EXPLANATION OF SIGNIFICANT DIFFERENCES
for the
RESIN DISPOSAL SUPERFUND SITE
JEFFERSON HILLS BOROUGH, PENNSYLVANIA

I. INTRODUCTION

Site Name: Resin Disposal Superfund Site

Site Location: Jefferson Hills Borough, Pennsylvania

Lead Agency: U.S. Environmental Protection Agency, Region III

Support Agency: Pennsylvania Department of Environmental Protection

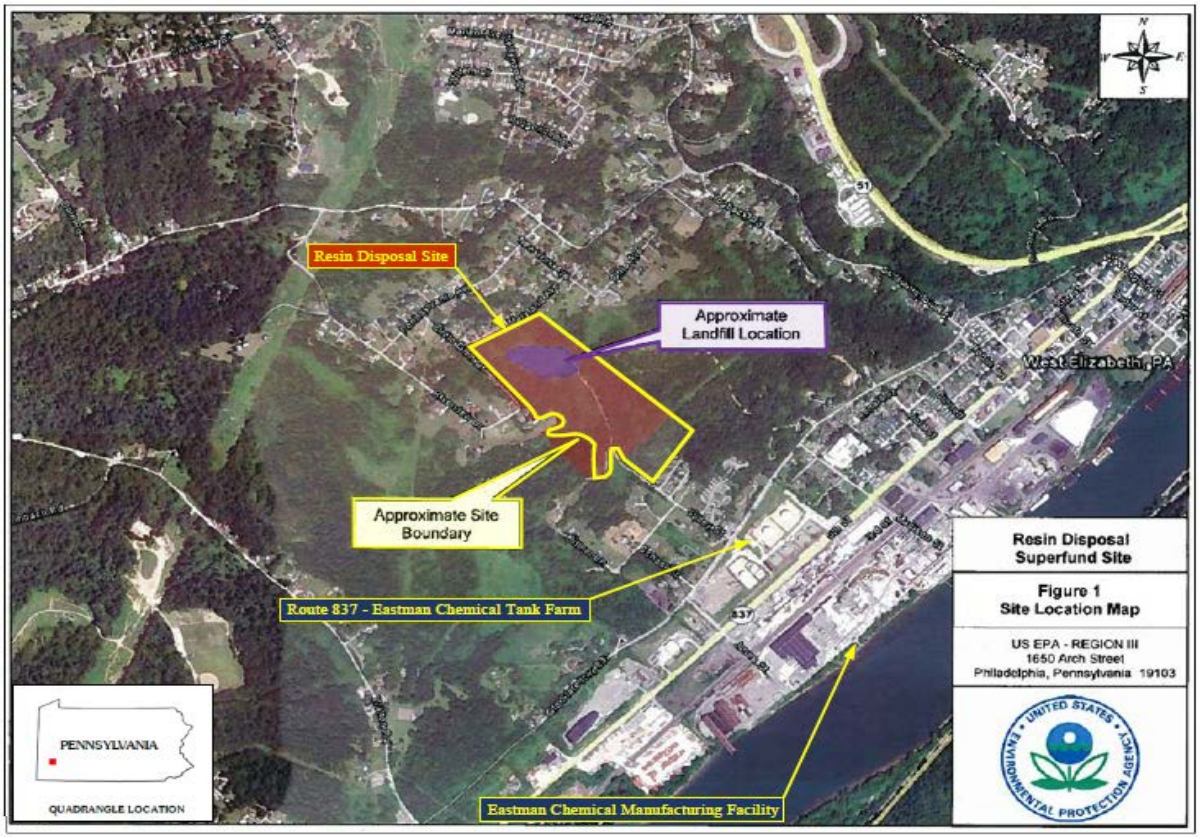
A. Statement of Purpose

The U.S. Environmental Protection Agency (EPA) is issuing this Explanation of Significant Differences (ESD) in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), 42 U.S.C. § 9617(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.435(c)(2)(i). This ESD describes changes to the remedial action selected by EPA for Operable Unit One ("OU1") of the Resin Disposal Superfund Site ("Site") in Allegheny County Pennsylvania (Figure 1). EPA's remedial action for OU1 was selected in a Record of Decision ("ROD") issued on June 28, 1991. Section 117(c) of CERCLA and Section 300.435(c)(2)(i) of the NCP require the publication of an ESD when modifications to the selected remedy are necessary, and such modifications significantly change, but do not fundamentally alter, the remedy selected in a ROD with respect to scope, performance, or cost.

B. Purpose of the ESD

EPA is preparing this ESD to document changes to the leachate treatment system that have evolved over time due to various releases of leachate. EPA has determined that the following changes are necessary to the OU1 remedial action to ensure it is implementable, protective, and properly safeguarded considering ongoing operations.

This ESD more clearly defines the capacity that the leachate treatment system must have to work effectively during storm events; it also adds pretreatment of the aqueous portion of the effluent and chemical concentration limits (also known as pre-treatment standards or effluent limitations) that the leachate must meet before it is discharged to Jefferson Hills Borough sanitary sewers. Finally, the ESD documents EPA's decision to leave in place a sanitary sewer line that runs under part of the Site; it was not relocated as stated in the 1991 ROD.



II. SUMMARY OF SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

A. Site History and Contamination

Presented below are highlights of the Site's background, operational history, site condition, and chronology. EPA's 1991 ROD for OU1 and 2015 Five Year Review (FYR) provide a more detailed summary of the Site's history and conditions, as well as enforcement activities related to Site. The 1991 ROD and 2015 FYR can be found on the Resin Disposal web page which may be reviewed on the internet at https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0301042 or the Administrative Record, at https://www.epa.gov/arweb/.

