UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

FORMER ELCO CORPORATION
HUNTINGDON, PENNSYLVANIA
EPA ID# PAD003009461

Prepared by:
Land, Chemicals and Redevelopment Division
July 2022

Table of Contents

Section 1: Introduction....1
Section 2: Facility Background....1
Section 3: Summary of Environmental History....2
Section 3.1: Environmental Investigations....2
Section 3.2: EPA Assessment....5
Section 4: Corrective Action Objectives....8
Section 5: Proposed Remedy....10
Section 6: Evaluation of Proposed Remedy....11
Section 7: Financial Assurance....14
Section 8: Public Participation....14

Index to Administrative Record....15

Section 1: Introduction

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the former ELCO Corporation (ELCO) facility located at 10426 Fairgrounds Road, Huntingdon, PA 16652 (Facility). The Facility location is shown in Figure 1. EPA's proposed remedy for the Facility consists of the establishment of a technical impracticability zone for groundwater within the Facility property boundary; natural attenuation for contaminated groundwater migrating beyond the Facility property boundary, and activity and use limitations for land, groundwater, and surface water. This SB highlights key information relied upon by EPA in proposing this remedy.

The Facility is subject to EPA's Corrective Action Program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. § 6901 et seq. (Corrective Action Program). The Corrective Action Program is designed to ensure that owners or operators of facilities subject to RCRA's corrective action requirements have investigated and cleaned up any releases of hazardous waste and hazardous constituents that have occurred at or from their properties. The Commonwealth of Pennsylvania (Commonwealth) is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the Commonwealth for the Corrective Action Program.

EPA is providing a 30-day public comment period on this SB and may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final decision for the Facility in a Final Decision and Response to Comments (FDRTC) after the comment period has ended. The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section 8, Public Participation, for information on how you may review the AR.

Section 2: Facility Background

The Facility property consists of approximately 21 acres and is located in an area of mixed use (industrial, commercial, and residential) properties. The Facility building is set back from State Highway Route 3035 (Fairgrounds Road) on land that slopes to the southeast towards Crooked Creek. A Facility location map is attached as Figure 1. To the southeast of the Facility across Fairgrounds Road there are residential homes served by public water.

ELCO began operations at the Facility in 1962-1963. Building modifications consisted of a factory addition and paving on the western side in 1966, a row of storage and maintenance rooms on the back side in the early 1970s, and a row of offices added to the front in 1982. The Facility is serviced by public water and sewer from Huntingdon Borough.

ELCO produced various products at the Facility over the years including molding, stamping,

screw machine, and plating operations. Trichloroethylene (TCE), toluene, and 1,1,1-trichloroethane (1,1,1-TCA) were the primary solvents used as cleaning (degreasing) agents. Cadmium was the primary metal associated with plating operations.

The Facility was shut down on June 30, 1996. Pennsylvania Department of Environmental Protection (PADEP), ELCO, and D Real Estate, Inc. entered into a Consent Order and Agreement - Buyer/Seller Agreement on November 15, 2000 (PADEP Order). ELCO sold the Facility to D Real Estate, Inc. in December 2000. The Facility is currently occupied by Seven D. Industries, LP, which manufactures vinyl window and patio door products.

Section 3: Summary of Environmental History

3.1 Environmental Investigations

On September 14, 1990, a Final Environmental Priorities Initiative Preliminary Assessment (PA) was submitted to EPA. Seven Solid Waste Management Units (SWMUs) were identified at the Facility as described in the PA: the flammable drum storage room, plating chemical and acid storage room, plating waste control room, caustic storage tank room, plating room, empty drum storage area, and used hydraulic oil drum storage area. The PA recommended that no further action under the Comprehensive Environmental Response, Compensation, and Liability Act be conducted at the Facility.

ELCO conducted environmental assessments of the Facility voluntarily from 1991 through 1993. These assessments addressed several areas of potential concern based on previous practices. Soil borings, test trenches, and installation of monitoring wells MW-1 through MW-4 occurred to investigate environmental conditions. The most significant finding was the elevated Volatile Organic Compound (VOC) TCE in soils.

