UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

FINAL DECISION AND RESPONSE TO COMMENTS

PEMCO INC. LOTS 27C AND 28
5601 EASTERN AVE
BALTIMORE, MARYLAND

EPA ID NO. MDD003093499

Prepared by
Land Chemicals and Redevelopment Division
September 2020

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List of Acronyms

AOC	Area of Concern
AR	Administrative Record
COC	Contaminant of Concern
EPA	Environmental Protection Agency
FDRTC	Final Decision Response to Comments
GPRA	Government Performance and Results Act
MCL	Maximum Contaminant Level
MDE	Maryland Department of the Environment
PAH	Polycyclic Aromatic Hydrocarbon
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SL	Screening Level
SVOC	Semi Volatile Organic Compound
SB	Statement of Basis
UST	Underground Storage Tank
VOC	Volatile Organic Compound

Section 1: Introduction

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments (FDRTC or Final Decision) selecting a final remedy (Final Remedy) for the approximately eight-acre Lots 27C and 28 (collectively, the Parcels) on the eastern side of the former Pemco Baltimore Plant located in Baltimore, Maryland (Facility). These Parcels are commonly referred to as the Road and Retail Parcels, respectively. The Final Decision is issued pursuant to Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste (HSWA) of 1984, 42 U.S.C. §§ 6901 et seq. EPA's Final Remedy for the Parcels consists of the following components: 1) compliance with and maintenance of groundwater and land use restrictions to be implemented through institutional controls; 2) vapor intrusion controls; and 3) capping of the Parcels with clean soil, asphalt, or concrete.

On May 13, 2020, EPA issued a Statement of Basis (SB) in which EPA proposed a remedy for the Parcels. EPA held a thirty (30)-day public comment period which began on May 13, 2020 and ended on June 12, 2020. The only comments EPA received during the public comment period were submitted by the past and current owners of the Parcels, TRP-MCB 5601 Eastern LLC, MCB Y56 Retail LLC, and MCB Y56 Retail LLC (collectively, MCB). The public comments received are included in Attachment A.

Based on comments received during the public comment period, EPA is making minor modifications to the proposed remedy and incorporating them into the selected Final Remedy as described in more detail in Attachment B, EPA Response to Comments.

The Facility is subject to EPA's RCRA Corrective Action program. The Corrective Action program requires that owners and operators of facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, usually in the form of soil or groundwater contamination, that have occurred at or emanated from their property. Maryland is not authorized for the Corrective Action program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the State of Maryland for the Corrective Action program.

EPA will propose a remedy in a separate SB for the rest of the Facility's soils and Facility-wide groundwater, including the Parcels' groundwater, after they have been evaluated under a Corrective Measures Study. In the interim, in this Final Decision, EPA is selecting groundwater use restrictions at the Parcels to prevent use of shallow groundwater until a final remedy for Facility-wide groundwater is selected.

Information on the Corrective Action Program as well as a fact sheet for the Facility can be found at: https://www.epa.gov/hwcorrectiveactionsites.
The Administrative Record (AR) for the Facility contains all documents, including data and quality assurance information, on which EPA's Final Remedy is based.

Section 2: Facility Background

2.1 Introduction

The entire Facility compromises approximately 20 acres of land in Baltimore City, Maryland.

Figure 1 shows the Facility layout. The Facility was previously owned by PEMCO and was formerly used to manufacture inorganic pigments and specialty glasses (known as frit). Frit manufacturing operations started in the early 1900s and ceased in September 2007. The pigments and frit were used to produce porcelain enamel and ceramic glaze coatings. For frit production, additives were mixed with the raw bulk materials and heated in smelting furnaces until molten. The molten glass was cooled in water-chilled rollers, and then broken into shards. The broken shards were either packaged or further milled to produce powdered frit.

The entire Facility was acquired by TRP-MCB 5601 Eastern LLC from Pemco Holding Corporation in April 2014. In November 2018, TRP-MCB 5601 Eastern LLC subdivided the complete Facility into five separate lots. In December 2018, TRP-MCB 5601 Eastern LLC transferred each of the five new lots to five separate, affiliated entities. Lot 27C was transferred to MCB Y56 Road LLC and Lot 28 was transferred to MCB Y56 Retail LLC.

EPA has primary authority for the Corrective Action program under Section 3006 of RCRA; the Facility is also overseen by the Maryland Department of Environment (MDE) pursuant to its Voluntary Cleanup Program (VCP). MDE received an application from TRP-MCB 5601 Eastern LLC as an "inculpable person" for its VCP in September 2014. MDE accepted the Facility into the VCP in August 2015. Following the Facility's subdivision and submission of new applications for each lot under the VCP in November 2018, each of the lots (including the Parcels) was accepted separately in the MDE's VCP in April 2019.

