



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

**US Steel Corporation
Mon Valley Works - Fairless Hills**

South Pennsylvania Avenue
Fairless Hills, Pennsylvania

EPA ID # PAD 002375376

Prepared by
RCRA Corrective Action Branch 2
Land, Chemicals and Redevelopment Division
December 2020

Table of Contents

Section 1: Introduction	1
Section 2: Facility Background	2
Section 3: Summary of Environmental Investigations	3
Section 4: Corrective Action Objectives	11
Section 5: Proposed Remedy	13
Section 6: Evaluation of Proposed Remedy	18
Section 7: Financial Assurance	20
Section 8: Public Participation	21
Attachment A: Index to Administrative Record	22
Figure 1: Location of Facility	
Figure 2: SWMU Locations	
Figure 3: Lot Locations	
Figure 4: Environmental Covenants	
Table 1: Summary of Lots	

List of Acronyms

AR	Administrative Record
BGS	Below Ground Surface
BP	Borrow Pit
EPA	Environmental Protection Agency
GPRA	Government Performance and Results Act
MCL	Maximum Contaminant Level
MSC	Medium Specific Concentration
PADEP	Pennsylvania Department of Environmental Protection
RCRA	Resource Conservation and Recovery Act
RIR	Remedial Investigation Report
RSL	Regional Screening Level
SB	Statement of Basis
SHS	Statewide Health Standard
SSS	Site-Specific Standard
SVOC	Semi-Volatile Organic Compound
VOC	Volatile Organic Compounds

Section 1: Introduction

The United States Environmental Protection Agency (EPA) is issuing this Statement of Basis (SB) to solicit public comment on its proposed remedy for the U.S. Steel (USS) Mon Valley Works - Fairless Hills (aka Keystone Industrial Port Complex (KIPC)) facility located in Fairless Hills, Bucks County, Pennsylvania (Facility). EPA's proposed remedy for the Facility consists of Corrective Action Complete with Controls for groundwater along with groundwater monitoring if soil contamination is discovered exceeding selected Corrective Action Objectives (CAOs); installation of soil covers where soil contamination exceeds the CAOs; relocation of sensitive species impacted by borrow pit (borrow pit or BP) and Terminal Treatment Lagoon sediment and surface water contamination; removal or capping of PCB waste; vapor intrusion assessment and mitigation, and compliance with and maintenance of land and groundwater use restrictions to be implemented through institutional controls. This SB highlights key information relied upon by EPA in proposing its remedy for the Facility.

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 and operators of certain facilities subject to RCRA 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 thirty (30)-day public comment period on this SB. EPA may modify its proposed remedy based on comments received during this period. EPA will select a final remedy for the Facility in a Final Decision and Response to Comments (Final Decision) after the public comment period has ended, comments are addressed, and any necessary modifications made.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found at <https://www.epa.gov/hwcorrectiveactionsites/contact-information-corrective-action-hazardous-waste-clean-ups-delaware>.

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**, below, for information on how you may review the AR.

Section 2: Facility Background

2.1 Introduction

The Facility is located on the west bank of the Delaware River, approximately one mile west of Bordentown, New Jersey, two miles south of Trenton, New Jersey, and three miles east of Levittown, Pennsylvania. The Facility location is presented on Figure 1. The Facility is comprised of approximately 2,800 acres.

Prior to 1952, the property on which the Facility was constructed was used for agricultural purposes. During construction of the Facility, numerous borrow pits were excavated to provide fill material to raise the Facility above the elevation of the 100-year floodplain.

Operations at the Facility began in 1952 and initially consisted of integrated steel-making and finishing. Additional development took place in the 1960s and the early 1970s, including the construction of the electric arc furnace, rod mill, and wire mill. In the early 1980s, the electric arc furnace and several finishing operations (rod, bar, rolling, and wire mills) were shut down. In 1984, the coke and coal chemical plants were shut down. The sinter plant ceased operations in 1990. Steel-making operations ceased in 1991 when the last blast furnace, open hearths, and primary mills were shut down. Currently, only the galvanizing facility is operating.

2.2 Corrective Action Obligations and Anticipated Future Use

In 1993, EPA and USS entered into a Consent Order pursuant to Section 3008(h) of RCRA, 42 U.S.C. § 6928(h) (1993 Consent Order), which requires USS to conduct investigations, corrective measures studies, and interim measures at the Facility. The 1993 Consent Order requires the investigation of 68 solid waste management units (SWMUs) within the Facility, including former production and disposal areas (Figure 2). In 2005, USS decided to pursue a Release of Liability (ROL) from the Pennsylvania Department of Environmental Protection (PADEP) under the Land Recycling and Environmental Remediation Standards Act (Act 2) while simultaneously satisfying corrective action obligations under the 1993 Consent Order pursuant to the “One Cleanup Program Memorandum of Agreement” (One Cleanup Program Memo) available at:

<http://files.dep.state.pa.us/EnvironmentalCleanupBrownfields/LandRecyclingProgram/LandRecyclingProgramPortalFiles/One%20Cleanup/One%20Cleanup%20Program%20MOA%20w%20EPA.pdf>.

USS has sold or leased various lots at the Facility for redevelopment based on factors such as geographic location, presence of known contamination, and interest from prospective purchasers/tenants. On a lot by lot basis, USS has submitted several Act 2 Remedial Investigation Reports (RIRs), Cleanup Plans, and Final Reports to PADEP and EPA, with the intent to receive an Act 2 ROL. Although USS has completed environmental investigations for the entire Facility, they have either not yet submitted, or not received approval of Act 2 Final

Statement of Basis

Reports and their included Vapor Intrusion and Ecological Assessments for Lots 18-27 (collectively, Remaining Lots) at this time. Table 1 displays which lots have PADEP-approved Act 2 Final Reports. Figure 3 shows this same information in map form along with the boundaries of the 52 lots at the Facility. Approximately 1460 acres of the Facility has received an Act 2 ROL for soil. An additional 1120 acres of the Facility has been investigated in accordance with Act 2 and is in various stages of submitting Final Reports, as identified in Table 1. Lots 18 and 19 have Final Reports submitted under Act 2 and review is pending. Lots 20-27 have not yet been remediated and are being evaluated in anticipation of future industrial use and redevelopment.

On August 30, 2014, USS recorded a Facility-wide environmental covenant (2014 Environmental Covenant). The 2014 Environmental Covenant prohibits the use of groundwater except for the purposes of monitoring and restricts land use to non-residential. Environmental covenants have also been recorded on individual lots as they have been sold and redeveloped (See Figure 4 for a map depicting environmental covenants at the Facility).

Section 3: Summary of Environmental Investigations

3.1 Environmental Investigations and Remediation

In the 1980s, USS began environmental investigations at the Facility and has continued investigations into the present. Overall, across the Facility, approximately 3,700 environmental samples have been collected from 1,400 locations and generally analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, cyanide, and polychlorinated biphenyls (PCBs). Sampled media include soil, sediment in borrow pits, surface water in borrow pits and low-lying areas, and groundwater. Investigations have focused on locations of known or suspected environmental releases (e.g., former underground storage tanks (USTs), former borrow pits, and SWMUs presented in the Description of Current Conditions, which is included in the AR (Figure 2).

3.1.1 Soils

The soil at the Facility generally consists of fill material overlying fine to coarse sand/gravel, silts, and clays. Within former borrow pit areas, the fill material consists of primarily slag. In these areas, slag fill ranges from 10 to 17 feet (ft) in thickness, where present. The native soil underneath the fill material consists of fine to coarse gravel, sand, and some silt with minor amounts of clay.

Soil samples were collected from surficial/shallow soils (0-2 ft below ground surface (bgs)) and subsurface soils (2-15 ft bgs) and were analyzed for VOCs, SVOCs, metals, cyanide, and PCBs across the Facility. Sampling results were screened against Act 2 Non-Residential Medium-Specific Concentrations (MSCs), including Pennsylvania Statewide Health Standards (SHSs) for direct contact exposure (0-2 ft bgs and 2-15 ft bgs) and non-use Statement of Basis

aquifer soil-to-groundwater pathway MSCs. In addition, soil data were screened against PA Soil Statewide Health Standard Vapor Intrusion Screening Values. If contaminants were in concentrations greater than the MSCs, then the data were evaluated through a site-specific risk assessment. Soil chemistry at the Facility is fairly consistent and representative of the documented historic use of steel making by-products as indicated by the data set.

No VOCs or SVOCs were detected in surface soils above the direct contact exposure pathway MSC except for benzo(a)pyrene (at Lot 8 and Lot F), benzo(a)anthracene (at Lot F), benzo(b)fluoranthene (at Lot F), and dibenzo(a,h)anthracene (at Lot F). Benzo(a)pyrene (MSC=12 mg/kg), benzo(a)anthracene (MSC=110 mg/kg), benzo(b)fluoranthene (MSC=110 mg/kg), and dibenzo(a,h)anthracene (MSC=11 mg/kg) were each evaluated using site-specific risk assessments for these lots and site-specific standards (SSSs) were developed. These SSSs include: for Lot 8 and Lot F: benzo(a)pyrene for Lot 8 (17.6 mg/kg) and Lot F (230 mg/kg), and for Lot F: benzo(a)anthracene (270 mg/kg), benzo(b)fluoranthene (230 mg/kg), and dibenzo(a,h)anthracene (48 mg/kg). The SSSs developed for benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene are within EPA's acceptable risk range for Corrective Action of 1×10^{-4} to 1×10^{-6} .

No VOCs or SVOCs were detected in subsurface soils above the soil-to-groundwater pathway MSC, except for dibenzofuran, which was found above its MSC of 500 mg/kg at Lot 11, Lot B, and Lot G. Dibenzofuran was evaluated via site-specific risk assessments conducted on Lot 11, Lot B, and Lot G, and SSSs were developed for dibenzofuran for Lot 11 (250,000 mg/kg), Lot B (6,048 mg/kg), and Lot G (6,048 mg/kg). The SSSs developed for dibenzofuran are within EPA's acceptable risk range for Corrective Action of 1×10^{-4} to 1×10^{-6} .

