



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



516270

SEP 22 2017

MEMORANDUM

REPLY TO THE ATTENTION OF:

SUBJECT: Request for Approval and Funding for a Time-Critical Removal Action at the Hancock Manufacturing VI Site, Toronto, Jefferson County, Ohio (Site ID # C5GV)

FROM: Eric Pohl, On-Scene Coordinator
Emergency Response Section 1

THRU: Jason H. El-Zein, Chief
Emergency Response Branch 1

TO: Margaret M. Guerriero, Acting Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to request and document your approval for the United States Environmental Protection Agency (EPA) to expend up to \$476,978 to conduct a time-critical removal action at the Hancock Manufacturing VI Site (the Site), located in Toronto, Jefferson County, Ohio.

The response actions proposed here are necessary in order to mitigate the immediate threat to human health and the environment posed by elevated levels of chlorinated volatile organic compounds (VOCs), specifically trichloroethylene, also known as trichloroethene (TCE), which is a hazardous substance as defined by CERCLA Section 101(14), in the groundwater, soil vapor, sub-slab gas and indoor air at the Site. Groundwater and soil gas concentrations of TCE exceed the EPA Vapor Intrusion Screening Levels (VISLs), which were adopted for use by the Ohio Department of Health (ODH). Groundwater, soil gas, sub-slab vapor, and indoor air sample results indicate a direct connection (i.e., a completed exposure pathway) between TCE-contamination from the Site and TCE sub-slab and indoor air samples in at least one residential property within a residential neighborhood at levels that ODH consider harmful to human health. This is known as a vapor intrusion (VI) completed pathway.

The proposed removal action will address immediate threats and potential threats to public health, welfare, and the environment posed by the Site through the following actions:

- Conduct extent of contamination sampling utilizing sub-slab and indoor air sampling techniques.

- If the VISLs for a contaminant of concern (e.g., TCE) is exceeded for a residential structure, design and install a vapor abatement mitigation system in the structure(s) impacted by subsurface gas migration. The abatement system will include installation of a sub-slab depressurization system (SSDS) or crawl space depressurization system, sealing cracks in walls and floors of the basement, and sealing drains that could be a pathway. Depressurization system installation may also include utilizing vapor barriers or impermeable membranes to prevent transmission of subsurface vapors to indoor air. The vapor abatement mitigation system will be designed to control levels of TCE to below VISLs.

There are no nationally significant or precedent-setting issues associated with the Site. This response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 (*Removal action*) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to abate or eliminate the immediate threats posed to public health and/or the environment.

The uncontrolled conditions of the hazardous substances present at the Site require that this action be classified as a time-critical removal action. The installation of vapor abatement mitigation systems will require approximately 24 working days to complete. Additional time will be required to perform periodic sampling to confirm efficiency of installed systems and additional extent of contamination assessment sampling.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: OHN000507855

RCRA ID: NA

State ID: NA

Category: Time-Critical Removal Action

The approximate boundaries of the known impacted properties include the railroad tracks immediate adjacent to the former Hancock Manufacturing Company and Hancock Manufacturing Co. Inc. facility (Facility) on the west, North 4th Street on the east, Myers Street on the north and Cleveland Street on the south.

The Site contains a residential neighborhood with one property that has vapor intrusion from a TCE-contaminated, shallow groundwater plume emanating from the Site with a completed vapor intrusion pathway. In addition, there are six properties with documented potentially completed vapor intrusion pathways.

Additional assessment activities completed subsequent to the initiation of the removal action may identify additional residential properties with vapor intrusion or potential vapor intrusion. The neighborhood is located north, east, and south of the Facility which, as described below, has historically handled TCE. As the location of the plume is variable, the site boundaries are dependent on the subsurface location of contaminants contributing to vapor intrusion and may

need to be adjusted or expanded from the delineations as described above. For the purposes of this Action Memorandum, the Site boundary will be determined by the extent of contamination within the groundwater plume.

A. Site Conditions and Background

1. Removal Site Evaluation

- a) Site Background – Hancock Manufacturing Company and Hancock Manufacturing Co, Inc.