1. Background

The Site is located about one half mile west of the town of West Elizabeth in Jefferson Hills Borough, Allegheny County, Pennsylvania and comprises approximately 26 acres. West Elizabeth is a mixed commercial, industrial, and residential area with a population of 518 (2010 census). Jefferson Hills Borough has a population of 10,316 (2010 census).

The Site has been divided into multiple operable units, or OUs. OU1 is the subject of this ESD and consists of a 2-acre former landfill located at the head of a narrow valley that was the location of a former coal mine. OU1 addressed remediation of the waste material at the landfill, the adjacent contaminated mine spoils and the light non-aqueous phase liquid (LNAPL) present in the subsurface

Pittsburgh Coal mine voids. OU2 addressed the dissolved-phase groundwater contamination in the bedrock and water table aquifers downgradient from the landfill.

2. Operational History

Prior to 1950, the Site property was deep mined and later strip mined for Pittsburgh Coal. The deep mining was done through a process known as room and pillar mining, which resulted in mine voids. Between 1950 and 1964, Pennsylvania Industrial Chemical Corporation (PICCO), which owned the Site property, manufactured hydrocarbon resins, glues and adhesives at its Clairton Pennsylvania plant. An estimated 85,000 tons of production waste from PICCO's Clairton plant were disposed at PICCO's Jefferson Hills property during this period. The waste was deposited in the strip mine by dumping it down a topographic chute as a wet viscous sludge, which was then contained behind earthen dikes creating a landfill (Figure 2).

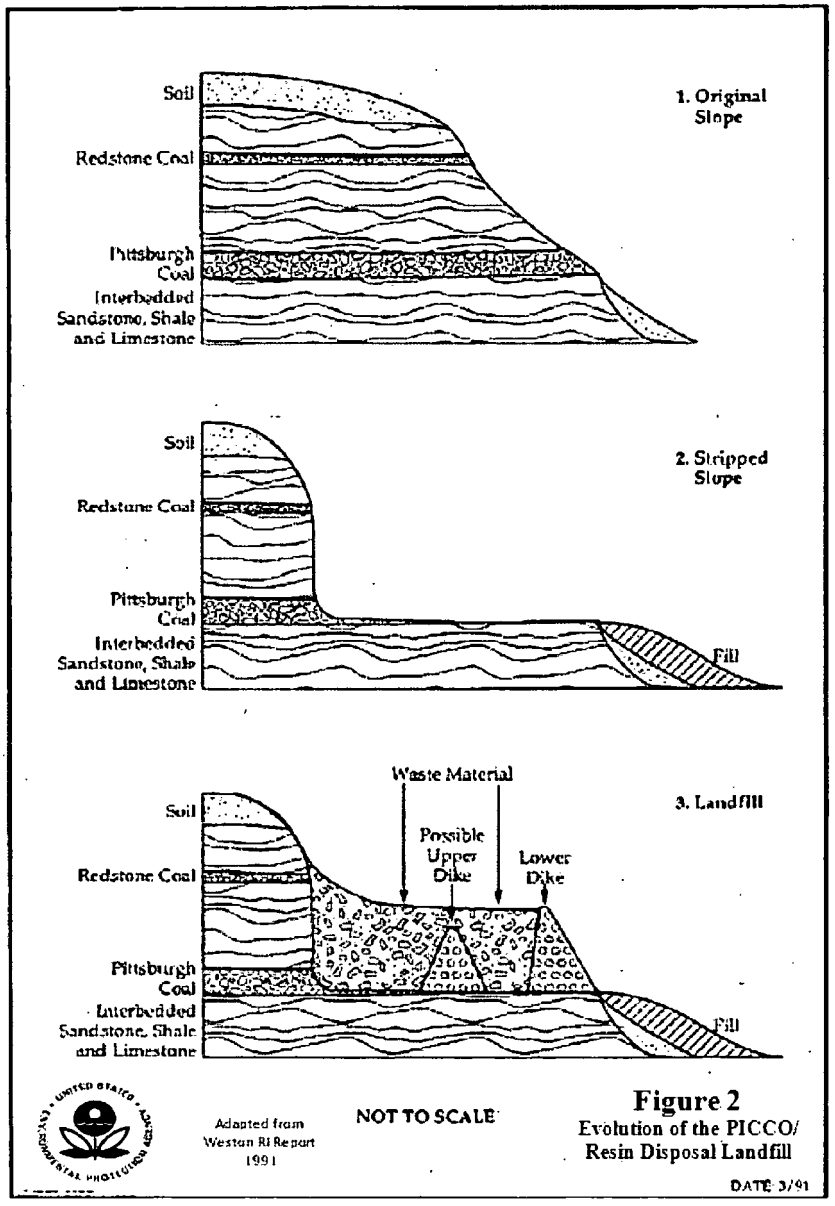


Figure 2
Evolution of the PICCO/ Resin Disposal Landfill

Wastes included cakes of clay used to filter resins, emulsion waste, sludge from acid wash and spent caustics from acid wash generated by the PICCO Clairton plant. These wastes contained hazardous substances listed under CERCLA including benzene, toluene, ethylbenzene, xylenes (BTEX), styrene, naphthalene, 1,2,4-trimethylbenzene, 1,2,5-trimethylbenzene, and 2-methylnaphthalene. Total petroleum hydrocarbons (TPHs) compose approximately 6% of the solid waste and 64% of the LNAPL.