2.2 Areas of Investigation

The Parcels have recently undergone redevelopment consistent with the remedy elements described in the MDE-approved Response Action Plan (RAP). The RAP detailed the remedy elements to address impacted soil, soil vapor, and groundwater contamination within the Facility boundaries in conjunction with the planed site redevelopment

- In March 2018, demolition of existing buildings and construction activities began at the Parcels. Capping activities were substantially complete (including placement of buildings, hardscaped areas, landscaped areas, and vapor intrusion controls in buildings) by December 2019. Five buildings with a slab-on-grade of 4 inches of concrete, sidewalks with 4 inches of concrete, parking lots and roadways with at least 4 inches of asphalt or 2 feet of clean soil in open areas serve as a cap at the Parcels. The installation

of a permanent cover on the Parcels was completed in December 2019 as required by the RAP and stated in the Facility's January 2020 Monthly Report.

Section 3: Summary of Environmental Investigations of Lot 27C and 28 Parcels

3.1 Environmental Investigations

For all environmental investigations conducted at the Parcels, groundwater concentrations were screened against federal Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. § 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141, or if there was no MCL for a contaminant, EPA Regional Screening Levels (SLs) for tapwater. Soil concentrations were screened against SLs for residential soil.

3.1.1 Soil Sampling

Between 1997 and 2010, more than 150 soil samples from across the Facility were collected for laboratory analyses. Contaminant concentrations above the SLs for direct contact with residential soil were detected at the Facility during that period and later during additional sampling events.

Soil Results for Metals

With few exceptions, metals were detected in soils at the Parcels at levels that were below their respective SLs. Metals above their screening levels are listed in Table 1 and Figure 2.

As is typical for soils in Maryland where there are naturally occurring elevated arsenic levels, arsenic was the most prevalent metal detected at levels above its residential SL, which is .68 milligrams per kilogram (mg/kg). Arsenic was detected in most of the samples. Arsenic concentrations for these samples ranged from non-detect to 74 mg/kg at sample location ESB-27.

The only other metals that were detected in at least one soil sample at a concentration above its SL were cobalt and iron. Cobalt was detected in eight soil samples at concentrations above its SL for residential soil of 23 mg/kg. These detections ranged from 26 mg/kg to 95 mg/kg. These sample locations were below or next to the former manufacturing building at sample locations ESB-8, ESB-27, ESB-30, ESB-31, S21, S24 and ESB-56 or within the Facility's former landfill at sample location ESB-45.

Iron was detected at 100,000 mg/kg at sample location ESB-31, which is located adjacent to the southwestern side of the former color mixing building. The screening value for iron is 55,000 mg/kg. Iron was also detected at 82,000 mg/kg at sample location ESB-6, southeast of the former color mixing building. The screening value for iron is 55,000 mg/kg.

Soil Results for Volatile Organic Compounds

Volatile Organic Compounds (VOCs) were not detected above their respective residential SLs for soils anywhere at the Parcels.

Soil Results for Semi-Volatile Organic Compounds and Polycyclic aromatic hydrocarbons (PAHs)

Semi-Volatile Organic Compounds (SVOCs) and Polycyclic Aromatic Hydrocarbons (PAHs) that were detected above their respective residential SLs are listed in Table 1. These SVOCs and PAHs were found in soils above their SLs throughout the Facility.

Supplemental Facility Characterization in 2014-2017

EPA and MDE requested that supplemental Facility characterization be performed at the Facility to better define areas of contamination. Supplemental Facility characterization activities included soil, soil gas (see Section ***Soil Gas Sampling in 2017*** for information on the supplement soil gas sampling), and groundwater sampling which occurred from 2014 through 2017.

Surface Soil

VOCs were not detected above their respective residential SLs for soils at the Parcels.

SVOCs (benzo(a)pyrene, benzo(a)antharacene, and indeno(1,2,3, CD)pyrene) and metals (arsenic, cobalt, iron, and sodium) are the Facility Constituents of Concern (COCs) that have been detected in Parcels surface soils (0-2 feet below ground surface (bgs)) above their respective SLs. These soil sample results are in Table 1.

Subsurface Soil

VOCs were not detected above their respective residential SLs for soils at the Parcels.

SVOCs (benzo(a)pyrene, benzo(a)antharacene, and indeno(1,2,3, CD)pyrene) and metals (arsenic, cadmium, and cobalt) are the COCs that have been detected in Parcels subsurface soils (greater than 2 feet bgs) above their respective SLs. These soil sample results are in Table 1.

3.1.2 Groundwater Investigations

Groundwater monitoring at this Facility has been on-going and has historically shown detections of perchloroethylene (PCE); trichloroethene (TCE); cis-1,2-dichloroethene (cDCE); and carbon tetrachloride above MCLs. However, groundwater is not used as a potable source at the Facility or in Baltimore City.

Groundwater occurs on site at depths of about 30 feet or deeper below ground surface (bgs) Groundwater samples were collected from the deeper wells installed at sample locations

EGW-9D, EGW-10, EGW-10D, EGW-11, and EGW-12. Sample locations EGW-10 and EGW-10D are at approximate depths of 65 feet and 131 feet bgs, respectively.