The Facility was used by the American Sewer Pipe Company (American Sewer) for the production of ceramic products prior to 1945. The Hancock Manufacturing Company operated the Facility from 1945 until 1979. During this time, the use of TCE resulted in the contamination of soil and groundwater at the Site. TCE was used at the Facility beginning in the early 1950s to remove drawing oils from the stampings during the final stages of production. Information from employees indicated that waste TCE sludge was disposed in the southwest corner of the plant until the early 1960s. Additionally, some TCE was found in the vicinity of a storage tank formerly located at the east side of the plant building.

From 1979 to 2002, Hancock Manufacturing Company, Inc. (Hancock, a separate entity) conducted metal stamping and drawing plant operations that manufactured oil filter casings and refrigeration compressor housings. Ohio EPA identified three distinct areas of degreaser operations at the Facility, and each area included degreaser equipment, dipping pits, or tanks utilizing TCE solvent. The largest degreaser pit was located on the east side of the building, approximately 180 feet south of Myers Street (AR# 12).

The Ohio EPA was notified by Hancock in April 1986 that TCE had been identified in a Facility production well. During the 1990s, Hancock conducted and completed remedial investigations under a consent order with the State of Ohio. Hancock entered an Ohio Voluntary Action Program (VAP) in March 2000 until operations were ceased at the Facility in July 2002. VAP eligibility was rescinded in October 2002.

After operations ceased in 2002, all equipment was removed from the building and Cessation of Regulated Operations was completed in 2005 (AR# 9). During a period when Hancock Manufacturing Co., Inc. operated the Facility, the property was owned by Dallas Properties, Inc. until March 2008, when it was sold to the City of Toronto (AR# 9). The date when Dallas Properties, Inc. first acquired the property is unknown.

Under ownership of the City of Toronto (City), environmental remedies and activities were pursued beginning in 2008. The City installed a soil vapor extraction (SVE) system in November 2008 and captured an estimated 6,100 pounds of TCE before system operation was discontinued in June 2013 due to reduced capture efficiency (AR# 9).

The City installed a sub-slab depressurization system in the three degreaser areas in 2017 to

continue TCE source removal and to allow indoor air standards to be met at the Facility (AR# 12). Beginning in 2012, site investigation at the manufacturing building collected sub-slab gas samples from beneath the main floor building ranging from 4.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 480,000 $\mu\text{g}/\text{m}^3$ (AR# 2, 9). Ohio EPA began vapor intrusion investigations in the area on and surrounding the Facility in January 2016. Presently, Bulldog Rack Systems, a tenant, occupies the former manufacturing building (AR# 9).

b) Site Background – Ohio EPA TCE Plume Investigation

A December 2013, report written by an environmental consultant and transmitted to the Ohio EPA details groundwater fate and transport modeling. Groundwater flow at the Site is influenced by the regional flow of the Ohio River (north to south); and generally localized groundwater flow is south or southeast, but could be influenced by Ohio River levels (AR# 2, 3, 14).

Groundwater samples collected by Ohio EPA during a March 2014 sampling event in the area on or surrounding the Facility indicated the presence of TCE (Attachment IV). Sample results detected levels of TCE in six of the samples, identified by Ohio EPA as MW-3, MW-8, MW-12, MW-13, MW-14, and MW-15. The highest TCE result was collected at MW-13, located along the exterior foundation wall on the east side of the manufacturing building, with 160 micrograms per liter ($\mu\text{g}/\text{L}$). MW-12, on the northeast corner of the Facility property measured 0.540 $\mu\text{g}/\text{L}$; MW-3 and MW-14 on the eastern portion of the Facility property measured 3.62 $\mu\text{g}/\text{L}$ and 1.28 $\mu\text{g}/\text{L}$ respectively; MW-15 and MW-15D (duplicate sample for quality assurance) located on the southeast portion of the Facility property measured 1.24 $\mu\text{g}/\text{L}$ and 1.19 $\mu\text{g}/\text{L}$ respectively; MW-8 located approximately midblock between N. 4th St and N. 3rd St & Freeman St. and Cleveland St, measured at 0.982 $\mu\text{g}/\text{L}$. The remaining groundwater samples taken either did not result in detections for TCE or the results were not reported by Ohio EPA (AR# 4).