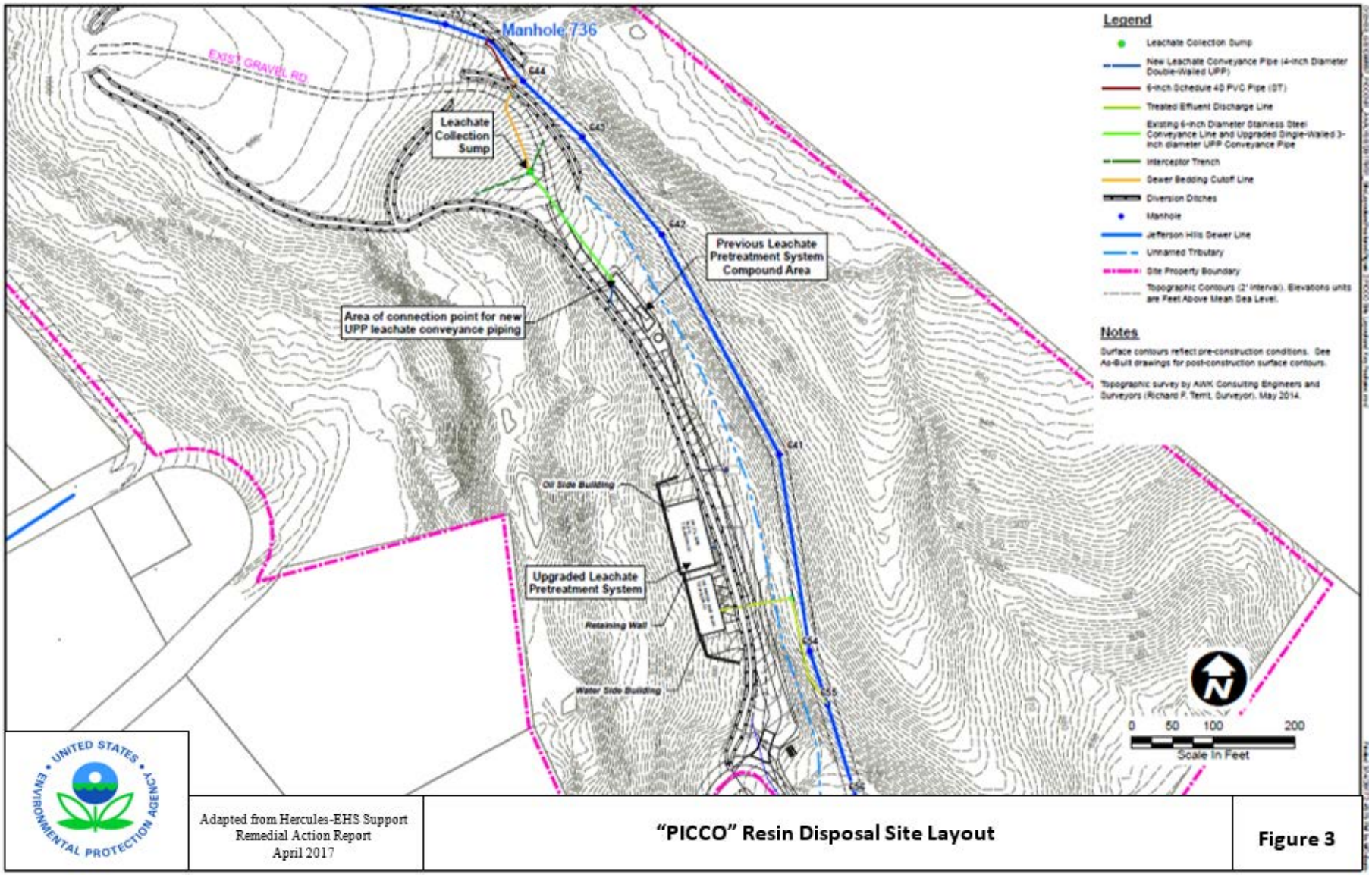
In 1973, PICCO sold the business, manufacturing facilities and the PICCO Resin Disposal Landfill to Hercules Incorporated (Hercules). In the early 1980s, Hercules installed a leachate collection trench and an oil/water separator to accumulate and manage leachate from the landfill (Figure 3). On July 11, 2008, Hercules was merged with Ashland, Inc. (Ashland). This merger transferred responsibility of the PICCO Resin Disposal Landfill to Ashland.

The Site first came to the attention of regulators in the 1970s after the Site was the subject of numerous complaints to Allegheny Health Department and the Pennsylvania Department of Environmental Resources (PADER). These complaints reported about strong chemical odors and contamination of surface waters emanating from leachate seeps downhill of the PICCO landfill. PADER observed and collected samples from a malfunctioning leachate collection system on January 2, 1979. PADER headed the oversight of the initial Resin Disposal Site Remedial Investigation and Feasibility Study (RI/FS). The Site was proposed to the National Priority List (NPL) in December 1982 and in September 1983 the Site was placed on the NPL.