Groundwater Sampling in 2018

In March 2018, GTA personnel collected groundwater samples and groundwater elevation data from monitoring well sample locations GTA-MW-2 and GTA-MW-3. Dissolved cobalt was detected in GTA-MW-2 and GTA-MW-3 at concentrations of 12 and 25 micrograms per liter (µg/L), above the tapwater SL (6 µg/L). Dissolved sodium was detected in each well at concentrations of 150,000 ug/l at GTA-MW-2 and 26,000 µg/L at GTA-MW-3, above the MCL (1,000 µg/L). Carbon tetrachloride was detected above the MCL (5 µg/L) in each groundwater sample at sample locations GTA-MW-2 (410 ug/l) and GTA-MW-3 (110 ug/l)). Chloroform was detected above the MCL (80 µg/L) in GTA-MW-2 at a concentration of 380 µg/L. Tetrachloroethene (PCE) was detected above the MCL (5 µg/L) in GTA-MW-2 (720 ug/l) and GTA-MW- 3 (12 ug/l). Trichloroethene (TCE) was detected in GTA-MW-2 (170 ug/l), above the MCL (5 µg/L).

3.1.3 Soil Gas Samples for VOC Analyses

The results of the soil gas sampling were compared to MDE Tier 1 and Tier 2 soil gas screening values, which are based on EPA soil gas SLs. As long as indoor air contaminant concentrations are below acceptable risk thresholds, soil gas concentrations that are below the Tier 1 soil gas screening values generally do not require any additional monitoring or assessment when source conditions are known and appear to be stable. When soil gas concentrations are between the Tier 1 and Tier 2 values, and indoor air risk is acceptable, additional long-term soil gas monitoring or source reduction is generally necessary. When target soil gas concentrations exceed the Tier 2 values, remedial measures are generally necessary at a site. In all instances, site-specific factors will be considered in establishing remedial goals and selecting monitoring frequencies.

Soil gas samples were collected throughout the Facility for VOCs in December 2006, August 2007, September 2008, December 2009 and July 2010.

At ESG-18, benzene was detected at 160 micrograms per cubic meter (ug/m^3) above the Tier 1 limit of 72 ug/m^3; chloroform was detected at 48 ug/m^3, above the Tier 1 limit of 24 ug/m^3; 1,1,2 trichloroethane was detected at 39 ug/m^3, above the Tier 2 limit of 21 ug/m^3; and trichloroethene was detected at 250 ug/m^3, above the Tier 2 limit of 210 ug/m^3. At ESG-6, acrolein was detected at 5.3 ug/m^3, above the Tier 1 limit of .42 ug/m^3.

Soil Gas Sampling in 2017

Soil gas sampling and analysis was conducted at the Facility in 2017 that involved the installation of six soil gas sampling points (GTA-SV-3, 4, 5, 6, 7, 8, 9 and 11) to evaluate overall soil gas conditions at the Parcels.

At GTA-SV-4, carbon tetrachloride was detected at 301 ug/m^3, above the Tier 2 limit of 47 ug/m^3; chloroform was detected at 320 ug/m^3, above the Tier 2 limit of 120 ug/m^3; and tetrachloroethene was detected at 1,600 ug/m^3, above the Tier 1 limit of 840 ug/m^3.

At GTA-SV-5, bromodichloromethane was detected at 290 ug/m^3, above the Tier 2 limit of 76 ug/m^3; chloroform was detected at 2,300 ug/m^3, above the Tier 2 limit of 120 ug/m^3; tetrachloroethene was detected at 380,000 ug/m^3, above the Tier 2 limit of 4,200 ug/m^3; and trichloroethene was detected at 23,000 ug/m^3, above the Tier 2 limit of 210 ug/m^3. Additional soil gas sampling performed adjacent to or in each cardinal direction from the original GTA-SV-5 sampling location identified tetrachloroethene at 1,300 ug/m^3 and 3,600 ug/m^3 at two locations above the Tier 1 limit of 840 ug/m^3; and trichloroethene at 150 ug/m^3 at on location above the Tier 1 limit of 42 ug/m^3.

At GTA-SV-6, trichloroethene was detected at 70 ug/m^3, above the Tier 1 limit of 42 ug/m^3.

3.1.4 PCB Concrete Sampling in 2018

From March 2018 to June 2018, initial sampling of concrete was conducted as part of a suitability evaluation for on-site concrete disposal. This sampling identified PCB impacts in two areas on the Parcels: (1) an enclosed transformer room within the northeastern portion of the former warehouse building; and (2) a portion of a concrete floor slab, adjacent to a former transformer pad, in the west-central portion of the color mixing building. The transformers were removed sometime in the past, but it is not known when.

In September 2018, GTA conducted perimeter sampling of the two known PCB-impacted areas identified during the initial assessment. Sampling activities conducted confirmed the PCB-impacted area in the warehouse building is contained within a formerly enclosed, 1,000 ft^2 room. For expediency and efficiency in the field, this entire room was identified as impacted by PCBs. Perimeter sampling outside of this 1,000 ft^2 area did not identify impacts greater than 1.0 mg/kg of PCBs. Within the color mixing building, additional perimeter sampling of the known PCB-impacted area resulted in expanding the PCB-impacted area to 470 ft^2.