The only metals detected in surface or subsurface soils above the Act 2 Non-Residential Direct Contact MSCs were iron, lead, and vanadium:

- Iron was detected in soil samples collected from Lot 12.1, Lot 8, Lot 18, Lot 19, Lot A, and Lot C at concentrations greater than its MSC of 190,000 mg/kg. Iron was evaluated using site-specific risk assessments for these lots, and SSSs were developed for iron for Lot 12.1 (287,100 mg/kg), Lot 8 (233,000 mg/kg), Lot 18 (251,900 mg/kg), Lot 19 (451,000 mg/kg), Lot A (851,667 mg/kg), and Lot C (250,800 mg/kg). The SSSs developed for iron are within EPA's acceptable risk range of 1×10^{-4} to 1×10^{-6} .
- Lead was detected in soil samples collected from Lot 8 and Lot K at concentrations greater than its MSC of 1,000 mg/kg. Lead was evaluated using site-specific risk assessments for these lots, and an SSS was developed for lead for Lot 8 (3,200 mg/kg) and Lot K (1,900 mg/kg). The SSSs developed for lead is within EPA's acceptable risk range for Corrective Action of 1×10^{-4} to 1×10^{-6} .
- Vanadium was detected in soil samples collected from Lot 8, Lot 12.1, Lot 18 and Lot 19 at concentrations greater than its MSC of 220 mg/kg. Vanadium was evaluated using site-specific risk assessments conducted for these lots, and an SSS was developed at Lot 8 (320 mg/kg), Lot 12.1 (587 mg/kg), Lot 18 (755 mg/kg), and Lot 19 (265.1 mg/kg).

Statement of Basis

The SSSs developed for vanadium is within EPA's acceptable risk range for Corrective Action of 1×10^{-4} to 1×10^{-6} .

No PCBs were detected in soils above the Act 2 Non-Residential MSCs, except for PCB Aroclor-1248. PCB Aroclor-1248 was detected in one subsurface soil sample collected from Lot 1 at a concentration greater than the Act 2 Non-Residential non-use aquifer soil-to-groundwater MSC of 62 mg/kg. Based on a review of the partitioning of organic molecules from soil or Light Non-Aqueous Phase Liquid (LNAPL) to groundwater, it was determined that the detected concentration of PCB Aroclor-1248 of 190 mg/kg could produce a maximum groundwater concentration well below the applicable groundwater MSC. An SSS was developed for PCB Aroclor-1248 and was approved by the EPA on August 30, 2016,

Vapor Intrusion from Soils

As each lot was investigated, a vapor intrusion assessment was performed with respect to the potential volatilization from soils to indoor air using the screening values in the PADEP Vapor Intrusion Guidance. These assessments were incorporated into the Final Reports that are submitted to EPA and PADEP for approval. Of all lots that have been fully investigated and assessed, only Lot 19 indicates potential for vapor intrusion if an occupied building is constructed on the lot. The former American Bridge Yard area of Lot 19 formerly housed one 4,000-gallon diesel UST and two 4,000-gallon gasoline USTs. All three USTs were removed in June 1990. Benzene was detected in one deep soil sample at a concentration of 0.41 mg/kg exceeding the screening value of 0.13 mg/kg. Further evaluation of this pathway will be necessary before any new structures are constructed on the lot.

3.1.2 Groundwater

The objective of the groundwater investigation was to evaluate the extent to which groundwater may have been impacted from historic operations associated with the Facility. To achieve this, interior well and perimeter well sampling was completed. An exposure assessment and an evaluation of the impacts of groundwater to the Delaware River were also completed.

Approximately 150 groundwater monitoring wells were installed across the Facility to investigate and monitor groundwater. Generally, the wells are 40 ft or less in depth and are screened across the unconfined shallow aquifer beneath the Facility. A few locations have been installed to depths up to 120 ft bgs. Across the Facility, the top of the shallow aquifer is between 6.5 and 20 feet bgs.

Manganese and iron have been found to be naturally occurring at elevated concentrations. In the 1950s, use of the groundwater for drinking purposes was discontinued in the vicinity of the Facility due to the naturally elevated concentrations of these metals. The shallow aquifer and deep aquifers are not currently used as drinking water sources because of the naturally occurring metals and the minimal saturated thickness of the aquifers (i.e., the distance from the top of the water table to the base of the aquifer) at the Facility. Therefore, EPA has determined that the

Statement of Basis

maximum beneficial reuse of groundwater at the Facility is as a recharge source to the Delaware River. As a surface water recharge source, groundwater quality at the perimeter of the Facility was evaluated using ambient surface water quality criteria (See discussion in Section 3.1.2.C., Groundwater to Surface Water Impacts, below). And, as reflected in the above discussion of the physical characteristics of groundwater, groundwater is not appropriate as a drinking water source, and maximum contaminant levels (MCLs) were determined not to be appropriate quality standards at this Facility.

A. Site-Wide Groundwater

Interior wells that were sampled throughout the 1980s and 1990s showed a limited number of areas throughout the Facility were found to have impacts to groundwater. These areas are localized, stable, and are impacted by small amounts of organic contaminants, such as TCE, benzene, naphthalene, dibenzofuran and total petroleum hydrocarbon, and inorganic constituents, such as mercury, lead, manganese, and iron. The groundwater results show contaminant levels are elevated above applicable non-residential used aquifer SHSs. Generally, these limited constituents were found between 10 and 100 times greater than their used aquifer SHSs. The concentrations of the contaminants in groundwater has not changed over the more than ten years of sampling events, demonstrating stable contaminant locations.

B. Perimeter Wells

A perimeter monitoring network was established in 1996 using 30 wells. Based on the monitoring results, further investigation of the deeper confined aquifer was determined to be unnecessary, as there were no impacts or communication between the shallow aquifer and the deeper aquifer. Additional groundwater monitoring at perimeter wells in the upper aquifer was determined to be necessary due to sporadic, low-level exceedances of the non-residential used aquifer criteria.

In 2000, 2008, and 2009, additional perimeter monitoring was conducted. During the most recent sampling events in 2008 and 2009, perimeter monitoring wells were generally located along the Facility property perimeter with several wells also in the Facility interior, to confirm the results from the 1980s and 1990s sampling rounds. In 2008, the perimeter well network expanded to 49 wells. In 2009, 28 wells were sampled for confirmation of the previous results.

Results of these sampling activities showed exceedances of non-residential used aquifer standards. No constituents were found at more than 20 times their respective non-residential used aquifer standards (see Table A below) with the exception of benzene and iron, which were found at less than 100 times greater than used aquifer standards, and manganese, which was found at 1000 times greater than the standard. Exceedance of these contaminants are found in both upgradient and downgradient wells. Manganese and iron have been found to be naturally occurring at elevated concentrations, resulting in a determination that the aquifer is not appropriate as drinking water source.

Statement of Basis

Table A: Perimeter Well Network Exceedances

Constituent	Max GW Concentration	NR/UA	(ug/l)
Benzene	490	5	
benzo(a)pyrene	2.4	0.2	
benzo(b)fluoranthene	2.9	1.2	
benzo(ghi)perylene	3.8	0.26	
benzo(k)fluoranthene	3.5	0.55	
bis(2-ethylhexyl)phthalate	11	6	
chrysene	3.8	1.9	
dibenzo(a,h)anthracene	3.8	0.6	
hexachlorobenzene	1.3	1	
n-nitroso-di-n-butylamine	0.91	0.63	
pentachlorophenol	1.2	1	
arsenic	100	10	
beryllium	60	4	
cadmium	13.6	5	
nickel	430	100	
manganese	31,000	50	
iron	22,800	300	

C. Groundwater to Surface Water Impacts

Site-wide groundwater occurs throughout the overburden unit at depths from about 6.5 feet to 20 feet bgs. Flow direction is generally to the south southeast toward the Delaware River. During investigations, groundwater was not found to flow into Biles Creek.

If constituents exceeded the non-residential used-aquifer MSCs in the perimeter well network, then an exposure pathway evaluation was completed using a model to determine if those concentrations would cause an unacceptable risk to the Delaware River. Due to the naturally-occurring, elevated concentrations of manganese and iron, these constituents were not included in the evaluation of impacts of groundwater to surface water. Transport modeling was completed for 11 organic compounds and four metals that were detected above their applicable non-residential used-aquifer SHSs during the 2008 and 2009 perimeter well monitoring activities (see Table A, above).

To evaluate the potential contribution of Facility-related constituents to the bordering Delaware River, an allowable concentration of each groundwater constituent (a concentration that would not cause surface water concentrations to exceed PA Chapter 93 surface water quality Statement of Basis

standards) was calculated using the mass-balance water quality model created by PADEP called the PA Single Discharge Wasteload Allocation Program for Toxics (PENTOXSD). This allowable groundwater concentration is called a wasteload allocation (WLA). A conservative approach was taken to selecting site-specific parameters for the model (i.e., very low flow of the Delaware River, low water height, steepest hydraulic gradient, etc.).

As a conservative measure, PENTOXSD modeling was completed for 11 organic compounds and four metals that were detected above non-residential, used aquifer groundwater screening criteria. Wasteload criteria were calculated for chronic fish criterion, acute fish criterion, target human health, and cancer risk levels. Calculated WLA for all compounds included in this analysis are at least ten times greater than detected concentration in Facility-wide groundwater. This analysis shows that Facility groundwater meets and will likely not exceed PA Chapter 93 surface water quality standards in the Delaware River and is not having an adverse impact on the Delaware River.

D. Vapor Intrusion Potential from Groundwater

A vapor intrusion assessment was performed with respect to the potential volatilization from groundwater to indoor air using the screening values in the PADEP Vapor Intrusion Guidance. All concentrations in site-wide groundwater were below the non-residential groundwater screening values. As a result, there is negligible risk for vapor intrusion threats from the groundwater.

E. One Cleanup Program

On August 4, 2010, USS submitted an Act 2 Remedial Investigation/Final Report for Facility-wide groundwater to the PADEP. The purpose of the report was to petition for a ROL for Facility-wide groundwater and to demonstrate that non-residential MSCs had been met. PADEP granted USS a ROL for constituents of concern in groundwater, with specific exclusions for two former fuel storage tank areas: the Power House area (Lot E.1) and the Former Open Hearth Area (Lot 12.2) and with the expectation that groundwater investigation reports for these areas would be submitted at a later date.