B. Selected Remedy

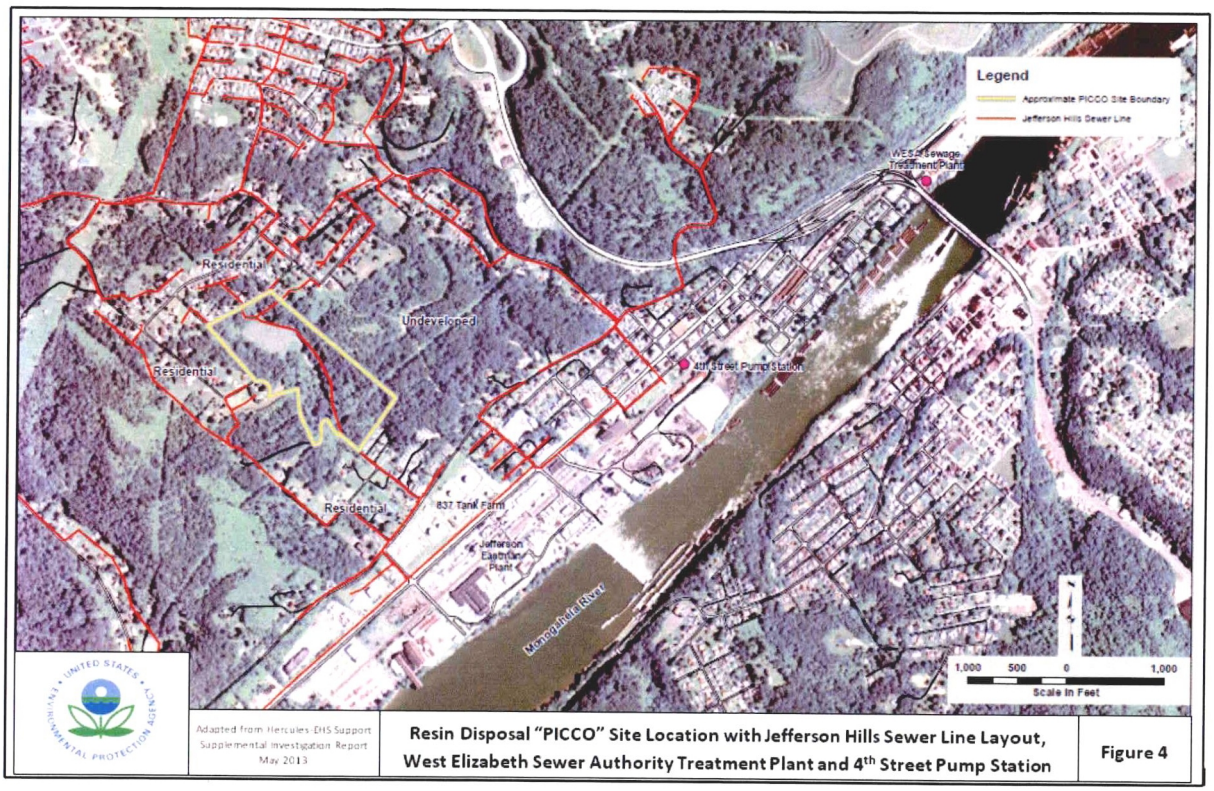
The Record of Decision (ROD) for Operable Unit 1 (OU1) was issued by EPA on June 28, 1991. The ROD divided the Site into two Operable Units. OU1 addressed remediation of the waste material at the landfill, the adjacent contaminated mine spoils and the LNAPL present in the subsurface Pittsburgh Coal mine voids. The selected remedy for OU1 required capping of the landfill portion of the Site, strengthening the lower landfill dike, upgrading the existing oil/water separator, installation of a skimmer network of wells to intercept LNAPL in the Pittsburgh Coal mine voids, relocation of a sanitary sewer and implementation of a 30-year monitoring program. A Consent Decree between EPA and Hercules for the Remedial Design and Remedial Action (RD/RA) of OU1 was signed on February 11, 1992.

The ROD for OU2, which addressed bedrock groundwater, was issued by EPA on September 25, 1995. The ROD directed no further remedial action, however, long-term monitoring of the offsite wells was required.


Manhole 736
EXIST GRAVEL RD
644
643
642
641
644
645
646
Leachate Collection Sump
Previous Leachate Pretreatment System Compound Area
Area of connection point for new UPP leachate conveyance piping
Oil Side Building
Upgraded Leachate Pretreatment System
Retaining Wall
Water Side Building
Legend
Leachate Collection Sump
New Leachate Conveyance Pipe (4-inch Diameter Double-Walled UPP)
6-inch Schedule 40 PVC Pipe (DT)
Treated Effluent Discharge Line
Existing 6-inch Diameter Stainless Steel Conveyance Line and Upgraded Single-Walled 3-inch diameter UPP Conveyance Pipe
Interceptor Trench
Sewer Bedding Cutoff Line
Diversion Ditches
Manhole
Jefferson Hills Sewer Line
Unnamed Tributary
Site Property Boundary
Topographic Contours (2' Interval). Elevations units are Feet Above Mean Sea Level.
Notes
Surface contours reflect pre-construction conditions. See As-Built drawings for post-construction surface contours.
Topographic survey by AWK Consulting Engineers and Surveyors (Richard P. Terrl, Surveyor), May 2014.
N
0 50 100 200
Scale In Feet
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Adapted from Hercules-EHS Support Remedial Action Report April 2017
"PICCO" Resin Disposal Site Layout
Figure 3

C. Site Releases

The remedy for OU1 required the collection leachate from the landfill for processing through an oil/water separator (OWS). The aqueous portion of the processed leachate was then discharged into the Jefferson Hills Borough sanitary sewer, which discharges into West Elizabeth Sewer Authority's (WESA's) Fourth Street lift station, where it is then pumped to the WESA Publicly Owned Treatment Works (POTW) for treatment of sewage and pre-treated industrial wastes (Figure 4).