ELCO then voluntarily conducted a focused investigation in May 1994. Sampling confirmed TCE in soils beneath the western part of the plating department as a source for groundwater contamination. Groundwater sampling indicated that impacts extended to the southern property boundary near MW-3. Cadmium was also identified in soils in a limited area on the western side of the former plating department.

In April 1995 and January 1996, ELCO installed MW-7 and MW-8 to test the operation of a soil vapor extraction and vacuum enhanced recovery (VER) system. The VER system proved effective and was implemented to treat TCE in the source area beneath the plating department. In July and December 1997, ELCO installed MW-9 and MW-13 downgradient of MW-8 to complement the VER system network. The full VER system was installed, connected to six recovery wells (MW-8 through MW-13), and became fully operational on April 13, 1998. The objective of the VER system was to reduce contaminant mass in the source area in order to reduce elevated VOC concentrations in soil and groundwater.

During a supplemental field program in April 1997, the former drum storage area (which encompasses the empty drum storage area and used hydraulic oil drum storage area) was found to be impacted by TCE, toluene, and 1,1,1-TCA. The soil, concrete pad, and additional impacted soil in an adjacent alleyway were removed. Following the removal action, monitoring wells MW-10, MW-11, and MW-12 were installed in this area.

ELCO submitted a Notice of Intent to Remediate to PADEP pursuant to Pennsylvania's Land Recycling and Environmental Remediation Standards Act (Act 2) on August 29, 1997. During the public notification comment period, Smithfield Township requested specific public involvement, and a Public Involvement Plan was implemented. ELCO submitted a Remedial Investigation Report (RIR) to PADEP in September 2000. The RIR summarized the data collected to date, including groundwater monitoring results through July 2000. The RIR documented and compared contaminant concentrations against Pennsylvania's non-residential medium-specific concentration (NRMSC) Statewide Health Standards (SHSs) in the following areas of concern (AOCs): the former plating department, the former orange team room/maintenance room, the former drum storage area and adjacent alleyway, the old effluent application area, and the debris deposition area.

Compounds selected for comparison to NRMSC SHSs were based known historical practices, including ethylbenzene, TCE, PCE, 1,1,1-TCA, toluene, 1,1-DCE, 1,2-cis-DCE, 1,1-DCA, methylene chloride, vinyl chloride, xylenes, cadmium copper, lead, nickel, beryllium aluminum, gold, and tin in groundwater and soils. Results presented in the RIR show the following for each AOC:

- former plating department and former orange team room/maintenance room (collectively investigated in RIR as Beneath the Facility Building) – No VOC constituents exceeded their respective soil direct contact NRMSC SHSs. TCE results in soil (32 mg/kg) exceeded the soil-to-groundwater NRMSC SHS, and Cadmium in soil (8,615 mg/kg) exceeded both its direct contact and soil-to-groundwater NRMSC SHS. TCE in groundwater exceeded the MSC with maximum concentrations observed at 130,000 ug/L.

- former drum storage area and adjacent alleyway – Test borings indicated this area was impacted by VOCs (5.1 mg/kg TCE; 2.6 mg.kg PCE; 540 mg/kg toluene; 120 mg/kg 1,1,1-TCA; and 0.6 mg/kg xylenes). The former drum storage pad and impacted soil was excavated and post-excavation samples were below SHSs.

- old effluent application area – Two sampling locations exceeded the soil-to-groundwater NRMSC (45 and 61.2 mg/kg) for Cadmium. Groundwater monitoring results from wells installed in this area were below the SHSs.

- debris deposition area – After removal of the tires, concrete, and wood debris, soil samples were taken and no constituents exceeded SHSs. Water was encountered at 3 feet below ground surface (bgs) and sampled for metals and VOCs. All results were below SHSs.