In November 2018, PCB-contaminated soil and concrete were delineated in these areas identified above and placed in roll-off dumpsters for off-site disposal. These removal activities were performed in accordance with a PCB Cleanup Plan approved by EPA on November 28, 2018 and summarized in a PCB Cleanup Plan Completion Report dated July 3, 2019. From November 8, 2018 to January 2, 2019, GTA personnel ensured the removal, transport, and proper disposal of PCB-impacted concrete and soil. Approximately 163 tons of PCB-contaminated material were disposed of at an off-site disposal facility. Confirmatory soil sampling has demonstrated that PCB concentrations that remain at the Facility are below the 10 mg/kg remedial goal established in the PCB Cleanup Plan.

3.1.5 Petroleum-Contaminated Soil Removal

From May to December 2018, underground storage tanks (USTs) (USTs # 2, 3, and 4), two 500-gallon heating oil USTs (USTs # 5 and 6), one 550-gallon heating oil UST (UST # 8), and petroleum-impacted soil were removed from the Facility. These activities were performed in conjunction with and under the supervision of the MDE Oil Control Program (OCP). A total of 682.99 tons of petroleum-impacted soils were removed beneath and adjacent to five USTs removed between May 25 and June 8, 2018 and were transported off site for disposal. Petroleum-impacted soil from the UST removed in December 2018 were transported off site for disposal with other petroleum-impacted materials encountered during site development. The USTs were recycled as scrap metal. These UST and petroleum-impacted soil removal activities occurred east and southeast of former warehouse building, and on the westernmost portions of the Parcels.

In December 2018 and January 2019, two areas of petroleum-impacted soil were discovered in sewer and storm drain utility runs located on the southeastern portion of the Parcels. The petroleum-impacted soil was observed approximately 1-foot bgs and consisted of gray clays and silts that exhibited a petroleum odor. Elevated Photo Ionization Detector (PID) readings were not observed. However, this material was observed in the general vicinity of the former forklift building, where stained concrete and a 500-gallon gasoline UST were previously removed from the Parcels. Stained soil and petroleum odors were not observed below 5 feet from grade, where native clays were encountered. The approximate area of excavated petroleum-impacted soil that was removed was about 50 feet long, 10 feet wide, and 5 feet deep. The petroleum-impacted soil was staged on and covered with plastic adjacent to the excavation, pending future off-site disposal. No liquids were encountered in the excavation.

In March 2018, an area of petroleum-impacted soil was discovered in a water line utility run located on the southeastern portion of the Parcels, contiguous to the impacts identified in December 2018 and in January 2019. The petroleum-impacted soil was observed approximately 1 foot below existing grades. The soil observations and PID readings were generally consistent to the area of adjacent impacts. Stained soil and petroleum odors were not observed below 3 feet from grade, where native clays were encountered. The area of excavated petroleum-impacted soil that was removed measured approximately 40 feet long, 4 feet wide, and 3 feet deep.

In May and June 2019, petroleum-impacted materials were encountered during footing excavations on the western side of the proposed Building 500 (Petroleum-Impacted Removal Area B). An approximately 75-foot section of petroleum-impacted soil was discovered in May 2019. In June 2019, two approximately 25-foot sections of petroleum-impacted soil were discovered north and south of the original 75-foot section. This material was found approximately 3 feet below existing grades and consisted of an approximately 1½-foot layer of stone, brick, and concrete mixed with soil (petroleum-impacted material). Clays were observed above and below this material, and the clays did not display indications of staining or unusual odors. The petroleum-impacted material exhibited petroleum odors, and PID readings were between 30-60 ppm. No liquids were observed in the excavation. Petroleum-impacted soils were not observed west of the excavation during prior utility installation activities, nor were they observed further east during the installation of interior column footings.

On February 6, 2019 and from March 18, 2019 to March 25, 2019, petroleum impacted soils from the Petroleum-Impacted Removal Area excavations were transported for off-site disposal. Soils transported off-site on February 6, 2019 also included the soils removed from the UST #8 excavation. A total of 343.7 tons of petroleum- impacted soil from the UST #8 and Petroleum- Impacted Soil Removal Areas A and B was transported for off-site disposal.