In a 1974 agreement with WESA, Hercules agreed to limit the amount of certain chemicals in the aqueous portion of the processed leachate before it flowed into WESA's sewage treatment plant. This agreement, entitled WESA-Hercules Effluent Limitations Agreement, has been amended several times. The 1991 ROD made the requirements of this agreement part of the remedy.

In the late 1990s, the Allegheny County Health Department responded to odor complaints from residents in West Elizabeth by installing traps at houses located along the sewer line leading from the Resin Disposal Site to the WESA POTW.

Between 2000 and 2007, the Pennsylvania Department of Environmental Protection (PADEP)[1] was notified that WESA had observed excessive levels of organic chemical vapors in the Fourth Street lift station on numerous occasions. Investigations conducted by both WESA and Hercules between 2005 and 2008 concluded that discharges of under-treated leachate from the Resin Disposal Site were contributing to excessive levels of organic chemical vapors within the Fourth Street lift station.

[1] PADEP was created by Act 18 of 1995, which split the Department of Environmental Resources into the Department of Environmental Protection and the Department of Conservation and Natural Resources.

Consequently, the PADEP Water Program directed Hercules to provide additional pre-treatment on the OWS aqueous discharge using a pump and filter system composed of cannisters of organo-clay and carbon. The additional pre-treatment at the Site significantly reduced odors and complaints from WESA. However, between March 31, 2011 and July 20, 2012, an additional series of leachate releases occurred at the Site. Most of the releases were caused by storms that overwhelmed the OWS and/or the onsite pre-treatment system, which could only pump at six gallons per minute (gpm). The release of April 15, 2011, which bypassed the pre-treatment system, resulted in the hospitalization of a WESA worker and a four-day plant shutdown of the POTW.

In March 2015, EPA approved a remedial design for an upgraded leachate treatment system at the Site. Construction for the upgraded system was completed in July 2016 and since then the system has been operating without incident.

On November 4, 2015, an ordinance entitled "An Ordinance of West Elizabeth Borough, Allegheny County, Pennsylvania, Providing for Certain Industrial Pre-Treatment Standards, Rules and Regulations in Accordance with the Requirements of the Environmental Protection Agency," Ordinance No. 276 of 2015, was enacted. It prohibits discharge of wastewater containing chemicals in excess of specified limits and contains limits for a number of chemicals in the leachate from the Site.

D. Remedial Action Components and Performance Standards

The OU1 ROD components are listed in Table 1 and OU1 performance standards are listed in Table 2:

Table 1
Components of the Selected OU1
Remedial Action as Stated in the 1991 OU1 ROD

Component	OU1 Remedial Action Components (1991 ROD)
1	Installation of a multi-layer cap and infiltration control system for the landfill to prevent further migration of contaminants
2	Installation of a skimmer well system downgradient of the landfill to collect floating product in ground water that may otherwise migrate offsite via the mine voids.
3	Upgrading of the lower landfill dike to increase its stability.
4	Relocation of the sanitary sewer along the northeast border of the landfill to allow future access without unduly disturbing the landfill cap system.
5	The existing oil/water separator located downslope of the leachate collection trench shall be replaced with an upgraded system that allows for the collection of uncontrolled air releases by utilizing an enclosed system. After separation, aqueous phase product is discharged to the WESA, and the non-aqueous product, if possible, is reclaimed as fuel.
6	The aqueous portion of the leachate shall meet the requirements of the WESA & Hercules Effluent Limitations Agreement.
7	Construction of a fence around the perimeter of the Site to prevent unauthorized site access
8	Instituting deed restrictions.
9	Monitoring ground and surface water and implementing a site maintenance program.

Table 2

Performance Standards for the Cover System as Stated in the 1991 OU1 ROD

Item	Remedial Action Performance Standards of OU1 ROD
1	The multilayer cap [over the landfill contents] shall meet relevant and appropriate requirements in 40 C.F.R Section 264.310 which are the RCRA Closure and Post-Closure regulations. This construction must also meet the equivalent state regulations in 25 PA Code Section 264.310.
2	The landfill and soils between the lower landfill dike and the leachate interception trench shall be capped utilizing a multilayer [soil] system [non-geotextile].
3	The existing oil/water separator (OWS) located downslope of the leachate collection trench shall be replaced with an upgraded system that allows for the collection of uncontrolled air releases by utilizing an enclosed [OWS] system [with volatile organic vapors treated with carbon cannisters].
4	After separation of leachate by the OWS into aqueous and non-aqueous phase liquids, aqueous phase product is discharged to the West Elizabeth Sanitary Authority (WESA), and the non-aqueous product, if possible, is reclaimed as fuel.
5	WESA Pretreatment Effluent Standards (WESA & Hercules Effluent Limitations Agreement). Establishes acceptable levels on discharge to the West Elizabeth Treatment Plant.
6	Institutional controls shall focus on access restrictions, which shall help reduce potential exposure. The restrictions employed shall consist of deed restrictions for potential future land use, which would include any development, excavation, or drilling onsite that could disturb covered or reconstructed areas.
7	Upgrading of the existing security system including the construction of a fence around the perimeter of the site containing a locked gate system which would restrict access to the site.
8	A network of skimmer wells shall collect non-aqueous phase product in the Pittsburgh Coal mine voids. Non-aqueous product shall be collected from the wells intermittently and, if possible, reclaimed as fuel. Monitoring wells shall be installed downgradient to ensure that the skimmer well network is working properly.

III. DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR SUCH DIFFERENCES

EPA is issuing this ESD to document changes to the leachate treatment system, which have become necessary over time to eliminate various causes of leachate releases. EPA has determined that the following changes are necessary to the OU1 remedial action to ensure it is implementable, protective, and properly safeguarded considering ongoing operations. The changes address applicable or relevant and appropriate requirements of Federal and State environmental laws, the components of the selected remedial action (Table 1) and the associated performance standards specified in OU1 ROD (Table 2). Where numbered remedy components are used below, they refer to the component numbering in Table 1. Where numbered performance standards are used below, they refer to the item numbers in Table 2.

A. ARARS Modified

1. The 1991 ROD's Section on Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) is modified.

The following replaces the paragraph about West Elizabeth Sanitary Authority Pretreatment Standards in the subsection on action-specific ARARs on Page 37 of the 1991 ROD:

> West Elizabeth Sanitary Authority Pretreatment Effluent Standards – An Ordinance of West Elizabeth Borough, Allegheny County, Pennsylvania, Providing for Certain Industrial Pre-Treatment Standards, Rules and Regulations in Accordance with the Requirements of the Environmental Protection Agency, Ordinance No. 276 of 2015, is applicable to the remedy. It establishes acceptable levels of discharge to the West Elizabeth POTW. The aqueous portion of the leachate shall be discharged in accordance with the substantive standards in the 2015 West Elizabeth Ordinance.

The following replaces the paragraph on Clean Water Act – National Pretreatment Standard in the subsection on action-specific ARARs on Page 37 of the 1991 ROD:

> Clean Water Act – National Pretreatment Standards 40 C.F.R. § 403.5: Prohibited discharges, paragraphs (a) *General prohibitions*, (b) *Specific prohibitions* and (d) *Local limits* - Indirect discharge to a POTW is governed by pretreatment regulations. This regulation is applicable to the discharge of the aqueous fraction of the treated leachate to the West Elizabeth POTW.

The following paragraph shall be added to the subsection on action-specific ARARs on Page 37 of the 1991 ROD:

> Clean Water Act – Effluent Guidelines and Standards, Organic Chemicals, Plastics, and Synthetic Fibers, Toxic pollutant effluent limitations and standards for direct discharge point sources that use end-of-pipe biological treatment, 40 C.F.R. § 414.91. The new pretreatment plant at the Site was designed and constructed to meet these standards, which are relevant and appropriate to the remedy. These effluent limitations apply to water that comes into contact with waste from hydrocarbon resin manufacturing.

Discussion: The ARARs listed in the 1991 OU1 ROD are insufficient for the following reasons:

a) Releases of leachate from the Resin Disposal Site in 2011 caused interference, shut down and pass though at the West Elizabeth POTW.
b) The WESA-Hercules Effluent Limitations Agreement standards were not effectively monitored and were insufficient to cover the range of chemicals in the leachate.
c) The WESA-Hercules Effluent Limitations Agreement was erroneously included as an ARAR in the 1991 ROD. ARARs must be federal or state environmental or facility siting laws. The WESA-Hercules agreement is not a law; instead, it is a contract between WESA and Hercules. Therefore, it is not a proper ARAR.

The National Pretreatment Standards 40 C.F.R. § 403.5: Prohibited discharges, paragraphs (a) *General prohibitions*, (b) *Specific prohibitions* and (d) *Local limits* is applicable to the remedy for the Resin Disposal Site. It prohibits introducing any pollutant into a POTW that would pass through the POTW untreated, or interfere with or upset the proper functioning of the POTW. This regulation, specific to pretreatment, replaces a citation in the 1991 ROD to the General Provisions for Effluent Guidelines and Standards, 40 C.F.R. Part 401.

West Elizabeth Borough's Ordinance No. 276 of 2015 is applicable to the remedy for the Resin Disposal Site. Among other things, it establishes specific local limits on chemicals in wastewater discharged to the POTW, including benzene; ethylbenzene; naphthalene; styrene; toluene; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene and total xylenes. Each of these chemicals is a primary contaminant of concern in leachate from the Site. Ordinance No. 276 of 2015 regulates a broader range of chemicals than the WESA-Hercules Effluent Limitations Agreement. The ordinance replaces the WESA-Hercules Effluent Limitations Agreement as an ARAR. ARARs must be either federal or state environmental or facility siting laws; the WESA-Hercules Agreement is none of those things. However, the Hercules-WESA Agreement is being retained as a performance standard because it limits discharge of certain chemicals (e.g., phenol) that have been detected in Site leachate.

In addition, federal laws regulate discharges from the production of organic chemicals, plastics and synthetic fibers. Under the Clean Water Act, EPA has promulgated effluent limitations and pretreatment standards controlling these discharges. These regulations are codified in 40 C.F.R. Subchapter N. EPA has established limitations and standards in many different industry classes and categories that address production of organic chemicals. Part 414 regulations apply to discharges from the manufacture of certain organic chemical products, including hydrocarbon resins, which were manufactured at PICCO's Clairton plant. Processed resin wastes from PICCO's Clairton plant were later disposed at the Resin Disposal Site.