The RIR was accompanied by a Cleanup Plan submitted to PADEP. The Cleanup Plan proposed Site-Specific Standards (SSSs) for constituents in soil and groundwater (TCE and Cadmium) that did not meet the NRMSC SHSs, as described above, and VER as the remedial system for remediation of soil and groundwater. The SSSs were proposed using two methods:

- The TCE SSSs (11,300 ug/L in groundwater and 400 mg/kg in soil) were calculated based on concentrations that could remain in soil and groundwater that would not cause an exceedance in Crooked Creek (the downgradient groundwater discharge point approximately 1,000 feet from the property boundary) in excess of its Surface Water Quality Standard (SWQS).

- The Cadmium SSS (8,615 mg/kg) was proposed based on a pathway elimination approach such that the direct contact exposure pathway does not exist because it was located beneath the concrete floor of the building.

PADEP approved the RIR and Cleanup Plan on December 18, 2000.

ELCO executed a Deed Acknowledgment on December 5, 2000, identifying contamination of the Facility property and imposing land and groundwater use restrictions. In addition, on July 9, 2001, Smithfield Township enacted Ordinance No. 2001-4 (Prohibiting the Drilling or Use of Water From a Water Supply Well In Certain Areas of Smithfield Township) (Ordinance), which prohibits the drilling and use of water supply wells at the Facility tax parcel and six residential tax parcels downgradient and southeast of the Facility that lie across Fairgrounds Road. All of these properties are served by public water. The PADEP Order requires ELCO to comply with the land and groundwater use restrictions in the Deed Acknowledgment and the Ordinance. These restrictions form part of the basis for EPA's proposed remedy, as detailed in Section 5, below.

Based on declining VER system operation and performance over time (TCE daily mass removal rates of 13 lbs/day at startup to an asymptotic level of 0.1 lbs/day in the last year) and reductions in groundwater monitoring result concentrations, PADEP approved a temporary shutdown of the VER system on August 29, 2001. Groundwater results from two additional monitoring events showed TCE groundwater concentrations were reduced in three primary source zone wells (MW-8, MW-10, and MW-12) from maximum concentrations of 130,000 ug/L, 12,000 ug/L, and 3,000 ug/L to 9,200 ug/L, 300 ug/L, and 56 ug/L, respectively. Based on this data, PADEP approved the permanent shut down the VER system on January 9, 2002.

ELCO submitted a Final Report pursuant to Act 2 in April 2003. The Final Report demonstrated attainment of the SSS of 11,300 ug/L for TCE in groundwater; 400 mg/kg for TCE in soil; 8,615 mg/kg for Cadmium in soil; and NRMSC SHSs for the remaining identified constituents in groundwater based on nonuse of the groundwater and soils based on nonresidential use of the property. The groundwater Point of Compliance (POC) established was the Facility property boundary. The Final Report was approved by the PADEP on June 26, 2003. Post remedial care, including long-term groundwater monitoring, continued at the Facility until 2013. In May 2014,

PADEP approved a request to cease the groundwater monitoring obligations of the Post Remedial Care Plan.

3.2 EPA Assessment

EPA evaluated the multiple investigation reports and the groundwater monitoring reports described above to determine whether the investigations, remedial actions, and final closure determinations under Act 2 satisfied RCRA Corrective Action Program requirements. The areas identified in the RIR encompass the SWMUs identified in the 1990 PA. See figure 2 for Facility investigation, monitoring well, and AOC/SWMU locations evaluated by the Corrective Action Program.

a. Groundwater

Groundwater sampling results submitted in the Act 2 reports were compared to PADEP NRMSC SHSs. EPA determined that the PADEP NRMSC SHSs for individual contaminants of concern in the Facility groundwater are equivalent to EPA's Maximum Contaminant Levels (MCLs) and meet or are below EPA's Regional Screening Levels (RSLs) within the acceptable risk range of 10^{-4} to 10^{-6} for Corrective Action.