The investigations for these two areas and subsequent ROLs are summarized as follows:

- Lot E.1, Former Power House Area: On May 24, 2016, USS submitted a Final Report/Remedial Investigation following an investigation associated with a former No. 2 Fuel Oil Underground Storage Tank (UST) located underneath a section of the Power House area (Lot E.1). The 20,000-gallon UST was closed in place and filled with cement slurry in 1990. Subsequent investigations showed soil analytical results were below their respective MSCs. Groundwater investigations determined that there is a small amount of fuel oil that remains entrained in the water table. Sampling spanning many years has shown this fuel oil has not moved, and EPA proposes that this trapped fuel oil does not

Statement of Basis

pose an unacceptable risk to human health or the environment if groundwater use controls are complied with and maintained. These controls include notification to regulators if any material is to be excavated at the area and segregating such material for proper disposal. An Act 2 Final Report was approved on June 22, 2016, thereby completing the groundwater evaluation for this area required by the associated groundwater exclusion discussed above. An environmental covenant identifying the location of the remaining UST and detailing the groundwater use controls and notification requirements was recorded on September 19, 2019.

- Lot 12.2, Open Hearth Area: On June 20, 2013, USS submitted a Remedial Action Completion Report following the removal and investigation associated with two 15,000-gallon diesel USTs in the Former Open Hearth Area (Lot 12.2). In June 1990 and May 1992, USS completed site characterization activities and removed the USTs. Subsequent characterization activities were completed in May and June 2011, including the collection of soil, perched groundwater, and groundwater samples. Soil analytical results were below respective non-residential MSCs. Groundwater analytical results were below non-residential MSCs, except for benzo(b)fluoranthene, benzo(g,h,i)perylene, and benzo(k)fluoranthene. The concentrations of these compounds were consistent with previous facility groundwater data shown in Table A, above. An Act 2 Final Report was approved on August 22, 2013, thereby completing the groundwater evaluation for this area required by the associated groundwater exclusion discussed above.

3.1.3 Onsite Surface Water, Sediments, and Ecological Risk

Lots within the Facility were also screened for potential impacts to ecological receptors. The ecological screening procedure is a multi-step evaluation to determine whether site media have the potential to cause ecological impacts. A search of the Pennsylvania Natural Diversity Index (PNDI) database was conducted to determine if threatened and endangered species, or their habitat potentially exist on the Facility. The search indicated that the Red-Bellied Turtle and several frog, toad, and fish species could potentially inhabit the Facility. As the Facility is largely developed and has been in heavy industrial use for more than 50 years, suitable habitat for such species at the Facility is limited primarily to unfilled or partially filled borrow pits.

Across the Facility, various unfilled or partially filled borrow pits and low-lying areas have been investigated as part of remedial investigation activities to determine if constituents of potential ecological concern are present in the surface water and sediments within those areas. Sediment samples were collected from the shallow sediments (0-6 inches) and were typically analyzed for VOCs, SVOCs, metals, acid-volatile sulfide and simultaneously extracted metals (AVS/SEM), PCBs, cyanide, soot carbon, sulfide, and total organic carbon (TOC). Surface water samples were also collected and analyzed for VOCs, total and dissolved SVOCs, total and dissolved metals, PCBs, and TOC.

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

Both surface water and sediment sample results were evaluated as part of lot-specific ecological health evaluations. Potential ecological impacts have been addressed where necessary at lots with approved Act 2 Final Reports. At Lots F and 28, Red-Bellied Turtles were moved to a nearby appropriate habitat, and the borrow pits were filled to grade with soil. Inspections and necessary maintenance of the filled areas are required by the three environmental covenants recorded May 17, 2016.

Currently, potential ecological impact areas exist involving various borrow pits that have not been completely filled and topographical depressions on Lots 21, 22, 23, 24, 25, 26, and 27, as well as BP-35, 35A, 35B, and 35C and the Terminal Treatment Plant Lagoons. To date, ecological health evaluations and assessment of the constituents of potential ecological concern at these areas to support corrective measures of these borrow pits and lagoons and have not been submitted to EPA. In the 1993 Consent Order, EPA required interim measures, such as using scare flags, netting, and air cannons, at several borrow pits to deter wildlife from entering the areas, and observation that the measures were effective. EPA proposes interim measures continue at Terminal Treatment Plant Lagoons and BP35, 35A, 35B, and 35C, until an Act 2 Final Cleanup Plan and Report or Redevelopment Work Plan has been approved by EPA.

3.1.4. Other Assessments

A. Borrow Pit 20

Borrow Pit 20 was a regulated hazardous waste land disposal unit, i.e., landfill, which received coal-tar decanter sludge. This landfill was located within Lot F, which is currently owned by Waste Management Inc. In 1992, upon closure, this landfill was issued a RCRA Hazardous Waste Facility Post-Closure Permit (Post-Closure Permit) by PADEP, which included requirements for a cap and a groundwater monitoring network to detect any contamination leaking from the landfill. After the property purchase, Waste Management excavated the landfill and disposed of its hazardous materials off site under PADEP oversight. Groundwater was monitored for one year after landfill removal and statistical evaluation procedures show contamination exceedances were not found. On June 25, 2020, PADEP determined that Waste Management had satisfied the clean closure and post-closure groundwater monitoring requirements in the RCRA Post-Closure Permit and that monitoring activities at the landfill could cease. Environmental actions at other areas (borrow pits) on Lot F are discussed in Section 3.1.3, above.

B. Lots Sold by USS from 1990s to Early 2000s

Ten areas within the Facility were sold by USS in the 1990s and early 2000s prior to conducting any sampling. These areas are within the Facility boundary as defined by the 1993 Consent Order issued by EPA. These ten lots are identified, using their Bucks County tax parcel identification numbers, as TMP-13-47-139, TMP-13-47-145, TMP 13-47-146, TMP-13-47-166, TMP-13-51-1-006, TMP-13-51-007, TMP-13-51-1-008, TMP-13-51-1-010, TMP-13-51-1-13, and TMP-13-51-1-19 on Figure 3.

Statement of Basis

EPA is proposing that no additional investigation is required at these ten lots, as documented in letters submitted by US Steel to EPA on December 13, 2019 and April 27, 2020. These lots were not used for manufacturing operations; all documented environmental concerns have been investigated, and no environmental impacts were found. Adjacent properties with consistent historic land use have demonstrated that the soils at the lots, prior to sale, met Act 2 non-residential MSCs.

C. National Can Area

The National Can area, which includes Borrow Pit 21, was a 14.5-acre area leased from 1967-1989 for which EPA assigned a separate RCRA Identification Number. EPA issued a Final Decision selecting a final remedy for this area on July 19, 2016. The final remedy for this area is land and groundwater use controls and is implemented by an environmental covenant, which restricts land to non-residential uses and prohibits groundwater use for any purpose, except for groundwater monitoring. The environmental covenant implementing the land and groundwater use controls for the National Can area was recorded on October 10, 2008.

3.2 Environmental Indicators

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA Corrective Action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Migration of Contaminated Groundwater Under Control and (2) Current Human Health Exposures Under Control. In April 2004, EPA determined that the Current Human Health Exposures Under Control indicator (CA 725) had been met at the Facility. On September 22, 2016, EPA determined that the Migration of Contaminated Groundwater Under Control indicator (CA 750) had been met at the Facility.

Section 4: Corrective Action Objectives

Based on the information available to EPA outlined in this SB, EPA proposes Corrective Action Objectives for the following media: soils, groundwater, surface water and sediments, and indoor air.

A. Soils

As explained above, USS has chosen to satisfy its corrective action obligations under RCRA and pursue Act 2 liability relief concurrently, as outlined in the One Cleanup Program Memo. PADEP's non-residential MSCs are equivalent to EPA Regional Screening Levels for industrial uses. If an SSS is proposed, EPA evaluates the accompanying risk assessment and approves/disapproves each SSS consistent with EPA policy and in coordination with PADEP. Therefore, EPA proposes the following Corrective Action Objectives for soils:

1. Prevent human exposure to surface soils (0-2 feet bgs) above PADEP's Act 2 non-

Statement of Basis

- residential MSCs or an SSS approved by PADEP and EPA.
2. Prevent construction worker exposure to subsurface soils (2-15 feet bgs) above PADEP's Act 2 non-residential MSCs or an SSS approved by PADEP and EPA.
 3. Prevent human and environmental exposure to bulk PCB remediation waste equal to or above 1 ppm for unrestricted use in high occupancy areas, as defined in the Toxic Substances Control Act (TSCA) regulations at 40 CFR 761.61.
 4. Prevent human and environmental exposure to bulk PCB product waste equal to or above 50 ppm, as defined in the TSCA regulations at 40 CFR 761.62

B. Groundwater

EPA's overall goals with respect to groundwater restoration and cleanup are to protect human health and the environment and to return usable groundwater to its maximum beneficial use in a reasonable timeframe given the circumstances at the Facility. Use of groundwater for drinking purposes at the Facility was discontinued in the 1950s because of the naturally occurring concentrations of iron and manganese in the groundwater and the availability of surface water from the Delaware River. Groundwater investigations completed at the Facility conclude that the minimal saturated thickness of the aquifers at the Facility prohibits their development as potential future source for groundwater supply.

The shallow aquifer is encountered from approximately 6.5 to 20 feet bgs and exhibits a limited saturated thickness (20 to 40 feet). Shallow aquifers like this one are vulnerable to many contaminant sources such as road runoff, leaking sewers and pipelines, industrial spills and agricultural chemical infiltration. In addition, its limited thickness makes it unreliable as a potable source during droughts. The shallow and deep aquifers are characterized by naturally occurring concentrations of iron and manganese that exceed EPA's Secondary MCLs for these constituents, which affect taste and color and may cause staining and corrosion. Combined, these factors make the shallow, and deep aquifers beneath the Facility unsuitable as a municipal supply.