The toxic pollutant effluent limitations and standards for direct discharge point sources that use end-of-pipe biological treatment applicable to the manufacture of organic chemicals, 40 C.F.R. § 414.91, are relevant and appropriate to the circumstances of the releases and the remedial action at the Resin Disposal Site for the following reasons:

(1) The purpose of these requirements and the purpose of the remedy are similar. Section 414.91 aims to limit toxic pollutants (a) in process waste water (b) from organic chemical and plastic manufacturing (c) discharging to surface water (d) where biological treatment occurs at the end of the pipe. The remedy aims to limit toxic pollutants (a) in leachate (b) from a landfill of chemical and plastic manufacturing waste (c) discharging to West Elizabeth's POTW, which in turn discharges to surface water (d) where biological treatment occurs at the POTW.

(2) The medium regulated by these requirements and the medium contaminated at the Resin Disposal Site are similar. Section 414.91 regulates process waste water from organic chemical and plastic manufacturing. Process waste water includes any water which, during manufacturing or processing, comes into direct contact with waste from organic chemical and plastic manufacturing. The contaminated medium at the Resin Disposal Site is leachate from an

organic chemical and plastic manufacturing landfill, i.e., water than has come into direct contact with landfilled waste from organic chemical and plastic manufacturing.

(3) Section 414.91 regulates many of the same substances that are found in leachate from the Resin Disposal Site, including several primary contaminants of concern: benzene, toluene, ethylbenzene and naphthalene.

(4) The actions regulated by section 414.91 and the remedial action required here are the same: treatment of water that has come into contact with waste from organic chemical and plastic manufacturing.

(5) The type of place regulated by section 414.91 and type of place affected by the release are similar; section 414.91 regulates operating organic chemical and plastic manufacturing plants; the release at the Resin Disposal Site affects a landfill created by a former organic chemical manufacturing plant.

(6) Section 414.91 and the remedy are both designed to protect the uses and potential uses (e.g., warm water fisheries) of the Monongahela River, into which treated effluent will eventually be discharged.

This ESD selects 40 C.F.R. § 414.91 as relevant and appropriate, instead of 40 C.F.R. § 414.111 (Toxic pollutant standards for indirect discharge point sources), for several reasons. Section 414.91 regulates more substances present in Resin Disposal leachate than section 414.111. In particular, section 414.91 contains discharge limits for 2,4-dimethylphenol, phenol, copper and nickel, which are present in the leachate; section 414.111 contains no limits for these substances.

Section 414.91 contains a significantly lower limit for ethylbenzene, one of the primary contaminants of concern. Section 414.91's maximum daily limit is 108 µg/L; 380 µg/L is the maximum daily limit in section 414.111.

Partly because of these differences, the remedy's pretreatment system was specifically designed to meet the more relevant limits in section 414.91. Although the limits in section 414.111 regulate discharges to a POTW, the limits in section 414.91 (which regulate discharges directly to a stream instead of a POTW) are appropriate because the pretreatment system has been operating successfully since 2016, with no reported upsets, interference or pass through at the West Elizabeth POTW. Most of the limits in section 414.91 are identical to or more stringent than the limits in section 414.111. In the few instances where limits in section 414.91 are less stringent than in section 414.111, the differences are generally small or, apply to substances that have not been detected in the leachate (e.g., anthracene, diethyl phthalate, fluoranthene, fluorene, phenathrene, pyrene, vinyl chloride).

Basis for change: The requirements listed above are applicable or relevant and appropriate to the remedial action. The new ARARs ensure that the aqueous phase will be treated properly before discharge to the sanitary sewer and the West Elizabeth POTW.

B. Performance Standards Modified

1. Performance Standard: Item 3 of the OU1 Performance Standards, as described in the OU1 ROD, is modified and replaced with the following requirements to prevent further releases of leachate and resin oils into the environment:

The existing oil/water separator (OWS) located downslope of the leachate collection trench shall be replaced with an upgraded system that allows for the collection of uncontrolled air releases by utilizing an enclosed system. The OWS and leachate treatment system shall be capable of meeting ARARs across a wide range of flow rates. The treatment system shall be able to efficiently operate at minimum flow rate of 25 gpm and have the capacity to manage double the highest flowrate ever measured (50 gpm) for approximately 36 hours (18 hours if the processing system completely fails). This capacity equates to at least 68,750 gallons of leachate storage capability upgradient of the treatment system. The storage and treatment systems shall be modular, so that storage and treatment components can be added easily if required in the future.

Discussion: Between 2000 and 2008, increased leachate flow rates, mostly due to storms, overwhelmed the OWS causing a series of releases to the unnamed stream and the Jefferson Hills sanitary sewer system. Site investigations conducted by Hercules between 2012 and 2013 determined that the source of increased leachate flows was related to storm water discharges from the surrounding communities onto the Resin Disposal Site. Storm water then rapidly infiltrated through soils in the uncapped portions of the Site.

Basis for change: When leachate flow rates increased beyond OWS specifications, the OWS would overflow to the ground and the unnamed stream. Consequently, EPA determined that upgradient leachate storage capability was needed to allow the leachate treatment system to operate at peak efficiency during peak flow periods. Therefore, the new leachate treatment system was designed with a flowrate of at least 25 gpm with capacity to manage up to 50 gpm (via storage) for a limited duration.

2. Performance Standard: Item 4 of the 1991 OU1 ROD Performance Standards is modified with the following requirement:

The separated aqueous phase liquids from leachate processed from the OWS shall be treated by a pre-treatment system (organo-clay and carbon filters) to meet ARARs prior to discharge to the Jefferson Hills Borough sanitary sewer. Non-aqueous product shall be reclaimed as fuel if possible, or properly transported and disposed of according to applicable regulations.