Long-term shallow groundwater monitoring continued semi-annually and then annually from 2003 through 2013. Shallow TCE groundwater impacts, up to 130,000 ug/L, exceeding EPA's MCL of 5 ug/L, were identified beneath the former plating department and former orange team room during the RIR. Post remediation concentrations observed in the Final Report and continued monitoring exhibited significantly decreased levels in the source area, around 16,000 ug/L, and concentrations in Facility boundary wells were only sporadically above the MCL.

The shallow monitoring well network data showed that the high levels of TCE were localized to the former plating department and former orange team room. Given that the TCE MCL exceedances are localized to shallow groundwater, the release date was approximately 50 years ago, and the VER system removed as much TCE mass as practicable, the TCE plume is stable and not expected to migrate beyond its current location. The RIR and Final Report describe the Facility as being underlain by a thin veneer of clay soils overlying a weathered shale bedrock. Groundwater occurs at shallow depths ranging from 1.5 feet bgs under the Facility to 9 feet bgs at the downgradient Facility property boundary. And the hydraulic conductivity (ability to transmit water) is very low and indicative of a low yielding groundwater system. EPA evaluated this information with respect to the *Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action* (*Groundwater Handbook*) and the *Guidance for Evaluating the Technical Impracticability (TI) of Ground-Water Restoration* (*TI Guidance*).

Technical impracticability (TI) for contaminated groundwater refers to a situation where achieving groundwater cleanup standards associated with final cleanup standards is not practicable from an engineering perspective. The term "engineering perspective" refers to factors such as feasibility, reliability, scale or magnitude of a project, and safety. In accordance

with the *Groundwater Handbook* and the *TI Guidance*, EPA has determined that the criteria to establish a TI zone within the Facility property boundary has been met for the following reasons:

- Contaminant-related factors: TCE is a dense non-aqueous phase liquid (DNAPL) described in the *TI Guidance* as particularly difficult to locate and remediate from the subsurface due to the potential to become sorbed onto, or lodged within, the soil or rock. The initially high groundwater concentrations in the Facility's source area coupled with the relatively low soils concentrations and continually elevated groundwater concentrations following remedial activities is indicative of an unlocated DNAPL that persists as a source to contaminate groundwater due to soil/rock sorption.

- Hydrogeologic factors: An extremely thin layer of clay soil in the source area (1.5 feet thick) overlies bedrock beneath the Facility. A high-end estimate of hydraulic conductivity derived from slug tests was approximately 0.8 gallons per day/ft^2. This value correlates to a value of approximately $4x10^{-5}$ cm/s which falls below the *TI Guidance* referenced low value (10^{-4} cm/s) described as having increased difficulty on the remediation scale.

- Remediation system factors: The *TI Guidance* explains that an inadequate remediation system design and implementation, is an insufficient justification to support a TI determination. At this Facility, EPA has determined that the VER system was adequately designed and implemented and that the operation & maintenance (O&M) and monitoring data further support a TI determination. The Final Report details system performance submitted in three System Performance Reports. These reports demonstrate a steep decline in the mass removal rate (13 lbs/day at startup to an asymptotic level of 0.1 lbs/day) in a short timeframe (2-2/3 years), which was followed by focused VER on wells with the highest concentrations that did not yield a significant increased rate of mass TCE removal. EPA has therefore determined that this shows that remediation of TCE in groundwater has occurred to the maximum extent practicable. This follows the recommendation in the *TI Guidance* that the focus of DNAPL source zone remediation should be removing free-phase and residual DNAPL to the maximum extent practicable.

The work performed pursuant to PADEP's Act 2 Program focused only on shallow groundwater. Therefore, EPA requested supplemental investigation/characterization data relating to deep groundwater and indoor air and asked that abandonment of the monitoring wells be delayed. ELCO submitted Phase II and Phase III Groundwater and Soil Vapor Investigation Reports (GSVIRs) to EPA in May 2014 and November 2018, respectively.