3.1.6 Vapor Barrier Interim Measure

In May 2019, sub-slab venting system (SSVS) plans for the proposed buildings in the Parcels were prepared and submitted to MDE and EPA for review. MDE and EPA approved the SSVS plans as passive venting systems and generally consist of a stone sub-base, gas collection geocomposite, geotextile, a 20-mil thick gas barrier membrane, and vertical vent riser piping. MDE and EPA reviewed and approved product materials prior to the installation of the SSVSs. Between June and October 2019, the sub-slab components of the SSVS were installed at each of the five buildings on the Parcels. During these installation activities, MDE or U.S. Army Corps of Engineers (USACE) representatives periodically visited the Facility to confirm that the SSVSs were constructed in general accordance with the MDE and EPA-approved plans including the Building 100 Undercut and Sub-Slab Venting System Plan dated April 8, 2019, the Building 200-400 Sub-Slab Venting System Plan dated May 8, 2019 and the revised Building 500 Sub-Slab Venting System Plan dated August 23, 2019. In addition, MDE or USACE representatives observed smoke test of the gas barrier membrane. Deficient areas revealed by the smoke test were sealed prior to the placement of concrete building slabs. Vertical risers were extended through each building's roof systems during vertical construction. Indoor air sampling has been conducted in several buildings and individual tenant spaces once interior finishes were substantially complete and the HVAC systems were operational. None of the VOCs detected exceeded the EPA residential or commercial RSLs. Additional indoor air sampling will be performed as the interior finishes and HVAC systems are installed. The SSVS installation and indoor air sampling activities were documented and summarized within monthly Remedial Action Plan (RAP) progress reports submitted to MDE.

3.1.7 Human Health Risk Assessment and Evaluation of Exposure Pathways

Human Health Risk Assessment Dated May 23, 2013

A Human Health Risk Assessment (HHRA) was performed under the assumption the entire Facility would be redeveloped for non-residential use. The results of the HHRA indicate that there is no unacceptable risk to current or future adolescents or adult trespassers or visitors at any of the undeveloped areas of the Facility. Further, there was no unacceptable risk identified for current or future off-site residents or industrial workers. The HHRA identified a potential for unacceptable risk to the following human health receptors under current or future industrial use conditions of the Facility:

- Presuming future redevelopment of the Facility property, exposure of future building occupants to soil gas via vapor intrusion could result in unacceptable risk to human health;

- Groundwater beneath the Facility contains VOCs and metals at concentrations above the EPA tapwater SLs and above MCLs, which could pose an unacceptable risk to human health receptors at the Facility if used for potable or non-potable purposes. Currently, there are no groundwater supply wells on the Facility; and

- Exposure to deep on-site groundwater for non-potable purposes could result in an elevated carcinogenic and noncarcinogenic risk for industrial workers.

The HHRA also concluded that if the Facility is to be redeveloped either as industrial or residential, controls would be required to eliminate the unacceptable risks identified above. The Final Remedy as described in this Final Decision includes these controls (See Section 5).

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) Current Human Exposures Under Control, which the Facility met on September 3, 2013; and (2) Migration of Contaminated Groundwater Under Control, which the Facility has not yet met. There is currently insufficient data to address the groundwater indicator, which will be addressed in the future.

Section 4: Corrective Action Objectives

EPA's Corrective Action Objectives for the Final Remedy at the Parcels are the following:

1. Soils

EPA has determined that hazardous constituents currently remain in Parcels soils above acceptable risk levels protective of human health and the environment for residential use (i.e., SLs for residential soils). Therefore, EPA's Corrective Action Objective for Parcels soils is to control exposure to the hazardous constituents remaining in surface soils by requiring compliance with and maintenance of engineering controls and land use restrictions to allow for residential use of the Parcels This objective will facilitate the redevelopment of the Facility in a way that protects human health and the environment and allows for residential use, while incorporating controls to protect workers during construction.

2. Groundwater

EPA's Corrective Action Objective for groundwater at the Parcels is to prevent exposure to potential hazardous constituents in groundwater in the interim through use restrictions while Facility-wide groundwater continues to be evaluated under the Corrective Action Program.

Section 5: Final Remedy

1. Introduction

Because some contaminants remain in the soil and groundwater at the Parcels at levels which exceed acceptable levels for residential use, EPA's Final Remedy requires engineering controls and compliance with and maintenance of soil and groundwater use restrictions.

EPA is requiring the implementation of land and groundwater restrictions necessary to prevent human exposure to contaminants at the Parcels through a permit, order, or environmental covenant.

Additionally, the State of Maryland Well Construction Regulations, codified at Code of Maryland Regulations 26.03.01.05, prohibit installation of individual water systems where adequate community systems are available. Moreover, Section 2.19.1 of the Plumbing and Gasfitting Code of Baltimore County states that public water supply systems are considered available if they are within 500 feet or another reasonable distance of an owner's property line. In this case, the Facility and surrounding area are already being provided with potable water from Baltimore City's public water supply system.

2. Soils

EPA's Final Remedy for the Parcels soils consists of engineering controls and compliance with and maintenance of land use restrictions.

The Final Remedy requires the following engineering controls for the Parcels and are described in the MDE-approved Remedial Action Plan (RAP), dated April 18, 2016:

- The maintenance of a permanent engineered cap on the Parcels which was completed in December 2019 as required by the RAP and stated in the Facility's January 2020 Monthly Report; and

- The development of a Soils, Cover and Cap Management Plan (SCCMP) and a Health and Safety Plan for MDE and EPA review and approval.