Given this information and EPA's goal of returning usable groundwater to its maximum beneficial use, at the Facility, EPA has determined that the maximum beneficial reuse of groundwater at the Facility is as a recharge source to the Delaware River. Therefore, EPA proposes the following Corrective Action Objectives:

1. Prevent recharge flow to the Delaware River with hazardous constituents at levels that would cause an exceedance of PADEP's Surface Water Quality Criteria at 25 Pa. Code § 93.8c. This objective has been met. The analytical data and modelling evidence provided by USS established that groundwater flowing into the Delaware River meets ambient water quality criteria for surface water and ecological impacts.
2. Prevent human exposure to and consumption of groundwater, given that contaminants remain in Facility groundwater above PADEP's Act 2 non-residential used aquifer MSC, by requiring compliance with and maintenance of groundwater use restrictions at the Facility.

Statement of Basis

C. Onsite Surface Water, Terminal Treatment Plant Lagoons, and Sediments

Currently, potential areas of ecological risk exist in surface water and sediment in certain borrow pits that are not completely filled as well as in the Terminal Treatment Plant Lagoons. Therefore, EPA proposes the following Corrective Action Objective:

1. Prevent exposure of threatened, endangered, and special concern species as identified in the Pennsylvania Natural Diversity Inventory (PINDI) database, including the Red-Bellied Turtle, toads, and frogs, to metals and PAHs in borrow pit and Terminal Treatment Plant Lagoons surface water and sediments, in accordance with the requirements of the Endangered Species Act, 16 U.S.C. §§ 1531-1544 and 25 Pa. Code § 250.311.

D. Indoor Air

VOCs have been detected in indoor air at the Facility at levels that may present a risk to human health. Therefore, EPA's Corrective Action Objective for indoor air is:

1. Prevent human exposure to indoor air where VOCs are at levels above EPA's industrial Regional Screening Levels (RSLs) for vapor intrusion.

Section 5: Proposed Remedy

EPA's proposed remedy consists of the following elements:

A. Groundwater

Corrective Action Complete with Controls

The Facility has demonstrated attainment of a standard protective of surface water and has completed a successful clean closure of the primary source area, which occurred after Lot F, containing BP-20, was transferred to Waste Management. Because contaminants remain in the groundwater at the Facility above MCLs, EPA is proposing to prohibit use of groundwater at the Facility as described in Section 5.E., below.

EPA recognizes that new information may be discovered as remediation and redevelopment proceed. Therefore, groundwater monitoring will be required if soil contamination is discovered exceeding selected Corrective Action Objectives. EPA and PADEP will evaluate all new information and determine if additional corrective measures are warranted.

If EPA and PADEP determine that additional institutional controls or other corrective actions are necessary to protect human health or the environment, EPA has the authority to

Statement of Basis

require and enforce such additional corrective actions through an enforceable mechanism which may include an order or environmental covenant, provided any necessary public participation requirements are met.

B. Soils

Construction and Maintenance of Soil Covers at Remaining Lots

In areas at Lots 18-27 where contaminants remain in soils at concentrations above PADEP's Act 2 non-residential MSCs or an SSS approved by PADEP and EPA, EPA's proposed remedy requires the construction and maintenance of soil covers in compliance with an EPA and PADEP-approved work plan. The Soil Cover Work Plan shall include schedules and methodologies to prevent unacceptable risk to human health and the environment from such contamination. A Cleanup Plan and Final Report submitted under Act 2 may be used to meet the requirements of this work plan. Because contaminants remain in soils at the Facility above levels suitable for residential use, EPA is proposing the land use restriction described in Section 5.E., below.

C. Onsite Surface Water, Terminal Treatment Plant Lagoons, and Sediments

1. Wildlife and Wildfowl Protection

EPA's proposed remedy requires continued implementation of the EPA-approved Interim Measures pursuant to the 1993 Consent Order to protect wildfowl and other wildlife from releases of oil, hazardous wastes, and/or hazardous constituents from the on-site Terminal Treatment Plant Lagoons, Borrow Pits 35, 35A, 35B, and 35C. These Interim Measures include:

- a. Construction, monitoring and maintenance of fencing, netting, scare flags, monofilament lines, and scare cannons to discourage wildlife from entering the borrow pits and lagoons;
- b. Removal of free liquid from BP35 and oil from the Terminal Treatment Plant Lagoons and direction to appropriate treatment, as required;
- c. Wildlife/wildfowl observation program, which occurs during months that are high-activity periods for migratory wildfowl (March, October, November); and
- d. Submission of progress reports twice annually, in June and November, detailing the actions taken since the previous progress report and anticipated activities during the next reporting period, including a Wildlife Observation Program Interpretive Report for the high activity periods of March, October, and November.

EPA recognizes that Terminal Treatment Plant lagoons and Borrow Pits 35, 35A, 35B, and 35C may be redeveloped, which may make the Interim Measures described above no longer necessary. For any such redevelopment, as part of this proposed remedy, EPA shall require Statement of Basis

submission of a Redevelopment Work Plan for EPA and PADEP review and approval and compliance with the EPA and PADEP-approved work plan. A Cleanup Plan and Final Report submitted under Act 2 may be used to meet the requirements of the Redevelopment Work Plan.

2. Ecological Risk Assessment

For the Remaining Lots with borrow pit surface water and sediments and topographical depressions that may potentially impact threatened, endangered, or special concern species and potential habitats of concern, EPA's proposed remedy requires submittal of a work plan for EPA and PADEP review and approval. At a minimum, this includes Lots 21, 22, 23, 24, 25, 26, and 27, and the Terminal Treatment Plant Lagoons. The work plan shall include ecological health evaluations using the PINDI database and lot-specific contaminants of concern based on potentially impacted species. If the Ecological Health Evaluation demonstrates potential negative impacts to the impacted species, a plan for relocation of such species shall be included in the work plan. The work plan shall provide a mitigation strategy for the habitat of concern, such as backfilling borrow pits to grade, creation of an enhanced habitat, etc. A Cleanup Plan and Final Report submitted under Act 2 may be used to meet the requirements of the work plan.

D. Indoor Air

1. Facility-Wide Vapor Intrusion Mitigation Systems

EPA proposes that a vapor intrusion mitigation system, the design of which shall be approved in advance by EPA and PADEP, shall be installed in each structure constructed at the Facility above soils that contain VOC contaminants at concentrations above EPA industrial RSLs for vapor intrusion unless it is demonstrated to EPA that vapor intrusion does not pose a threat to human health, and EPA provides prior written approval that no vapor intrusion control system is needed.

2. Vapor Intrusion Assessment at Remaining Lots

For Lots 18-27, EPA proposes that a vapor intrusion assessment be conducted at each existing building using the EPA Vapor Intrusion Screening Level calculator. EPA and PADEP will use the assessment results to determine if vapor intrusion mitigation, such as introduction of additional ambient air or the design of a sub-slab depressurization system, is necessary to eliminate the potential for vapor intrusion. If the results from vapor intrusion assessment demonstrates that EPA industrial RSLs for vapor intrusion are exceeded, EPA will require the installation of a vapor intrusion mitigation system, the design of which shall be approved in advance by EPA and PADEP.

E. Land and Groundwater Use Restrictions

1. Facility-Wide Restrictions

Because contaminants remain in the soil and groundwater at the Facility above levels appropriate for residential use, EPA's proposed remedy requires land and groundwater use restrictions to restrict activities that may result in exposure to those contaminants. EPA is proposing that the following use restrictions and requirements be implemented at the Facility:

- a. Groundwater at the Facility shall not be used for any purpose, including, but not limited to, use as a potable water source, other than to conduct the maintenance and monitoring activities required by PADEP and/or EPA;
- b. The Facility shall not be used for residential purposes;
- c. Maintain EPA and PADEP-approved soil covers;
- d. Annually inspect EPA and PADEP-approved soil covers and repair as necessary;
- e. Document annual inspections in a report to be maintained on site; and
- f. A vapor intrusion mitigation system, the design of which shall be approved in advance by EPA and PADEP, shall be installed in each new structure constructed at the Facility above soils that contain VOC contaminants at concentrations above EPA's industrial RSLs for vapor intrusion, unless it is demonstrated to EPA that vapor intrusion does not pose a threat to human health and EPA provides prior written approval that no vapor intrusion control system is needed.

2. Lot E.1/Former Power House Area Restrictions

EPA is proposing that the following additional land use restriction be implemented at the Lot E.1/Former Power House Area:

- a. All earthmoving activities, including excavation, drilling and construction activities, shall be conducted in a manner such that the activity will not pose a threat to human health and the environment or adversely affect or interfere with the final remedy, will meet appropriate Personal Protective Equipment requirements sufficient to meet EPA's acceptable risk range, and will comply with all applicable Occupational Health and Safety Administration (OSHA) requirements. No such activities shall take place at the Facility unless EPA, in consultation with PADEP, provides prior written approval.

3. Lot 5.1 and Lot 1 Restrictions

EPA is proposing that the following additional land use restriction be implemented at Lot 5.1 and Lot 1:

- a. Removal of PCB remediation waste greater than or equal to 1 ppm at Lot 1 and PCB bulk product waste greater than or equal to 50 ppm at Lot 5.1 is prohibited without

Statement of Basis

- prior written approval of EPA and PADEP.
- b. For PCB bulk product waste that remain at Lot 5.1 in concentrations greater than or equal to 50 ppm, submit a Work Plan for EPA approval to properly manage or remove and dispose of materials.
 - c. For PCB remediation waste that remain at Lot 1 in concentrations greater than or equal to 1 ppm, adhere to the following requirements:
 - Notify future landowners that the lot has been used for PCB remediation waste disposal and PCB waste remains on the property;
 - Submit a work plan documenting what activities will be performed to ensure appropriate management and capping of such waste for EPA and PADEP approval; and
 - At least twice annually, conduct an inspection of and any maintenance required on the installed shelter, security gates, basement pumps, PCB waste and marking system of such soils must be conducted with records maintained at the Lot.