Additional groundwater wells, sub-slab soil gas, stream gauging, and indoor air points were installed, sampled, and results were presented in the GSVIRs to address EPA's request to investigate exposure pathways via two pathways: groundwater routes to current or future potable water supply wells and vapor routes within the Facility building and to the nearest downgradient residential buildings. Based on the history of groundwater results as well as the GSVIR results, ELCO proposed that the groundwater and indoor air pathways were incomplete, and no further

investigation was necessary. EPA agreed and approved the Phase III GSVIR on February 28, 2019.

For deep groundwater, the Phase III MW-3D groundwater results exceeded EPA's MCL only for TCE (63 ug/L) at the property boundary. The Phase III GSVIR presented a fate and transport groundwater model that predicted the MCL would be met at approximately 618 feet off-site. The deep groundwater discharges to Crooked Creek at approximately 1,000 feet downgradient of the Facility boundary and well MW-3D. The Final Report provided a Natural Attenuation (NA) Assessment through analysis of natural attenuation indicator parameters at the source area and property boundary wells. EPA has determined that NA via anaerobic degradation has been shown to be occurring and is a contributing factor in controlling the fate and transport of TCE in the groundwater. EPA evaluated the groundwater monitoring data and determined, based on trend a trend analysis, that TCE is predicted to achieve the MCL at the property boundary within approximately 20 years.

As described previously, Smithfield Township enacted an Ordinance which prevents the use of groundwater for potable purposes and therefore eliminates potential unacceptable exposure via drinking water in the off-site area located southeast of the facility across Fairgrounds Road. Additionally, a well survey performed during the RIR found that no water supply wells exist hydraulically downgradient or within a one-half mile radius of the Facility. Therefore, EPA has determined that TCE in groundwater does not create an unacceptable risk at the Facility given current use and use restrictions.

b. Soils

Soil sampling results submitted in the Act 2 reports were compared to PADEP NRMSC SHSs. For the contaminants of concern identified, EPA determined that PADEP direct contact soil standards meet or are below EPA's Regional Screening Levels (RSLs) and are within the acceptable risk range of 10^{-4} to 10^{-6} for Corrective Action. Facility soils at the former orange team room/maintenance room, former drum storage area and adjacent alleyway, old effluent application area, and debris deposition area meet EPA direct contact RSLs for industrial use. Only soil concentration levels for TCE and Cadmium results exceeded EPA soil-to-groundwater RSLs, similar to the PADEP RIR results.

The site-specific standards of 400 mg/kg for TCE (to prevent impacts to surface water) and 8,615 mg/kg for cadmium (conservatively utilizing Facility foundation to prevent direct contact even though 8,615 mg/kg is within EPA's acceptable risk range of 10^{-4} to 10^{-6} for Corrective Action) in soil in the former plating department is acceptable. Considering the land and groundwater use restrictions imposed through the Deed Acknowledgement and expected to be to recorded in an Environmental Covenant, there is no unacceptable risk to human health or the environment. Therefore, EPA has determined that TCE in soil does not create an unacceptable risk at the Facility given current use and use restrictions.

c. Indoor Air

Subslab soil vapor results submitted in the May 2014 Phase II GSVIR exceed EPA's screening values for determining if there is a concern for indoor air exceedances. In accordance with EPA's OSWER Technical Guide for Assessing And Mitigating The Vapor Intrusion Pathway From Subsurface Vapor Sources To Indoor Air (VI Guidance), indoor air sampling was conducted. Indoor air sampling results submitted in the Phase II and Phase III GSVIRs were below EPA's industrial RSLs at the Facility. Therefore, EPA has determined that on-site exposure via vapor intrusion into indoor air is not a concern under current use and conditions.