The Final Remedy also requires implementation of a vapor intrusion control system, the design of which shall be approved in advance by EPA and MDE. The vapor intrusion control system shall be installed in every new structure constructed on the Parcels where VOC gas was detected above the contaminated groundwater plume or within a 100-foot perimeter of the contaminated groundwater plume, unless EPA and MDE approve in writing a demonstration that vapor intrusion does not pose a threat to human health and that no vapor intrusion control system is needed. Existing buildings already have vapor intrusion control systems installed.

3. Groundwater

Because contaminants remain in the groundwater at the Facility above levels appropriate for residential use, while Facility-wide groundwater is being investigated further, the Final Remedy restricts the use of groundwater to prevent human exposure to those contaminants. In the interim, EPA is requiring groundwater use restrictions be implemented through institutional controls at the Parcels. MDE will also prohibit the future use of groundwater on the Parcels under its VCP. Groundwater monitoring results and the HHRA indicate that there are currently no unacceptable risks of exposure to contaminated groundwater, except for potential direct contact by on-site construction or excavation workers. However, groundwater is deeper than any proposed construction depth; therefore, groundwater contact by construction or excavation workers does not present an unacceptable risk. In the unlikely event groundwater is encountered during construction, protection of workers will be addressed by an EPA and MDE- approved Health and Safety Plan.

4. Institutional Controls

EPA's Final Remedy also includes the following land and groundwater use restrictions and notifications to protect human health and the integrity of the Final Remedy:

1. Groundwater at the Parcels shall not be used for any purpose other than the operation, maintenance, and monitoring activities currently being conducted at the Facility and activities required by EPA and MDE, unless it is demonstrated to EPA and MDE that such use will not pose a threat to human health or the environment or adversely affect or interfere with the Final Remedy, and current affected Parcel owners obtain prior written approval from EPA and MDE for such use.

2. The Parcels shall not be used for unrestricted residential use (Maryland Tier 1A) or as an unrestricted public recreational area (Maryland Level 1 and 2) unless the then-current affected Parcel owners demonstrate to EPA and MDE that such use does not pose a threat to human health and EPA and MDE provide prior written approval for such use.

3. No new wells shall be installed on the Parcels unless it is demonstrated to EPA and MDE that such wells are necessary to implement the Final Remedy for the Facility, and current affected Parcel owners obtain prior written approval from EPA and MDE to install such wells.

4. All new structures on the Parcels shall be protected by a vapor intrusion control system, unless it is demonstrated to EPA and MDE that vapor intrusion does not pose unacceptable risk to human health and EPA and MDE provide written approval that no vapor intrusion system is needed.. The design of which shall be approved in advance in writing by EPA and MDE. The current Parcel owners shall maintain the integrity of the vapor barrier installed in current structures, and conduct inspections, maintenance and repairs as needed.

Compliance with the EPA and MDE-approved SCCMP. The SCCMP will require the current Parcel owners to maintain the integrity of all caps and covers on the Parcels by conducting regular periodic inspections (no less frequently than once per year),making timely repairs if needed, and maintaining a record of such inspection and maintenance. The SCCMP will also establish the documentation, reporting, and notification methods that will be used to implement, monitor compliance, and ensure the SCCMP remains in place and effective.

5. All earthmoving activities on the Parcels, including excavation, grading, and/or utility construction, shall be conducted in compliance with an EPA and MDE-approved SCCMP to ensure that the activity will not pose a threat to human health and the environment or adversely affect or interfere with the covered areas.

6. On an annual basis and whenever requested by EPA or MDE, the current Parcel owners shall submit to MDE and EPA a written certification stating whether the owner is maintaining and complying with all groundwater and land use restrictions.

7. The Parcels shall not be used in a way that will adversely affect or interfere with the integrity and protectiveness of the Final Remedy.

The Parcel owners shall also allow EPA, MDE, and/or their authorized agents and representatives, access to the Parcels to inspect and evaluate the continued effectiveness of the final remedy, and if necessary, to conduct additional remediation to ensure the protection of human health and the environment based upon the Final Remedy selected by EPA in this Final Decision.

In addition, the Parcel owners shall provide EPA with a coordinate survey as well as a metes and bounds survey of the Parcel boundaries. Mapping the extent of the above use restrictions will allow for presentation in a publicly accessible mapping program such as Google Earth or Google Maps.

