



Remedial Action Plan – Summary

Twin Oaks – Newark 14”-Diameter Pipeline – Upper Makefield Township, Bucks County

What is this plan?

This document is a Remediation Action Plan for the jet fuel release from the Twin Oaks-Newark pipeline in the Mt. Eyre Manor Neighborhood, Upper Makefield Township, Bucks County, Pennsylvania. In February 2025, SPLP identified the pipeline release and notified the Pennsylvania Department of Environmental Protection (PADEP) and the public of their intent to cleanup impacts from the release. The PADEP ordered SPLP to perform certain actions and to submit certain reports documenting the cleanup efforts. This Remedial Action Plan was prepared by Verdantas LLC to meet those requirements. The Remedial Action Plan includes a summary of the investigation and remedial activities conducted to date, the cleanup objectives, the potential methods that could be used to clean up the impacts from the release, the selection of multiphase extraction (MPE) as the selected cleanup method, and the planned pilot testing to confirm the effectiveness and design parameters of the selected cleanup method.

What has the investigation found so far?

The jet fuel was released from a section of the pipeline in the western part of the neighborhood and has seeped into the ground, through the fractured bedrock, and to groundwater. The impacts from the pipeline release are primarily beneath the release location and to the immediate east-northeast of the release location. The jet fuel is present in the shallow fractures within the bedrock as a floating liquid layer on top of the groundwater (called LNAPL or light non-aqueous phase liquid), and as dissolved petroleum constituents known as Volatile Organic Compounds (VOCs) in the shallow groundwater.

What remedial activities have been completed so far?

- Jet fuel monitoring and recovery: SPLP has installed 44 wells to monitor and recover the released jet fuel. Using pumps, bailers, and absorbent materials, as of June 16, 2026, SPLP had removed approximately 518 gallons of jet fuel from wells and an estimated 644 gallons through soil excavation beneath the pipeline.
- Private well testing and treatment: as of June 16, 2026, SPLP had collected 1,839 water samples from 365 private drinking water wells in the surrounding

neighborhood, provided bottled water, and installed 203 Point of Entry Treatment (POET) systems to prevent exposure to LNAPL and impacted groundwater.

What are the cleanup goals?

- Recover as much released jet fuel as possible.
- Prevent contamination from migrating.
- Reduce groundwater impacts to levels that meet Pennsylvania remediation standards.
- Continue to provide safe drinking water to affected residents.

What cleanup methods were evaluated?

SPLP evaluated 16 cleanup methods applicable to this type of natural setting (fractured bedrock). Ten (10) of the technologies evaluated are not a good fit for use in a neighborhood setting with private water supply wells. A detailed evaluation of the six (6) remaining technologies showed MPE would be the best method to clean up LNAPL and groundwater impacts from the pipeline release. Focused, short-term testing (pilot testing) is planned to confirm that MPE will be effective at the site and to obtain information needed to design a potential MPE remediation system.

What is multiphase extraction (MPE)?

MPE is a common cleanup method, especially for petroleum contamination in shallow soil and bedrock. Pumps are used to remove air, water, and LNAPL from below the ground in the impacted area. Extracted fluids and air are conveyed to the collection and treatment system for proper treatment and disposal.

How long will the MPE pilot test take and when will it happen?

The MPE pilot test is planned to take about a month. The test is planned for the summer or fall when the water levels in the ground are naturally near their lowest point of the year. This allows the MPE to affect a thicker portion of the subsurface with less water pumping.

What are the next steps?

If the pilot testing confirms that MPE will be an effective approach, a full-scale system will be designed, installed, and operated. Work will continue until Pennsylvania environmental standards are met.