To assess offsite vapor intrusion, EPA evaluated the groundwater wells near the property boundary located between 100-150 feet from offsite residential properties. The concentration of TCE currently exceeds the MCL in the deep (MW-3D), and historically, in the shallow (MW-3), groundwater wells. EPA evaluated the most recent November 2018 concentrations identified in wells MW-3 (ND) and MW-3D (63 ug/L). The distance of the well closer to the residential properties, MW-3, is 115 feet away, near the 100-foot default buffer distance in EPA's VI Guidance. The distance of the well farther from the residential properties, MW-3D, is approximately 150 feet and has a groundwater depth of 92 ft bgs. Considering the clean layer of shallow groundwater that exists between deep groundwater and receptors, and the distance and depth to impacted groundwater, EPA determined there was not a potential for indoor air exposures. To be conservative, EPA utilized the Vapor Intrusion Screening Level (VISL) Calculator to determine whether TCE concentrations in MW-3D would cause and unacceptable indoor air concentration and risk. Results of the screening, using the on-site well concentrations 150 feet away, validate indoor air results are within EPA's acceptable risk range for Corrective Action. Therefore, EPA has determined that off-site vapor intrusion into indoor air is not a concern.

d. Surface Water

An unnamed, intermittent stream piped under the Facility was shown to have limited to no flow during extended periods of the year. Sample results taken at the downstream Facility sampling point in January through March 1997 showed a maximum TCE concentration of 28 ug/L. To be conservative, these values were screened against the SWQS of 3 ug/L and MCL which were exceeded. Due to lack of flow (inconsistent source), controlled access (lack of pathway), and intermittent nature (minimal exposure frequency), exposure via this pathway is a minimal risk concern to human health. Samples taken at the point where the unnamed tributary enters, and within, Crooked Creek were below the applicable human health SWQS of 3 ug/L. Therefore, EPA has determined that TCE in surface water does not create an unacceptable risk at the Facility given current use and use restrictions.

Section 4: Corrective Action Objectives

EPA's Corrective Action Objectives for the specific environmental media at the Facility are the following:

1. Groundwater

EPA expects the final remedies to return usable groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the facility. For projects at facilities where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the MCLs promulgated pursuant to Section 42 U.S.C. § 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141.

There was no history of groundwater use in this section of Smithfield Township. Groundwater use was restricted both on site and off site by the PADEP Order and the Ordinance. EPA has determined that the VER remediation system operated to the maximum extent practicable and that it is technically impracticable to fully remediate the residual TCE DNAPL within the Facility property boundary. MCLs are expected to be achieved via NA at, and beyond, the Facility property boundary allowing for restoration of the aquifer downgradient of the TI zone. Therefore, EPA's Corrective Action Objectives for groundwater are:

- Prevent unacceptable exposure to contaminated groundwater in the TCE source zone and downgradient area where levels exceed the MCL for TCE. Prohibit the use of groundwater for any purpose except to implement the Final Remedy.

2. Soil

Given that current and reasonably anticipated future use of Facility is industrial and that Facility SWMU soils have met EPA's industrial RSLs or site-specific standards, EPA's Corrective Action Objectives for soil are:

- Prevent exposures to soil where contaminant concentrations create an unacceptable risk under a residential use scenario.
- Control industrial and construction worker exposures to soil where contaminant concentrations remain above EPA's industrial RSLs or site-specific standards.

3. Indoor air

Given that current and reasonably anticipated future use of Facility is industrial and that Facility SWMU indoor air concentrations have met EPA's RSLs for industrial use EPA's Corrective Action Objective for indoor air is:

- Prevent human exposure to unacceptable vapor intrusion risk as a result of groundwater-to-indoor air screening levels that exceed EPA's industrial RSL for TCE.

4. Surface water

Given that current and reasonably anticipated future use of Facility is industrial and that surface water passes through the TI zone, EPA's Corrective Action Objectives for surface water is:

- Prevent exposure to TCE-contaminated surface water in the unnamed, intermittent stream piped under the Facility that exceeds the applicable SWQS and MCL.

Section 5: Proposed Remedy

EPA's proposed remedy for Facility consists of the following components:

1. For the groundwater within the Facility property boundary: A TI zone will be established and mapped in accordance with EPA's Mapping of Institutional and Engineering Controls in EPA Cleanup Programs document;
2. For the groundwater at and beyond the Facility property boundary: natural attenuation until TCE levels attain the MCL at the Facility boundary and beyond; and
3. Activity and use limitations to be implemented as institutional controls, as outlined below.