The land use restrictions and requirements listed in this Section have already been implemented at certain parcels at the Facility through environmental covenants prepared under Pennsylvania's Uniform Environmental Covenants Act, 27 Pa. C.S. §§ 6501 et seq. (UECA). For those parcels that do not have an environmental covenant, EPA is proposing the land use restrictions and requirements be implemented through an environmental covenant prepared under Pennsylvania's UECA. If the owner of the Facility parcel fails to meet and maintain its obligations under an EPA or PADEP-approved environmental covenant; or EPA or PADEP, in its sole discretion, deems that additional ICs are necessary to protect human health or the environment, both agencies have the authority to enforce the environmental covenant or require and enforce additional corrective action.

F. Additional Requirements for Final Remedy

1. Coordinate Survey

Each owner of Facility property shall provide EPA with a coordinate survey as well as a metes and bounds survey of the Facility boundary and of each area subject to engineering, intrusive activities, notification controls, and other activity and use limitations. Mapping the extent of the land use restrictions will allow for presentation in a publicly accessible mapping program such as Google Earth or Google Maps.

2. Environmental Covenants

For those parcels of Facility property for which an environmental covenant has been previously recorded in the chain of title, the owner of the Facility property shall provide EPA with a copy of the recorded environmental covenant. In addition, the owner of the Facility Statement of Basis

property shall provide EPA with each environmental covenant recorded in the future.

3. Cost Estimate

Each Facility property owner shall provide EPA and PADEP with an itemized cost estimate for remaining remediation work for EPA's and PADEP's use in evaluating the need for financial assurance.

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 on Corrective Action decision documents. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

A. Threshold Criteria

1. Overall Protection of Human Health and the Environment

EPA's proposed remedy for the Facility protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risk through the implementation and maintenance of land and groundwater use restrictions. For areas that present or may present unacceptable risks to human health and the environment, Act 2 Cleanup Plans and Final Reports or other work plans are required to ensure corrective action activities will be completed to address unacceptable human health and environmental risks, consistent with this proposed remedy. Until Act 2 Cleanup Plans and Final Reports or other work plans are approved, compliance with the interim measures in the 1993 Consent Order to protect ecological receptors is also required. In addition, EPA's proposed remedy restricts land use to non-residential and limits groundwater use to monitoring only at the Facility, in accordance with restrictions already in place at the Facility. Therefore, EPA's proposed remedy protects human health and the environment.

2. Achieve Media Cleanup Objectives

Investigation results at the Facility demonstrate that soils meet current PADEP SHSs for non-residential MSCs or SSSs for those lots that have an approved Act 2 Final Report. Where contaminants remain in soils at concentrations above PADEP's Act 2 non-residential MSCs or an SSS approved by PADEP and EPA, EPA's proposed remedy requires the construction and maintenance of soil covers in compliance with an EPA and PADEP-approved work plan. These standards fall within EPA's acceptable risk range and are protective of human health and the environment. In addition, EPA has determined that the beneficial use for groundwater at the Facility is as a recharge use for surface water and that ambient surface water criteria have been

Statement of Basis

met. If new information is discovered, such as soil contamination exceeding Corrective Action Objectives, EPA and PADEP may require additional groundwater monitoring. Therefore, the proposed remedy has achieved or will achieve media cleanup objectives.

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. Based on the information currently available to EPA, there are no remaining large, discrete sources of waste from which constituents would be released to the environment. The regulated hazardous waste landfill at Lot F has been removed, eliminating a potential source of releases to groundwater. If additional sources of releases are discovered in soil exceeding Corrective Action Objectives, EPA may require additional groundwater monitoring. Therefore, EPA has determined that the proposed remedy remediates the sources of releases.

B. Balancing Criteria

4. Long-Term Effectiveness

The long-term effectiveness of the remedy for the Facility will be maintained by Facility owner compliance with land and groundwater use restrictions in addition to any approved Act 2 Cleanup Plans and Final Reports or other work plans. Annual compliance reports that will be submitted to EPA and/or PADEP, as required by the environmental covenants, will ensure continued compliance with land and groundwater use restrictions.

5. Reduction of Toxicity, Mobility, or Volume

Reduction of toxicity, mobility, or volume of hazardous constituents has already been achieved by removal of the landfill at Lot F. Data from the Facility-wide groundwater monitoring and soil sampling results demonstrates that ambient surface water criteria have also been achieved. Additionally, at Lot 5.1, the proposed remedy requires a work plan for removal PCB bulk product waste equal to or above 50 ppm. At Lot 1, the proposed remedy requires a work plan documenting appropriate management and capping of PCB remediation waste equal to or above 1ppm. Therefore, the proposed remedy reduces toxicity, mobility, or volume of hazardous constituents.

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. Any additional corrective action activities will be completed in consultation with EPA and in

Statement of Basis

accordance with OSHA requirements to limit short-term risks to remedial workers. As such, the proposed remedy will be short-term effective.

7. Implementability

EPA's proposed remedy has already been partially implemented by USS under the Act 2 program in accordance with the One Cleanup Program Memo and the 1993 Consent Order. For Remaining Lots, a Cleanup Plan and Final Report submitted under Act 2 may be used to meet the requirements of required work plans, as specified in Section 5. Therefore, the proposed remedy is readily implementable.

8. Cost

The Facility owner shall provide EPA and PADEP with an itemized cost estimate for remaining corrective action work for EPA and PADEP's use in evaluating the need for financial assurance.

9. Community Acceptance

EPA will evaluate community acceptance of the proposed remedy during the public comment period, and it will be described in the Final Decision selecting the Final Remedy.

10. State Acceptance

EPA will evaluate the Commonwealth's acceptance of the proposed remedy during the public comment period and provide an analysis in the Final Decision.

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 will evaluate whether financial assurance is required based on the cost estimate(s) it receives from the Facility owner(s), as required in Section 5.F.3., above.

Section 8: Public Participation

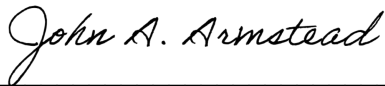
Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, or electronic mail to Linda Matyskiela at the contact information listed below.

A public meeting will be held upon request. Requests for a public meeting should be submitted to Linda Matyskiela in writing at the contact information listed below. A meeting will not be scheduled unless one is requested.

The AR contains all the information considered by EPA for the proposed remedy in this SB. The AR is available at the following location:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Linda Matyskiela (3LD20)
Phone: (215) 814-3420
Email: Matyskiela.Linda@epa.gov

Date: 12.3.20



John A. Armstead, Director
Land, Chemicals, and Redevelopment Division
US EPA, Region III

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

Attachment A - Administrative Record

Investigation by Lot

1 *Former BP NT-4 Act 2 Remedial Investigation/Final Report and Risk Assessment*, May 13, 2016

1 EPA Approval Letter for BP NT-4 Area, Site Specific Standard for PCB, August 30, 2016

2 *Act 2 Final Report for 95-Acre Parcel Including Former BP-19*, September 17, 2015

3 *Act 2 Final Report for 7.5 Acre Parcel*, August 4, 2011

4 *Act 2 Remedial Investigation/Final Report for 29-Acre Parcel*, October 4, 2019 - Amended October 7, 2019

5 *Act 2 Remedial Investigation/Final Report for the Former Sheet and Tin Mill Area - 158-Acre Parcel*, February 29, 2016

5.1 *Polychlorinated Biphenyl Final Report- For Various Sheet and Tin Facility Basements*, March 2, 2018

6 *Act 2 Remedial Investigation/Final Report for 21-Acre Parcel*, October 10, 2019

7 *Act 2 Final Report for Steel Orca Data Center Project - 37.95-Acres*, April 24, 2012

8, D *Act 2 Remedial Investigation/Risk Assessment/Final Report, 52-Acre Parcel*, May 23, 2017

9 *Final Report - Fairless Works Energy Center*, June 2002

9 EPA Approval Letter for Fairless Works Energy Center Final Report, 2002, August 15, 2002

10 *Act 2 Final Report for 32-Acre Parcel*, September 8, 2015

11 *Act 2 Remedial Investigation/Final Report for American Biofuels - 71-Acre Parcel*, October 23, 2007

12.1 *Act 2 Remedial Investigation/Risk Assessment/Final Report, 73-Acre Parcel*, April 26, 2017

12.2 *Remedial Action Completion Report - Former Open Hearth Site - 0.3 Acres*, June 20, 2013

13 *Act 2 Remedial Investigation/Final Report Air Products and Chemicals, Inc. Relocation Project*, December 10, 2010

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

14 *Final Act 2 Report - Kinder Morgan Area A-1-8.08 Acres*, April 19, 2013

15 *Act 2 Remedial Investigation/Final Report - Cleaned and Abandoned Fuel Oil Line - Kinder Morgan Fertilizer Dome Lease Area*, March 31, 2008

16 *Act 2 Final Report - Kinder Morgan Fertilizer Dome Lease Area - Domes 3 and 4*, March 21, 2012

17 *Act 2 Final Report for 8-Acre Parcel Formerly Containing Seven Process Dip Tanks*, March 2014

A Remedial Investigation, Risk Assessment, and Final Report - Gravel Area Parcel, November 2006

A EPA Approval Letter of RIR/FR for Soils at Gravel Area, December 7, 2006

B *Act 2 Remedial Investigation/Final Report - Proposed AE Polysilicon Corp. 30 Acre Parcel*, August 20, 2007

B EPA Approval Letter for RIR/FR for Soils at Proposed AE Polysilicon Parcel, October 30, 2007

C *Act 2 Remedial Investigation/Final Report and Risk Assessment - Motor Room Building Area (9.4 Acres)*, October 2014

E.1 *Final Report/Remedial Investigation Report - Powerhouse Underground Storage Tank FFU-160 Area*, May 24, 2016

E.2 *Remedial Investigation/Act 2 Final Report - Condensate Tank*, June 13, 2012

F *Remedial Investigation Report - Fairless Parcel*, November 2007

F *Risk Assessment Report and Cleanup Plan – Fairless Parcel*, April 2008

F *Amendment to the Risk Assessment Report and Cleanup Plan – Fairless Parcel*, February 2009