Section 6: Evaluation of Final Remedy

This section describes the criteria EPA used to evaluate the Final Remedy consistent with EPA guidance. The evaluation criteria are applied in two phases. In the first phase, EPA evaluates the Final Remedy against three threshold criteria as general goals. In the second phase, if the Final Remedy meets the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	EPA's Final Remedy for the Parcels protects human health and the environment by eliminating, reducing, or controlling potential unacceptable risk through the implementation and maintenance of use restrictions and engineering controls for contaminated soil and groundwater above acceptable residential use levels. All current structures on the Parcels have a vapor barrier, which will be maintained by the current Parcel owners. If new buildings are constructed, vapor intrusion control systems, the design of which shall require prior written approval from EPA and MDE, will be installed. Also, a cap of either concrete, asphalt, or clean soils, depending on the location, was installed in December 2019 over the Parcels to prevent human and environmental exposure to the hazardous wastes and hazardous constituents remaining in the soil and landfill. All earthmoving activities, including excavation, drilling and construction activities in those areas of the Parcels where any contaminants remain in soils above EPA's SLs for residential use or in groundwater above MCLs/tapwater SLs shall be conducted in accordance with an EPA and MDE-approved SCCMP. The SCCMP will also include procedures to maintain the cap and cover over contaminated soils. Any earthmoving activities will be conducted in accordance with an EPA and MDE-approved Health and Safety Plan. Therefore, EPA has determined that the Final Remedy satisfies this criterion.
2) Achieve media cleanup objectives	EPA's Final Remedy achieves media cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). The Final Remedy in this SB is based on an anticipated residential land use.

	All earthmoving activities, including excavation, drilling and construction activities, in the areas at the Parcels where any contaminants remain in soils above SLs for residential use or in groundwater above MCLs/tapwater SLs, shall be conducted in accordance with an EPA and MDE-approved SCCMP. The SCCMP will also include procedures to maintain the cap and cover over contaminated soils. Any earthmoving activities will be conducted in accordance with an EPA and MDE-approved Health and Safety Plan. Therefore, EPA has determined that the Final Remedy satisfies this criterion.
3) Remediating the Source of Releases	In all remedies, EPA seeks to eliminate or further reduce releases of hazardous wastes and hazardous constituents that may pose a threat to human health and the environment and this Final Remedy meets this objective. The sources of petroleum and PCB releases have been removed from the soil at the Parcels, thereby eliminating, to the extent practicable, further releases of hazardous constituents from on-site soils as well as groundwater. All earthmoving activities, including excavation, drilling and construction activities, in the areas at the Parcels where any contaminants remain in soils above SLs for residential use or in groundwater above MCLs/tapwater SLs, shall be conducted in accordance with an EPA and MDE-approved SCCMP and Health and Safety Plan. All current structures on the Parcels have a vapor barrier, which will be maintained by the current Parcel owners. If new buildings are constructed, vapor intrusion control systems, the design of which shall require prior written approve of EPA and MDE, will be installed. Therefore, EPA has determined that the Final Remedy satisfies this criterion.

Section 6: Evaluation of Final Remedy (continued)

Balancing Criteria	Evaluation
4) Long-term effectiveness	The Final Remedy is long-term effective because groundwater and land use restrictions will be implemented, and the soil cover will be maintained to prevent exposure to contaminated soils and groundwater remaining at the Parcels and may present unacceptable risk.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	Reduction of toxicity, mobility, and volume of contaminated soils was achieved by excavation, removal, and disposal of contaminated soils.
6) Short-term effectiveness	EPA anticipates that the land and groundwater use restrictions will be fully implemented shortly after the issuance of the FDRTC. EPA's Final Remedy takes into consideration future activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment, by requiring the EPA and MDE-approved SCCMP and Health and Safety Plan.
7) Implementability	EPA's Final Remedy is readily implementable. EPA is requiring that use restrictions be implemented through a mechanism that will inform future owners and occupants of these restrictions, such as an environmental covenant, permit, or order.
8) Cost	EPA's Final Remedy is cost effective. The costs associated with this Final Remedy are minimal as vapor intrusion controls are the costliest aspect of the Final Remedy. These vapor intrusion controls are already installed in existing buildings but will need to be installed and approved by EPA and MDE in any new buildings.
9) Community Acceptance	EPA evaluated community acceptance of the Final Remedy during the public comment period, as described in the Response to Comments.
10) State/Support Agency Acceptance	MDE has reviewed and concurred with the Final Remedy for the Parcels.

Overall, based on the evaluation criteria, EPA has determined the Final Remedy meets the threshold criteria and provides the best balance of tradeoffs with respect to the evaluation criteria.

Section 7: Financial Assurance

EPA has evaluated whether financial assurance is necessary for EPA's Final Remedy at the Facility. Given that the physical elements of the remedy have been constructed and that the costs of implementing institutional controls at the Facility will be minimal, EPA is not requiring a financial assurance requirement for this Final Remedy.

Section 8: Declaration

Based on the Administrative Record complied for the corrective action at the Facility, I have determined that the Final Remedy selected in this Final Decision is protective of human health and the environment.