Activity and Use Limitations

EPA's proposed remedy for Facility consists of the following activity and use limitations (AULs):

1. Use of the Facility property shall be restricted to commercial or industrial activity, which shall exclude schools, nursing homes and other residential uses or residential-style facilities and recreational uses.

2. The surface water and groundwater at the Facility property shall not be used for any purpose, including, but not limited to use as a potable or non-potable source, other than to conduct maintenance and monitoring activities required by PADEP and/or EPA.

3. The subsurface strata and soils in the designated affected areas at the Facility property shall not be disturbed, except as approved in advance by PADEP and EPA, and provided that appropriate health and safety precautions shall be implemented for the protection of workers and any other persons who may be subject to exposure in the event of such PADEP and EPA-authorized disturbance.

4. Prior to further development or redevelopment of the Facility property which could disturb subsurface strata and soils in the designated affected areas, the owner of the Facility shall, no less than thirty (30) days before the beginning of the disturbance, submit to the

PADEP/EPA, or its then successor agency, a work plan for management and disposal of disturbed subsurface strata and soils consistent with the regulations of PADEP and shall thereafter properly manage and dispose of all subsurface strata and soils consistent with the work plan approved by PADEP.

5. Any new construction of buildings intended for human occupation will include mitigation measures designed to prevent vapor intrusion-related exposures unless PADEP and EPA determine these unnecessary. Mitigation measures incorporated into new building construction will be designed by a licensed professional engineer. EPA and PADEP will be provided with a description of the mitigation measures prior to building construction.

6. Ensure the existing asphalt/building foundation slab remains in place and maintained in good condition.

EPA's preferred instrument to implement the activity and use limitations and ensure that the current and any future land owners comply with the restrictions is an Environmental Covenant prepared under Pennsylvania's Uniform Environmental Covenants Act, 27 Pa. C.S. § 6501 et seq. (UECA). These restrictions may also be implemented via a permit or order.

In addition, groundwater protection beyond the Facility Property boundary shall continue through the existing Smithfield Township Municipal Ordinance No. 2001-4, enacted on July 9, 2001, which prohibits a person whose property is served by public water supply to drill, or use for any purpose, a water well that is or is likely to be contaminated or where the pumping of such well may induce the migration or spread of such contaminates.

Section 6: Evaluation of Proposed Remedy

This section provides a description of the criteria EPA used to evaluate the proposed remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	EPA's proposed remedy protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risks. EPA's proposed remedy for the Facility protects human health and the environment from potentially complete exposure pathways for contaminants through the adherence to proposed land and groundwater use restrictions to

	be established under an Environmental Covenant at the Facility pursuant to Pennsylvania's UECA or via a permit or order.
2) Achieve media cleanup objectives	The remedy proposed in this SB is based on the current and future anticipated land use at the Facility as non-residential. The groundwater is not used as a current, and unlikely to be used potential, drinking water source due to the shallow water table and low hydraulic conductivity. Furthermore, EPA has determined it is technically impracticable to restore groundwater within the property boundary. Therefore, EPA's proposed remedy meets the media cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource uses.
3) Remediating the Source of Releases	In all proposed remedies, EPA seeks to eliminate or reduce further releases of hazardous wastes and hazardous constituents that may pose a threat to human health and the environment. The Facility has met this objective. The sources have been excavated and remediated to the maximum extent practicable.