F *Act 2 Final Report for Soils – Fairless Parcel*, July 2015

F *Borrow Pit 20 RCRA Clean Closure Report*, October 2019

F PADEP Letter - Clean Closure Certification of BP-20, June 25, 2020

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

G Act 2 Remedial Investigation/Cleanup Plan/Final Report Proposed Gamesa 73.86-Acre Expansion Project, May 22, 2008

G EPA Approval Letter of RIR/CP/FR for Soils at Gamesa, August 8, 2008

H Remedial Investigation/Act 2 Final Report - 22-Acre Parcel, June 8, 2005

H EPA Approval Letter for RIR/FR for Soils at Old Central Maintenance Shop Parcel, June 17, 2005

I Act 2 Remedial Investigation Final Report - 28-Acre Parcel Lot 8 Phase 4, March 28, 2007

J Act 2 Remedial Investigation Final Report - 10-Acre Parcel Lot 5, Phase 3, August 10, 2007

K Remedial Investigation/Pathway Elimination Analysis/Final Report for the Former Tube City, LLC, Property located at 300 South Steel Road in Section II of the USX Industrial Park, April 28, 2005

L Remedial Investigation/Final Act 2 Report - 35.26-Acre Liberty Coating Company, February 2, 2009

Remedial Investigation/Final Act 2 Report - Site-Wide Groundwater, August 4, 2010

Act 2 RIR/FR – Proposed Samax 14.2-Acre Parcel, March 31, 2008

Final Report, Wheelabrator Falls, Inc. Property, September 1997

Historical Operation Assessments of Previously Undeveloped Parcels, December 19, 2019 and April 27, 2020

General

Final Administrative Order on Consent, USX Corporation Fairless Hills, PA, Docket RCRA-III-065-CA, signed 4/20/1993

EPA and PADEP Letter for One Cleanup Program at US Steel – Fairless Works, September 28, 2005

Description of Current Conditions – US Steel Fairless Works, Volumes I, II, III, July 1993

Health and Safety Plan for US Steel Fairless Works, May 1993

Quality Assurance Project Plan, Act 2/RCRA Corrective Action – US Steel Fairless Works, July 2001

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

Onsite Soil Reuse Plan, Former US Steel Fairless Works, October 7, 2008

Draft Environmental Data Summary Report, June 30, 2020

Environmental Covenants

United States Steel Corporation, County Tax Parcel 13-051-001, Instrument Number Recorded 10/30/2014 (Entire Facility)

Waste Management Disposal Services of Pennsylvania Inc., County Tax Parcel 13-50-3, Instrument Number 2016027296, Recorded 5/17/2016 (Lot F)

Waste Management Fairless LLC, County Tax Parcels 13-51-1-25 and 13-50-6, Instrument Number 2016027298, Recorded 05/17/2016 (Lot F)

United States Steel Corporation, County Tax Parcel 13-51-1, Instrument Number 2016027294, Recorded 05/17/2016 (Lot 28)

United States Steel Corporation, County Tax Parcel Portion of 13-51-1, Instrument Number 2018060745, Recorded 11/2/2018 (Lot 8 and Lot D)

Exelon Generation, County Tax Parcel 13-50-7, Instrument Number 2019052102, Recorded 09/19/2019, (Lot E.1)

Yookel, Inc., County Tax Parcel 13-51-1-1, Recorded 10/10/2008 (Samax)

United States Steel Corporation, County Tax Parcel 13-51-1, 13-51-1-14, 13-51-1-15, Instrument Number 2008087254, Recorded 10/10/2008 (Lot G)

United States Steel Corporation, County Tax Parcel 13-051-001, 13-051-001-005, 13-051-001-012, Instrument Number 2016032320, Recorded 6/7/2016 (Lot 2)

United States Steel Corporation, County Tax Parcel 13-051-001-005, Portion of 13-051-001-012, Instrument Number 2016032321, Recorded 6/7/2016 (Lot 10)

United States Steel Corporation, County Tax Parcel 13-051-001, Instrument Number 2016047054, Recorded 8/8/2016 (Lot 5)

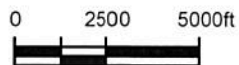
United States Steel Corporation, County Tax Parcel 13-051-001, Instrument number 2104060392, Recorded 10/30/2014 (Lot 15)

United States Steel Corporation, County Tax Parcel 13-051-001-026, Instrument Number 2015069724, Recorded 11/10/2015 (Lot C)
Statement of Basis

Liberty Land Holding LLC, County Tax Parcel 13-47-136, Instrument Number 2009092466,
Recorded 11/10/2009 (Lot