In addition to the groundwater samples, in Ohio EPA's time-critical removal action referral to EPA, Ohio EPA reported soil gas analysis data from TCE exterior vapor points (VP) installed both on the Facility property, and in the area of properties surrounding the Facility. For the VPs on the northern portion of the Facility property, results of 161, 640, and 910 $\mu\text{g}/\text{m}^3$ were measured. On the eastern and southern portions of the Facility property, VP measured 8440, 1600, 5700, 1290, and 3350 $\mu\text{g}/\text{m}^3$. For the VPs located off the Facility property, two VPs located west of N. 4th St. and immediately south of Short St. measured 285 and 675 $\mu\text{g}/\text{m}^3$, however two additional VPs approximately 50 feet south of these measured non-detect and 38.7 $\mu\text{g}/\text{m}^3$.

Northward VPs between this presumptive plume boundary and the southern property line of the Facility property, measured 2600 and 1600 $\mu\text{g}/\text{m}^3$. A VP located on N. 4th St. near the location of MW-8 measured non-detect, and a VP approximately 200 feet north of this measured 48 $\mu\text{g}/\text{m}^3$. North of the Facility property, one VP was located in the alleyway between and parallel to Short St. & N. 4th St, approximately twenty-five feet from the

property boundary was measured at 662 $\mu\text{g}/\text{m}^3$ and a VP located approximately 250 feet north of that VP measured non-detect.

Based on Ohio EPA's sampling data described above, the potential subsurface TCE plume could approximately be described as located near Myers St on the north, N. 4th St on the east, and Short St. on the south. The western boundary was not ascribed through sampling data; this boundary is not anticipated to have an impact of this proposed removal action since there are no structures or dwellings immediately to the west of the Facility property and within the Site area (AR# 6).

c) Site Background – Ohio EPA Residential Vapor Intrusion Sampling

From January 2016 through May 2017, Ohio EPA investigated the indoor air and interior sub-slab soil gases of residential properties in the area surrounding the Facility property. The TCE air sample results are reported in $\mu\text{g}/\text{m}^3$. See Tables 1, 2 & 3 below. Exceedances of the Ohio Department of Health, site-specific health based screening levels (see Section II.A.1.d) are highlighted in yellow.

During some of these sampling events, samples were also analyzed for tetrachloroethylene (also known as tetrachloroethene, perchloroethylene, PCE, or PERC), however none of the reported results exceeded the vapor intrusion screening levels for those contaminants and are thus not specified in Tables 1, 2, or 3.

Table 1: Ohio EPA Residential Indoor Air Sampling for TCE		
Location ID	Sample Date	Result
N5-5	January 2016	ND
N5-6	January 2016	2.1
N5-7	January 2016	1.5
N5-8	January 2016	ND
N5-9	January 2016	ND
N5-10	January 2016	ND
N5-5	April 2016	ND
N5-6	April 2016	1.1
N5-7	April 2016	1.6
N5-8	April 2016	ND
N5-10	April 2016	ND
N5-9	August 2016	ND
N5-11	August 2016	ND
N4-3	August 2016	ND
N4-4	August 2016	1.61

N4-5	August 2016	ND
N4-7	August 2016	ND
N4-8	August 2016	2.15
N4-6	October 2016	ND
N4-8	October 2016	ND
N4-11	October 2016	ND
N5-1	January 2017	ND
N5-3	January 2017	1.45
N5-4	January 2017	1.83
Myer Street	May 2017	1.18
Apartments (N)	May 2017	1.24
N4-2	May 2017	ND
Apartments (S)	May 2017	ND

Table 2: Ohio EPA Residential Sub-Slab Soil Gas Sampling for TCE

Location ID	Sample Date	Result
N5-5	January 2016	260.0
N5-6	January 2016	6000.0
N5-7	January 2016	2800.0
N5-8	January 2016	270.0
N5-10	January 2016	190.0
N5-5	April 2016	186.0
N5-6	April 2016	9480.0
N5-7	April 2016	4410.0
N5-8	April 2016	766.0
N5-10	April 2016	276.0
Cleveland Street	August 2016	ND
N4-3	August 2016	51.1
N4-4	August 2016	11.3
N4-7	August 2016	49.4
N4-8	August 2016	38.2
N4-8	October 2016	46.2
N5-2	January 2017	ND
N5-3	January 2017	ND
N5-4	January 2017	ND
Myer Street	May 2017	14.3
Apartments (S)	May 2017	ND