Balancing Criteria	Evaluation
4) Long-term effectiveness	The current and reasonably anticipated use of the Facility is industrial use. In addition, groundwater is not used at the Facility for drinking water, no downgradient users of off-site groundwater exist, this proposed remedy includes a restriction prohibiting the use of groundwater at the Facility, and the Ordinance also prohibits groundwater use. Therefore, the long-term effectiveness of the remedy for the Facility will be maintained by the implemented land and groundwater use controls.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	The reduction of mobility and volume of hazardous constituents has been achieved to the maximum extent practicable as demonstrated by the remedial activities removing contaminant sources. In addition, data from the soil and groundwater monitoring exhibit evidence of natural

	attenuation which will continue to reduce the mobility and volume of residual contaminant concentrations.
6) Short-term effectiveness	EPA's proposed remedy does not involve any activities, such as construction or excavation, that would pose short-term risks to workers, residents, and the environment; and therefore, it is short-term protective.
7) Implementability	EPA's proposed remedy is readily implementable. EPA's proposed remedy reflects remedial work already completed and proposed land and groundwater use restrictions. EPA does not anticipate any regulatory constraints in the implementation of its proposed remedy.
8) Cost	The costs associated with this proposed remedy including maintenance and an Environmental Covenant are minimal (estimated cost of less than $10,000 per year). Therefore, EPA's proposed remedy is cost effective.
9) Community Acceptance	EPA will evaluate community acceptance of the proposed remedy during the public comment period and will be described in the FDRTC.
10) State/Support Agency Acceptance	PADEP is not authorized for Corrective Action but was the lead oversight agency for the remediation at this Facility under Act 2 with input from EPA. PADEP has reviewed and approved the Final Report, including a proposed Environmental Covenant, and associated remedial activities and use restrictions for the Facility. EPA expects State acceptance of the minor additional use restrictions and the proposed remedy.

Overall, based on the information currently available, the proposed remedy meets the threshold criteria and provides the best balance of tradeoffs with respect to the evaluation criteria.

Section 7: Financial Assurance

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy at the Facility. Given that EPA's proposed remedy does not require any additional engineering actions to remediate residual contamination at this time, and given that the costs of implementing the necessary controls at the Facility will be minimal (less than $10,000 annually), EPA is proposing that no financial assurance is required.

Section 8: Public Participation

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last 30 calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. Kevin Bilash at the address listed below.

A public meeting will be held upon request. Requests for a public meeting should be made to Mr. Kevin Bilash at the address listed below. A meeting will not be scheduled unless one is requested.

The AR contains all the information considered by EPA for the proposed decision at this Facility. The AR is available for review by contacting Mr. Kevin Bilash:

Contact: Mr. Kevin Bilash (3LD20)
Four Penn Center
1600 JFK Boulevard
Philadelphia, PA 19103
Phone: (215) 814-2796
Email: bilash.kevin@epa.gov

EPA's review of available information indicates that the proposed remedy is protective of human health and the environment and addresses releases of hazardous waste or hazardous constituents at and from the Facility.

Date: 07/29/2022

DANA AUNKST Digitally signed by DANA AUNKST Date: 2022.07.29 08:43:14 -04'00'

Dana Aunkst, Director
Land, Chemicals, and Redevelopment Division
US EPA, Region III

Index to Administrative Record

Preliminary Assessment Report, NUS Corporation, September 14, 1990

Remedial Investigation Report, Vincent Uhl Asociates, Inc., September 2000

Cleanup Plan, Vincent Uhl Asociates, Inc., September 2000

Consent Order and Agreement - Buyer/Seller Agreement, the Pennsylvania Department of Environmental Protection, ELCO U.S.A. Inc., and D Real Estate, Inc., November 15, 2000

Municipal Ordinance No. 2001-4, Smithfield Township, July 9, 2001

Final Report, Vincent Uhl Asociates, Inc., March 2003

Phase II Groundwater and Soil Vapor Investigation Report, Former ELCO Corporation Site, ARCADIS, May 2014

Phase III Groundwater and Soil Vapor Investigation Report, Former ELCO Corporation Site, ARCADIS, November 2018

TCE MW-3/MW-3D Trend Analysis (Excel), EPA, November 2018

Vapor Intrusion Screening Level Calculator Results, EPA, May 2020

Mapping of Institutional and Engineering Controls in EPA Cleanup Programs Land, Chemicals and Redevelopment Division - EPA Region 3 June 10, 2020