Statement of Basis

US Steel Mon Vally Works Fairless Hills
December 2020

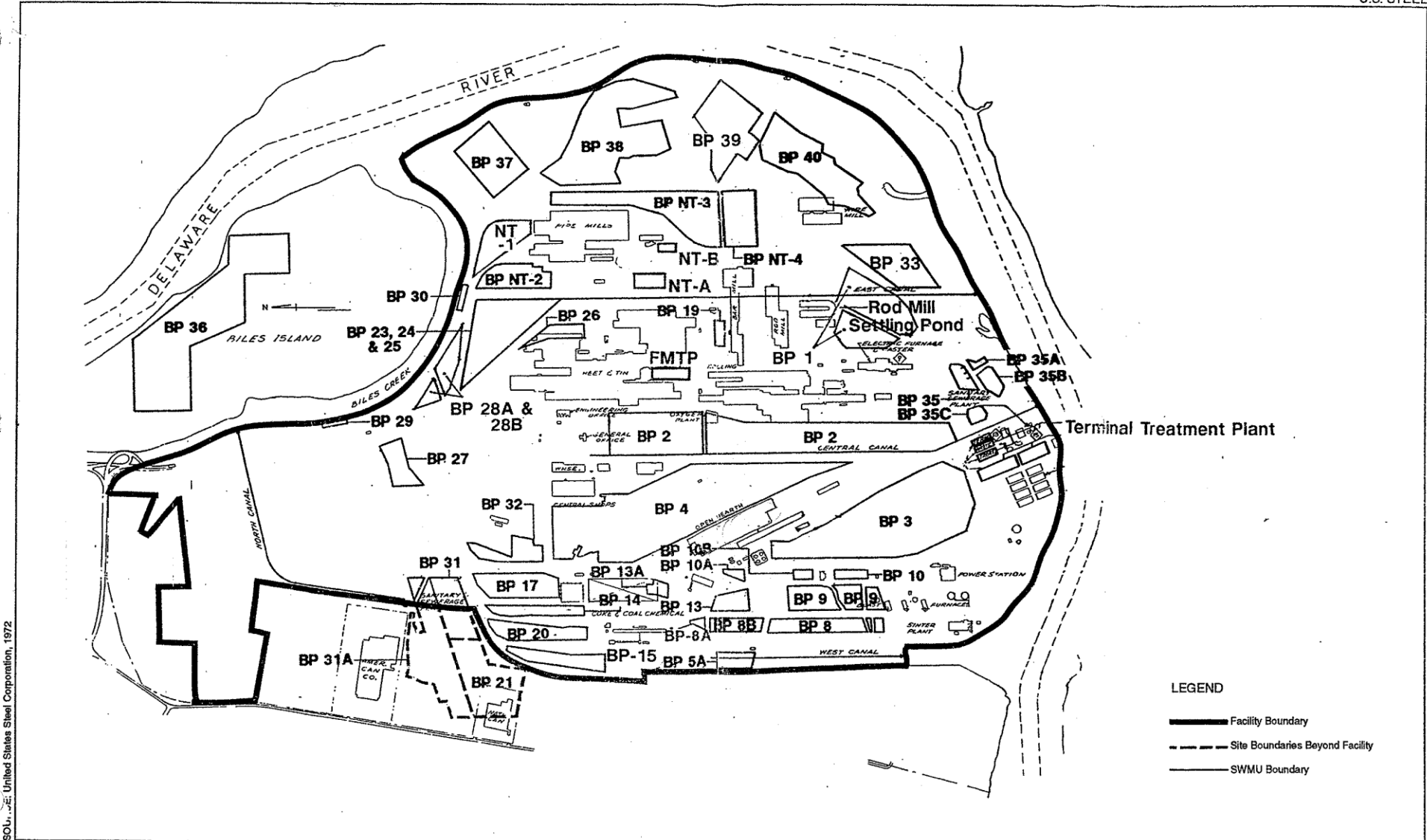


**U.S. STEEL
FAIRLESS HILLS, PA
ENVIRONMENTAL DATA SUMMARY REPORT**

Project No. 11211507
Date APRIL 2020

FACILITY LOCATION

FIGURE 1



SDU...J.E. United States Steel Corporation, 1972

BCM Project No. 00-5039-70

0 1500 FT

NORTH

LEGEND

———— Facility Boundary

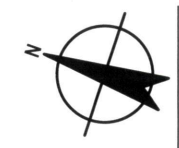
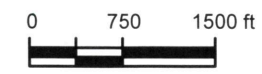
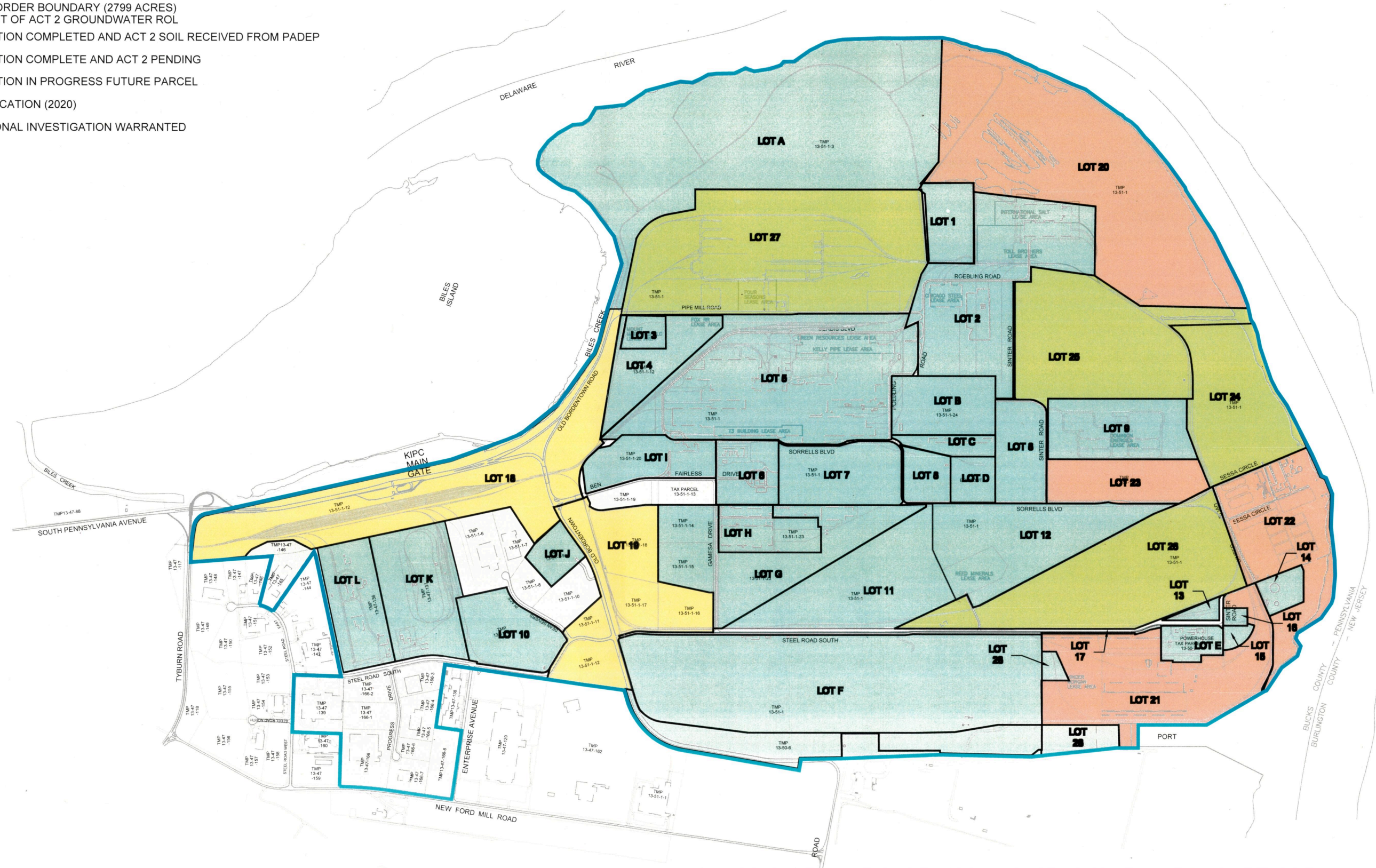
- - - - - Site Boundaries Beyond Facility

- · - · - SWMU Boundary

Figure 3
 Site Location Map, Fairless Works
 Fairless Hills, Pennsylvania

LEGEND

- CONSENT ORDER BOUNDARY (2799 ACRES)
AND EXTENT OF ACT 2 GROUNDWATER ROL
- INVESTIGATION COMPLETED AND ACT 2 SOIL RECEIVED FROM PADEP
- INVESTIGATION COMPLETE AND ACT 2 PENDING
- INVESTIGATION IN PROGRESS FUTURE PARCEL
- PARCEL LOCATION (2020)
- NO ADDITIONAL INVESTIGATION WARRANTED

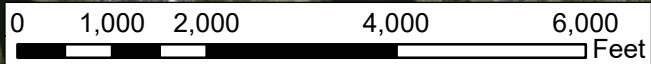


U.S. STEEL
FAIRLESS HILLS, PA
ENVIRONMENTAL DATA SUMMARY REPORT

Project No. 11211507
Date June 2020

SITE PLAN

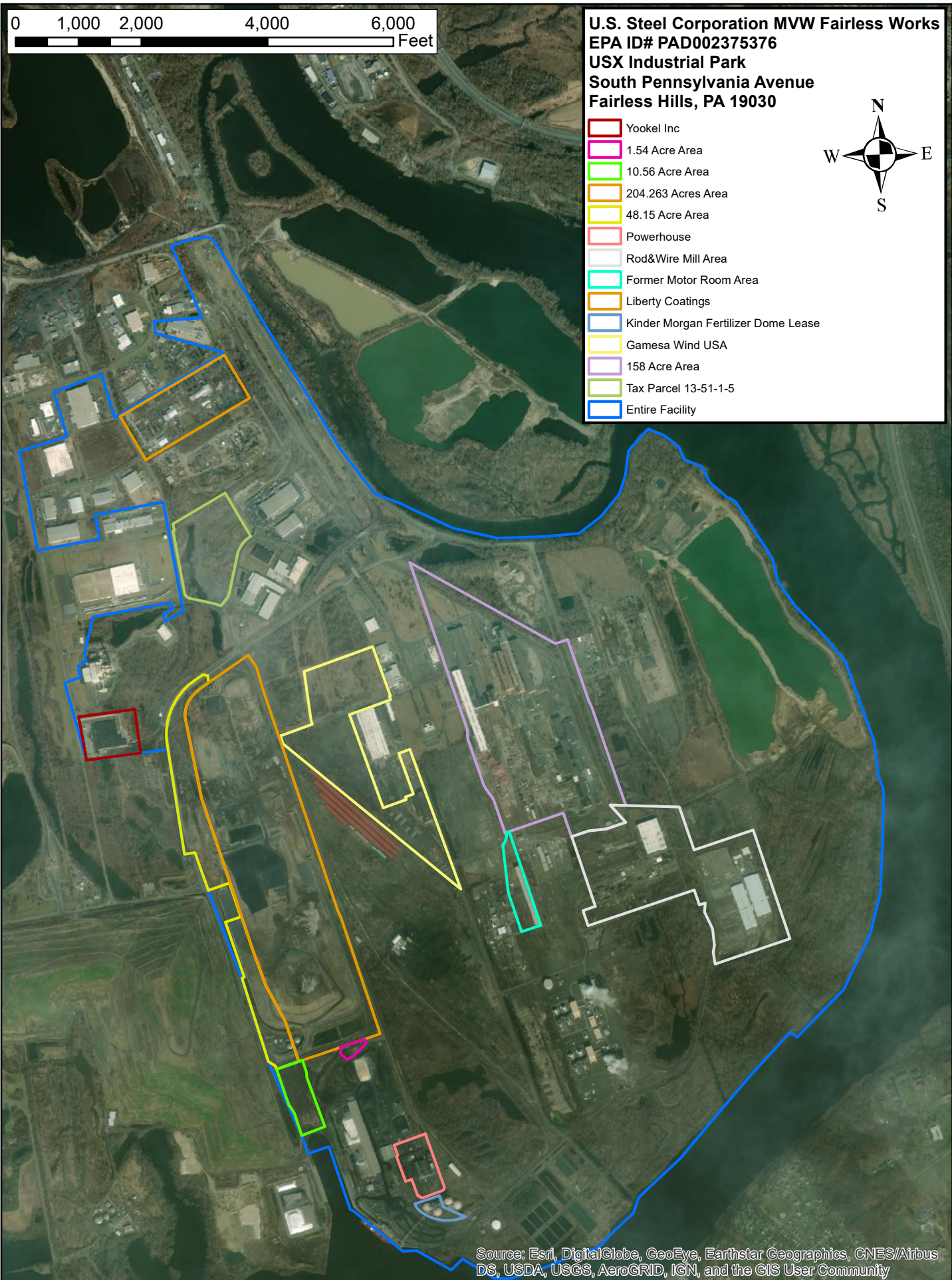
FIGURE 1.2



U.S. Steel Corporation MVW Fairless Works
EPA ID# PAD002375376
USX Industrial Park
South Pennsylvania Avenue
Fairless Hills, PA 19030



- Yookel Inc
- 1.54 Acre Area
- 10.56 Acre Area
- 204.263 Acres Area
- 48.15 Acre Area
- Powerhouse
- Rod&Wire Mill Area
- Former Motor Room Area
- Liberty Coatings
- Kinder Morgan Fertilizer Dome Lease
- Gamesa Wind USA
- 158 Acre Area
- Tax Parcel 13-51-1-5
- Entire Facility



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Table 1
Summary of Lots
Statement of Basis
U. S. Steel Mon Valley Works Fairless Hills
Fairless Hills, Pennsylvania