Discussion: The 1991 OU-1 ROD called for leachate treatment with an OWS that discharged aqueous materials directly to the sewer for treatment at the WESA POTW. However, between 2000 and 2007, WESA lodged complaints with PADEP of resin-type odors within the West Elizabeth Fourth Street lift station. PADEP's Clean Water Program concluded that discharges of under-treated leachate from the Resin Disposal Site were contributing to excessive levels of organic chemical vapors within the Fourth Street lift station. In 2008, PADEP's Clean Water Program required Hercules to install an aqueous phase pre-treatment system. This "polishing

system" removed volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and hydrocarbons at greater than 90 percent efficiency using organo-clay filters and carbon treatment. Sampling and reporting of the aqueous phase concentrations before and after treatment were also required by PADEP. Odor problems in West Elizabeth Borough were initially reduced until problems with the flow rate compatibility of the OWS/polishing system and other problems discussed above caused additional releases. The revised performance standard will require the pretreatment system to meet the new ARARs selected in this ESD.

Basis for change: In 2008, a pretreatment system was added to reduce odors in West Elizabeth Borough and upsets at the West Elizabeth POTW. This pre-treatment system was mostly successful, however, the pretreatment system had insufficient capacity during heavy rain events and was subject to electrical outages that would cause releases to the environment. EPA and PADEP determined that the capacity of the former OWS and pretreatment system alone was incapable of handling storm surge leachate flows without personnel on-site to manage the system. On March 24, 2014, EPA approved a design for a new upgraded leachate treatment system capable of treating large volumes of leachate at sustained high rates of discharge. This upgraded system included upgradient storage, a high capacity OWS and an aqueous pre-treatment system. Construction was completed on July 14, 2016.

C. Remedial Components Withdrawn

1. Remedial Action Component 4 is withdrawn and is replaced with the following requirement:

The existing sanitary sewer line, which is located under a portion of the landfill, shall remain in place.

Discussion: In the Final Remedial Design (RD) Document for the Landfill Cap and Fence (Weston, 08/01/1995) several alternatives to relocate the sanitary sewer line (including leaving the existing sewer line in place) were evaluated. The Final RD Document recommended leaving the existing sewer line in place beneath the landfill cap because it appeared that the sewer pipe was above the groundwater table and would not be receiving groundwater infiltration. The sewer line was left in place after EPA approved the Landfill Cap Design in a letter to Hercules dated September 29, 1995.

However, subsequent investigations in 2012 and 2013 determined that the groundwater table does rise to levels above a portion of sewer line under the landfill cap during storm events at manhole 736. Consequently, the manhole was replaced with a single piece high density polyethylene (HDPE) unit anchored to concrete in June 2014. In addition, a French-drain system was installed redirecting leachate in the sewer line bedding to the leachate collection trench system. The upgrade of manhole 736, along with the installation of the French-drain and continued monitoring of the sewer line, will prevent bypass of the leachate treatment system along the sewer line. Therefore, the sanitary sewer line can remain in place.

Basis for change: The decision to withdraw Component 4 of the OU1, which required relocation of sanitary sewer line outside of the landfill, was not officially documented. This ESD officially documents the decision to leave the sanitary sewer line in place.

IV. SUPPORT AGENCY COMMENTS

In accordance with 40 C.F.R. § 300.435(c)(2), EPA has consulted with PADEP concerning the changes to the remedy in this ESD. On August 9, 2018, EPA received a letter from PADEP concurring with the remedy as amended by this ESD. This letter of concurrence can be found in the Administrative Record.

V. STATUTORY DETERMINATIONS

EPA has determined that the modified remedy described in this ESD complies with the statutory requirements of Section 121 of CERCLA, 42 U.S.C. § 9621. EPA has determined that the remedy, as modified by this ESD, will remain protective of human health and the environment, will comply with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and will be cost-effective.

VI. PUBLIC PARTICIPATION

As required by the NCP, EPA will publish a notice of availability and a brief description of this ESD following its signing. In accordance with CERCLA Section §117(d) and the NCP 40 C.F.R. §300.825(a), this ESD and documents that form the basis for this ESD will become part of the Site's Administrative Record (AR) which is available for review at the location(s) identified below.

U.S. Environmental Protection Agency, Region III Administrative Record Reading Room 1650 Arch Street Philadelphia, PA 19103-2029 (215) 814-3157 Hours: Monday – Friday: 8:00 AM to 4:00 PM *Please call to schedule an appointment.*	Jefferson Hills Borough Municipal Building 925 Old Clairton Road Jefferson Hills, Pennsylvania 15025

The AR is also available online at: http://loggerhead.epa.gov/arweb.

VII. SIGNATURE

This ESD modifies the remedy set forth in the 1991 OU1 ROD, for the Resin Disposal Superfund Site to document changes to the leachate treatment system that have evolved over time due to various releases of leachate. EPA has determined that changes were necessary to the OU1 remedial action to ensure it is implementable, protective, and properly safeguarded considering ongoing operations.

This ESD more clearly defines the capacity that the leachate treatment system must have to work effectively during storm events; it also adds pretreatment of the aqueous portion of the effluent and chemical concentration limits (also known as pre-treatment standards or effluent limitations) that the leachate must meet before it is discharged to Jefferson Hills Borough sanitary sewers. Finally, the ESD documents EPA's decision to leave in place a sanitary sewer line that runs under part of the Site landfill; it was not relocated as stated in the 1991 ROD.

Approved by:

Karen Melvin, Director
Hazardous Site Cleanup Division
EPA Region III

SEP 25 2018
Date