Date: 9/15/20

John A. Armstead

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

Attachments:
Figure 1: Map of Facility
Figure 2: Soil Sampling Results Map
Table 1: Soil Sample Results
Attachment A: Public Comments
Attachment B: EPA Response to Comments

Section 9: Index to Administrative Record

Site Characterization and Risk Assessment Report for 5601 Eastern Ave Baltimore Maryland, Environmental Resources Management dated September 9, 2011

Report of Preliminary Geotechnical Exploration Former Pemco Facility 5601 Eastern Ave. Baltimore MD, Geo-Technology Associates Inc., June 9, 2015

Remediation Action Plan, Geo-Technology Associates Inc. dated April 18, 2016

Site Update Response Yard 56, Geo-Technology Associates Inc., April 23, 2018

Groundwater Evaluation Summary Yard 56, 5601 Eastern Ave., May 15, 2018

Underground Storage Tank Closure Report Yard 56, Geo-Technology Associates Inc., March 6, 2020

March and April 2018 Response Action Plan (RAP) Progress Report, Geo-Technology Associates Inc.
Building 100, Undercut and Sub-Slab Venting System Plan, Geo-Technology Associates Inc., April 8, 2019

Building 200-400, Sub-Slab Venting System Plan, Geo-Technology Associates Inc., May 8, 2019

Building 500, Sub-Slab Venting System Plan (revised), Geo-Technology Associates Inc., August 23, 2019

Attachments

Attachment A

Attachment B

EPA Response to Comments

During the comment period, EPA received comments from TRP-MCB 5601 Eastern LLC, MCB Y56 Retail LLC and MCB Y56 Retail LLC (collectively, MCB) on the Statement of Basis (SB). EPA's summary of MCB's comments and EPA's responses to those comments are set forth below.

MCB Comment No. 1

Clarification Edits
MCB enclosed with its letter a copy of the SB, marked as Exhibit A, with suggested edits shown in red-colored text that represent MCB's specific comments to the SB. The majority of the comments are provided to correct the record and supplement or clarify specific matters.

EPA's Response

EPA agrees with most of the suggested edits in Exhibit A and made corresponding changes in the FDRTC. EPA did not accept the suggested edits in the following instances:

- EPA did not accept the final sentence of the suggested penultimate paragraph of Section 2.1 Introduction because the previous sentence accurately explains the MDE and EPA oversight authorities at the Facility. EPA combined the final two suggested paragraphs of Section 2.1. to read as follows:
    - EPA has primary authority for the Corrective Action program under Section 3006 of RCRA; the Facility is also overseen by the Maryland Department of Environment (MDE) pursuant to its Voluntary Cleanup Program (VCP). MDE received an application from TRP-MCB 5601 Eastern LLC as an "inculpable person" for its VCP in September 2014. MDE accepted the Facility into the VCP in August 2015. Following the Facility's subdivision and submission of new applications for each lot under the VCP in November 2018, each of the lots (including the Parcels) was accepted separately in the MDE's VCP in April 2019.
- EPA accepted the suggested first paragraph under Section 3.1.5 Petroleum-Contaminated Soil Removal except for the final words of the first sentence: "from the subject property." EPA has revised this sentence to read "from the Facility" as this term and not "subject property" is defined in the SB.
- EPA rejected the insertion of the word "potentially" before the term "hazardous wastes and constituents" in Section 6 Evaluation of Proposed Remedy in the evaluation of threshold criteria (1) and (3). As explained in Section 4: Corrective Action Objectives: "EPA has determined that hazardous constituents currently remain in Parcels soils above acceptable risk levels protective of human health and the environment for residential use (i.e., SLs for residential soils)."

MCB Comment No. 2

Defined Extent of the "Parcel"
The "Parcel", as defined in the proposed draft Statement of Basis published by EPA on May 13th, is identified as the approximately seven (7) acres of Lot 28 (which is also commonly known as the

"Retail" Parcel). However, the investigation, remedial, and development and capping work completed by MCB at the subject property, all as overseen by both the EPA and MDE from the very start of the project, has included both the 7.197 acres of Lot 28 (also known as the "Retail" Parcel) and the adjacent 1.053 acres of Lot 27C (also known as the "Road" Parcel.)

EPA's Response

EPA agrees with this comment and made corresponding changes that are reflected throughout the FDRTC.

MCB Comment No. 3

References to Land Use and Development Plans
We noted that any presentation of the Parcels' current and future was missing in the proposed draft SB. As you know, the sole use of Lot 27C is as a common drive for the entire Yard 56 development, and there are no structures of any type constructed or planned on the lot. Lot 28 has been developed for retail and commercial use, with tenants in the various structures completed including fast casual restaurants, a bank, grocery store, and a fitness center.

EPA's Response

EPA agrees with this comment; however, EPA notes that detailed descriptions of current and future land uses are not necessary in the Final Decision. EPA is selecting the Final Remedy for the Parcels based on the current and anticipated future uses of the Parcels. It is not necessary to include a detailed summary of the current and anticipated future uses.

MCB Comment No. 4

Facility Subdivision
TRP-MCB 5601 Eastern LLC subdivided the Facility into five separate lots in November 2018. It then transferred each of the resulting five lots to separate affiliated entities, all under common ownership and control. As such, Lot 27C is currently owned by MCB Y56 Road LLC and Lot 28 is currently owned by MCB Y56 Retail LLC.

EPA's Response

EPA agrees with this comment and made corresponding changes that are reflected throughout the FDRTC.