Parcel	e-FACTS ID		Tax Parcel	Report Type(s) and Parcel Size	Parcel Size (Acres)	Additional Description	Standard	Documents		Comment	Proposed Remedy	Environmental Covenant Recorded Date
	Facility	Site						Report	Approval			
GW	726731		--	RI/FR - 3900 Acre Parcel	2800	Site-wide Groundwater	SSS, NR-SHS	Yes	Yes	SSS for Select VOC, SVOCs, and Metals - See LOT 12.2 for Excluded Area 1 Approval - See LOT E.2 for Excluded Area 2 Approval	1	10/30/2014*
Act 2 Parcels Owned by USS												
Lot 01	809297		13-51-1	RI/RA/FR - 15-Acre Parcel	15.4	Former BP NT-4	SSS, NR-SHS	Yes	Yes	SSS for Aroclor-1248	1,2,6	10/30/2014*
Lot 02	805128		13-51-1	FR - 95-Acre Parcel	95	95-Acre Parcel including Former BP-19	NR-SHS	Yes	Yes		1	6/7/2016
Lot 03	735079	688671	13-51-1-12	FR - 7.5-Acre Parcel	7.5	Former ABC Construction Co., Inc.	NR-SHS	Yes	NA	Approval Not Required - Meets SHS	1	6/7/2016
Lot 04	835237		13-51-1-12	RI/FR - 29-Acre Parcel	29	BP-23,24,25	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 05	807837		13-51-1	FR - 158-Acre Parcel	158	Sheet and Tin Mill	NR-SHS	Yes	Yes		1,7	8/8/2016
Lot 06	838035		13-51-1	RI/FR - 21-Acre Parcel	21	Administrative Offices	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 07	750855	759362	13-51-1	FR - 37.96-Acre Parcel	37.96	Steelcorca	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 08	825352		13-51-1/13-51-1-27	RI/RA/FR - 52-Acre Parcel	41.4	BP-2 South, Motor Room Area	SSS, NR-SHS	Yes	Yes	SSS for Vanadium; Portions sold to Lot D	1	11/2/2018
Lot 09	619996		13-51-1-21	FR - 45-Acre Parcel	45	Fairless Works Energy Center, Dominion	NR-SHS	Yes	NA	Approval Not Required - Meets SHS	1	10/30/2014*
Lot 10	804117		13-51-1-5	FR - 32-Acre Parcel	32		NR-SHS	Yes	Yes		1	10/30/2014*
Lot 11	698050	691444	13-51-1	RI/FR - 71-Acre Parcel	71	Proposed American BioFuels	SSS, NR-SHS	Yes	Yes	SSS for dibenzofuran	1	10/30/2014*
Lot 12.1	817311		13-51-1	RI/RA/FR - 73-Acre Parcel	73	BP-4 South, Open Hearth Area	SSS, NR-SHS	Yes	Yes	SSS for Iron and Vanadium	1	10/30/2014*
Lot 12.2	09-24273		13-51-1	RAC - 0.3-Acres Parcel	0.3	Former Open Hearth Site - FFU-7/8	NR-SHS	Yes	Yes	Select VOC/SVOC	1	10/30/2014*
Lot 13	735127	740240	13-51-1	RI/FR - 5.36 Acre Parcel	5.36	Air Products and Chemicals, Inc. Relocation Project	NR-SHS	Yes	NA	Approval Not Required - Meets SHS	1	10/30/2014*
Lot 14	760603	691444	13-51-1	FR - 8.08-Acres Parcel	8.08	KM Lease Area - A-1	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 15	706759	706157	13-51-1	RI/FR - 2.70-Acre Parcel	2.7	Kinder Morgan Fertilizer Dome	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 16	750074	260854	13-51-1	FR - 2.4-Acre Parcel	2.4	KM Lease Area - Domes 3 & 4	NR-SHS	Yes	Yes	Approval Not Required - Meets SHS	1	10/30/2014*
Lot 17	696036		13-51-1	FR - 8-Acre Parcel	8	Drip Tanks	NR-SHS	Yes	Yes		1	10/30/2014*
Lot 18	839140		13-51-1-12	RI/RA/FR - 143-Acre Parcel	143	Site Entrance	SSS, NR-SHS	Yes	Pending	SSS for Iron and Vanadium	1,5	10/30/2014*
Lot 19	839178		13-51-1-11/12/16/17/18	RI/RA/FR - 77-Acre Parcel	77	BP-32 Area	SSS, NR-SHS	Yes	Pending	SSS for Iron and Vanadium	1,5	10/30/2014*
Lot 20			13-51-1	210 Acre Parcel	210	South East Riverfront Parcel			DRAFT	Investigation Complete; Report being prepared	1,5	10/30/2014*
Lot 21			13-51-1	102-Acre Parcel	102	Kinder Morgan Main Parcel			DRAFT	Investigation Complete; Report being prepared	1,4,5	10/30/2014*
Lot 22			13-51-1	76-Acre Parcel	76	TTP Parcel			DRAFT	Investigation Complete; Report being prepared	1,4,5,8	10/30/2014*
Lot 23			13-51-1	36-Acre Parcel	35	BP2-South and Central Canal			DRAFT	Investigation Complete; Report being prepared	1,4,5	10/30/2014*
Lot 24			13-51-1	69-Acre Parcel	70	BP 35 and landfill				Investigation Complete; CP anticipated	1,4,5,8	10/30/2014*
Lot 25			13-51-1	101-Acre Parcel	110	BP1				Investigation Complete; CP anticipated	1,4,5	10/30/2014*
Lot 26			13-51-1	115-Acre Parcel	115	BP3				Investigation Complete; CP anticipated	1,4,5	10/30/2014*
Lot 27			13-51-1	182-Acre Parcel	182	Pipe Mill			DRAFT	Investigation Complete; CP anticipated	1,4,5	10/30/2014*
Lot 28			13-51-1	See Lot F	12.1	BP-5/BP-8 as Part of Coke Works Area	SSS, NR-SHS	Yes	Yes		1,2,3	5/17/2016
Misc.			13-51-1	Not Specifically Identified	69	Roads, sidings, and various intermittent parcels						
Act 2 Parcels Not Owned by USS												
Lot A	686340		13-51-1-3	RI/RA/FR - 264-Acre Parcel	264	Waste Management Gravel Area	SSS, NR-SHS	Yes	Yes	SSS for Iron	1	10/30/2014*
Lot B	696036	691444	13-51-1-24	RI/FR - 30-Acre Parcel	30	Proposed AE Polysilicon Corp.	SSS, NR-SHS	Yes	Yes	SSS for dibenzofuran	1	10/30/2014*
Lot C	777132		13-51-1-26	RI/RA/FR - 9.4 Acre Parcel	9.4	Motor Room building Area	SSS, NR-SHS	Yes	Yes	SSS for iron	1	10/11/2015
Lot D			13-51-1-27	See Lot 8	10.6						1	see Lot 8
Lot E.1	809909		13-50-7	RI/FR - 2.7-Acre Parcel	2.7	Powerhouse FFU-160 Area	NR-SHS	Yes	Yes		1,2,3	9/19/2019
Lot E.2	750863		13-50-7	RI/FR - 0.006-Acre Parcel	0.006	Powerhouse Condensate Tank	NR-SHS	Yes	NA		1	see Lot E.1
Lot F	699185	696766/ 769292	13-51-1-25 /13-50-6	RI & FR - 252-Acre Parcel	260	Fairless Parcel, Coke Works Area	SSS, NR-SHS	Yes	Yes		1,2,3	2ECs 5/17/2016
Lot G	706624	705995	13-51-1-14/15/23	RI/CP/FR - 73.86-Acre Parcel	73.86	Proposed Gamesa Expansion Project	SSS, NR-SHS	Yes	Yes	SSS for dibenzofuran	1	10/10/2008
Lot H	667077	654544	13-51-1-23	RI/FR - 22-Acre Parcel	22	Old Central Maintenance Shop	NR-SHS	Yes	Yes		1	10/30/2014*
Lot I	692279		13-51-1-20/28	RI/FR - 28-Acre Parcel	28	Lot 8 Phase 4	NR-SHS	Yes	Yes		1	10/30/2014*
Lot J	695137	691444	13-51-1-9	RI/FR - 10-Acre Parcel	10	Lot 5, Phase 3 - ARRR	NR-SHS	Yes	Yes		1	10/30/2014*
Lot K	454610		13-47-137	RI/FR - 52.5-Acre Parcel	52.5	Tube City	SSS, NR-SHS	Yes	Yes	SSS for Lead	1	10/30/2014*
Lot L	714873	715949	13-47-136	RI/FR - 35.26-Acre Parcel	35.26	Liberty Coating Company	NR-SHS	Yes	Yes		1	10/30/2014*
	701562	691444	13-51-1-1	RI/FR - 14.2-Acre Parcel	14.2	Samax / Yookel, BP-21	NR-SHS	Yes	Yes		1	10/30/2014*
				FR -Wheelabrator Falls	75	BP-31, 31A	NR-SHS	Yes	Yes		1	10/30/2014*

Table 1
Summary of Lots
Statement of Basis
U. S. Steel Mon Valley Works Fairless Hills
Fairless Hills, Pennsylvania

Parcel	e-FACTS ID		Tax Parcel	Report Type(s) and Parcel Size	Parcel Size (Acres)	Additional Description	Standard	Documents		Comment	Proposed Remedy	Environmental Covenant Recorded Date
	Facility	Site						Report	Approval			
Parcels Not Owned by USS - No Further Investigation Warranted												
			13-47-145	Letter to EPA - 12/13/2019	7.2						1	10/30 2014*
			13-47-166	Letter to EPA - 12/13/2019	14.5						1	10/30 2014*
			13-47-166-1	Letter to EPA - 12/13/2019	7.5						1	10/30 2014*
			13-47-166-2	Letter to EPA - 12/13/2019	7.1						1	10/30 2014*
			13-47-166-3	Letter to EPA - 12/13/2019	7						1	10/30 2014*
			13-47-166-4	Letter to EPA - 12/13/2019	4.8						1	10/30 2014*
			13-47-166-5	Letter to EPA - 12/13/2019	3.7						1	10/30 2014*
			13-47-166-6	Letter to EPA - 12/13/2019	3.4						1	10/30 2014*
			13-47-166-7	Letter to EPA - 12/13/2019	6.5						1	10/30 2014*
			13-47-166-8	Letter to EPA - 12/13/2019	9						1	10/30 2014*
			13-51-1-13	Letter to EPA - 12/13/2019	7						1	10/30 2014*
			13-51-1-19	Letter to EPA - 12/13/2019	6.7						1	10/30 2014*
			139-47-139	Letter to EPA - 04/27/2020	13.7						1	10/30 2014*
			13-51-1-6	Letter to EPA - 04/27/2020	19.3						1	10/30 2014*
			13-51-1-7	Letter to EPA - 04/27/2020	8						1	10/30 2014*
			13-51-1-8	Letter to EPA - 04/27/2020	5.7						1	10/30 2014*
			13-51-1-10	Letter to EPA - 04/27/2020	12.3						1	10/30 2014*
			13-47-146	Letter to EPA - 04/27/2020	3.5						1	10/30 2014*

Notes:

- CP Cleanup Plan
- RI Act 2 Remedial Investigation Report
- RA Act 2 Risk Assessment Report
- FR Act 2 Final Report
- SSS Site Specific Standard
- NR-SHS Non-Residential Statewide Health Standard
- * Environmental Covenant for Entire Facility Recorded 10/30/2014

Remedy Elements:

- 1 NR/NP Non-Residential use/Non Potable use restriction
- 2 Soil Soil cover
- 3 PRC Post Remedial Care required
- 4 EHE Ecological Health Evaluation
- 5 VI Vapor Intrusion Assessment
- 6 PCB PCB notification, soil cover, use limitations
- 7 PCB PCB material removal
- 8 WL Wildlife Deterrent