wells ranges from approximately 24 to 28 feet below top of casing and is variable throughout the calendar year.

These data indicate that there is no need for SPLP to wait for "water table decline" to implement the proposed MPE pilot test, as water levels in these wells are similar across all four seasons. Each of the four wells selected for MPE pilot testing would need to be dewatered a similar amount to "maximize the exposure of the smear zone" from 10 to 45 feet deep regardless of the time of year the MPE pilot test is implemented.

DEP strongly recommends that the pilot test commence no later than May 31, 2027.

6. Reporting Schedule

The RAP provides details of a proposed MPE pilot test to evaluate the effectiveness and technical feasibility of MPE as the remedy to address LNAPL and groundwater contamination related to the pipeline release. DEP expects that SPLP will summarize the results of the proposed MPE pilot study in a technical document and submit it to DEP for review as part of its execution of the RAP. SPLP did not provide information in the proposed MPE pilot study that discusses how this information will be summarized nor does it provide a timetable for submittal of the results.

Please include information that discusses how the information will be summarized and when this technical document will be provided to DEP for review.

7. Permitting

The RAP only noted that permits and approvals "may be necessary" (Section 6.5). The RAP should detail all permits and approvals SPLP believes are required and a schedule for obtaining them, consistent with what is contained in 25 Pa. Code § 245.311(a)(3).

8. Vapor Intrusion

The results of vapor intrusion (VI) investigation work completed to date is summarized in Section 2.3 – Summary of Site Characterization and Remediation. The following is stated on Page 9 of the RAP:

Based on the results of [vapor intrusion] sampling, no further investigation or remediation of the vapor intrusion pathway is warranted.

The results of VI work completed to date indicate that the VI pathway related to the release of regulated substances from the pipeline is incomplete, posing no unacceptable risk to potential receptors at this time. However, SPLP will not be able to determine that no further investigation or remediation is necessary until you have demonstrated attainment of an Act 2 standard. Additional VI evaluation may be needed in accordance with 25 Pa. Code § 250.312 and the Land Recycling Program Technical Guidance Manual (Section IV).

9. RAP Recommendations

The RAP must be revised and resubmitted within 45 days, pursuant to the Order. DEP makes the following recommendations to successfully correct the RAP deficiency and submit an approvable RAP.

- Although the MPE pilot test is not a final remedy to attain the Act 2 standard, DEP recognizes that it is an important step in determining the remedy. Therefore, the RAP should continue to include the pilot test workplan, revised to address DEP's comments above.
- The revised RAP and any RAP addendums will be subject to public review and comment in accordance with the Order and the Public Involvement Plan.
- The RAP should include a schedule describing when and how the pilot test results will be evaluated, a final remedy will be selected, and a RAP addendum will be submitted.
- The anticipated contents of the RAP addendum for the remedial action to attain the Act 2 standard should be outlined, and they should reflect the criteria previously stated by DEP and quoted in the introduction to this letter. Title 25 Pa. Code § 245.311(a) serves as a reference for the contents of a complete RAP and addendum.

Please feel free to contact C. David Brown by email at cdbrown@pa.gov or by telephone at 484.250.5792 with any questions or if further clarification is needed regarding this matter.

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
310 Piatt Place
301 5th Avenue
Pittsburgh, PA 15222

TDD users may contact the Board through the Pennsylvania Relay Service, 711 or 1-888-895-1197.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at <http://www.ehb.pa.gov> or by contacting the Secretary to the Board at 717.787.3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717.787.3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

Sincerely,

C. David Brown, P.G.  Digitally signed by C. David Brown, P.G.
Date: 2026.09.29 15:32:54 -04'00'

C. David Brown, P.G.
Regional Manager
Environmental Cleanup and Brownfields

cc: Mr. Gordon, Energy Transfer
Mr. Ketchum, P.G., Verdantas
Upper Makefield Township
Bucks County Health Department
Mr. Langan, Esq.
Mr. Devan, P.G.
Mr. Staron, P.G.
Mr. Lipik, P.G.
Ms. Budnovitch