Table 3: Ohio EPA Residential Indoor Basement Air Sampling for TCE		
Location ID	Sample Date	Result
N5-9	January 2016	ND
N4-4	August 2016	ND
N5-9	August 2016	2.47
N5-11	August 2016	2.53
N5-6	October 2016	ND
N5-11	October 2016	2.95
N5-1	January 2016	ND
N5-2	January 2016	ND
N4-1	May 2017	ND
N4-2	May 2017	ND

d) Site Background – Ohio Department of Health

On September 1, 2017, the Health Assessment Section of the Ohio Department of Health (ODH) provided health-based guidance to evaluate the results of vapor intrusion sub-slab and indoor air sampling for contaminants of concern at the Site. ODH adopted the EPA VISLs for utilization as a risk-based screening tool for residential properties for vapor intrusion. The values for screening levels are obtained from the EPA VISL Calculator applying a 10^{-4} cancer risk and Hazard Quotient (HQ) of 1 for TCE (AR# 17). Table 4 summarizes the TCE screening levels for the Site.

TABLE 4

**EPA VAPOR INTRUSION SCREENING LEVELS (VISL) and
OHIO DEPARTMENT OF HEALTH SCREENING LEVELS**

Trichloroethylene	Residential Screening Level
Indoor Air	
TCE ($\mu\text{g}/\text{m}^3$)	2.1
Sub-Slab	
TCE ($\mu\text{g}/\text{m}^3$)	70
Groundwater	
TCE ($\mu\text{g}/\text{L}$)	5.2

Notes:

The Residential screening levels are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for air or soil gas, or micrograms per liter ($\mu\text{g}/\text{L}$) for groundwater, and based on 10^{-4} cancer risk, $\text{HQ} = 1$, for trichloroethylene. Values are obtained from the EPA Vapor Intrusion Screening Calculator v.3.4.6, published January 2016.

On September 1, 2017, ODH, under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), submitted a Letter Health Consultation to EPA (AR# 17). Prior to transmittal to EPA, ATSDR reviewed the Health Consultation (AR# 18, 19). The Health Consultation assesses the data that Ohio EPA collected and discusses the public health implications of exposure to VOCs from vapor intrusion from the Site. Table 5 summarizes the data used by ODH in preparing their conclusions and recommendations.

TABLE 5

**Ohio Department of Health – Letter Health Consultation
Sub-Slab soil gas and Indoor Air sampling results for TCE, Hancock Manufacturing Site,
Toronto, Ohio (Ohio EPA, 2016-2017)**

Property (Location ID)	Sub-slab ($\mu\text{g}/\text{m}^3$)	Sub-Slab (ppb)	Indoor Air ($\mu\text{g}/\text{m}^3$)	Indoor Air (ppb)
Apartments (N)	NS	NS	1.24	0.23
Myer Street	14.3	2.66	1.18	0.22
N. 5 th St. #1	ND	ND	ND	ND
#2	ND	ND	ND	ND
#3	ND	ND	1.4	0.26
#4	ND	ND	1.8	0.34
#5	260	48.4	ND	ND
#6	9,480	1,764	2.1	0.39
#7	4,410	820.6	1.5	0.28
#8	766	142.5	ND	ND
#9	--	--	2.47	0.46
#10	276	51.4	ND	ND
#11	--	--	2.53	0.47
Cleveland Street	ND	ND	ND	ND
N. 4 th St. #1	--	--	ND	ND
#2	--	--	ND	ND
#3	51	9.5	ND	ND
#4	ND	ND	1.61	0.30
#5	11.3	2.1	ND	ND
#6	--	--	ND	ND

#7	49	9.12	ND	ND
#8	8.6	1.6	ND	ND
Apartments (S)	ND	ND	ND	ND
VISLs for TCE	70	13	2.1	0.39

ND = Chemical not detected in sample

NS = Chemical was not sampled for

VISL = US EPA Vapor Intrusion Screening Levels (US EPA, 2015); sub-slab exceedances highlighted in gold; indoor air exceedances highlighted in red

The Health Consultation provides the following conclusions and recommendations:

Health Consultation Conclusions

TCE released historically from the former Hancock Manufacturing Company Facility in Toronto, Ohio, poses a public health hazard to residents living adjacent to and just east of the Facility. This conclusion is based on the following observations:

- 1) Still viable, significant sources of TCE in soils, groundwater, and soil gas exist on the former Facility.
- 2) The highly porous and permeable nature of the underlying geology at the Site facilitates the easy movement of the TCE in groundwater from the Facility property into off-site residential areas in close proximity to the known TCE source area.
- 3) A completed exposure pathway exists for vapor intrusion at this Site. Elevated levels of TCE have been documented at this time for on-site groundwater (160 parts per billion [ppb]) and deep soil gas (up to 8,440 ug/m³ or 1,570 ppb) at the HMC property line adjacent to neighboring residential areas. TCE contamination occurs at levels up to 9,480 ug/m³ (or 1,764 ppb) in the sub-slab soil gas under homes along North 5th Street, and in the indoor air in homes on North 5th Street (up to 2.53 ug/m³ or 0.47 ppb), with both of the latter exceeding health-based screening levels for TCE in these media.
- 4) TCE was detected in 14 out of 23 homes in the adjacent off-site residential neighborhood sampled by Ohio EPA along N 4th and N. 5th Streets in 2016-2017.
- 5) TCE is a known human cancer-causing agent, with a preponderance of data linking occupational exposures to TCE in the workplace with increased incidence of kidney cancer in exposed workers. Low levels of TCE in the indoor air (less than 40 ppb) have been calculated to pose a short-term non-cancer health threat to sensitive individuals, in particular, women of child-bearing age who may become pregnant.

Health Consultation Recommendations

Based on the data reviewed by ODH, it recommends the following actions to be protective of the health of residents living adjacent to the former Hancock Manufacturing Facility.

- 1) The vapor intrusion investigation should be expanded to determine the full extent of the TCE vapor intrusion threat to off-site areas in the City of Toronto, especially residential areas east and south of the former Hancock Manufacturing Facility.
- 2) Additional sampling of area homes should be conducted during the course of the year to capture the “worse –case scenario” for each of the properties sampled, *i.e.*, seasonal variations in vapor phase TCE that may exceed vapor intrusion screening levels and periodically pose a health threat to occupants of these properties.
- 3) Consideration should be made towards the installation and operation of sub-slab vapor abatement systems or in-home air purification systems to mitigate or eliminate real or potential indoor air threats to impacted residents living adjacent to the former Facility until the source of the contamination has been fully identified and isolated or contained or removed.

e) Site Background – Ohio EPA Request for Removal Assistance

In a letter dated June 2, 2017, the Ohio EPA expressed concerns about the risk to human health from indoor air exposure to TCE from a shallow groundwater plume. Ohio EPA viewed the Site as a potential threat to the residences in the area of the Hancock Manufacturing Facility. Ohio EPA requested assistance from the EPA Removal Branch in evaluating options for addressing current and potential vapor intrusion risks at the Site, specifically the installation of vapor mitigation systems in residential homes and additional sampling as necessary to confirm the extent of TCE vapor impacts (AR# 9).

2. Physical Location

The approximate boundaries of the Site are the railroad immediate adjacent to the Facility on the west, North 4th Street on the east, Myers Street on the north and Cleveland Street on the south, inclusive of properties adjoining these roadways. The Site includes the area over the TCE-contaminated plume.

The Facility is a former manufacturing facility located at 709 North 5th Street in Toronto, Jefferson County, Ohio 43964 (Attachment III). The property is presently owned by the City of Toronto and occupied by Bulldog Rack Systems. The Facility occupies a single parcel (Parcel 19-02444-000) and includes approximately 6.26 acres. Most of the parcel is covered with buildings and asphalt or concrete. There is a small grassy area east of the main building.

A single family residential neighborhood surrounds the Facility property on the north, east, and south side, with a series of apartment buildings bordering the Facility property near its northwest corner. Immediately to the west of the property is a railroad line, a highway, and wooded land sequentially.

An Environmental Justice (EJ) analysis for the Site is contained in Attachment II. Screening of the surrounding area used Region 5’s EJ Screen tool. Region 5 has reviewed environmental and

demographic data for the area surrounding the Site and determined there is a high potential for EJ concerns at this location.

3. Site Characteristics

Ohio EPA was first notified of TCE contamination in a Facility production well in April 1986.

EPA reviewed the data collected by Ohio EPA (AR# 4, 5, 6, 9, 10, 11) and identified the following:

- Groundwater – TCE concentrations as high as 160 µg/L
- Soil Gas – TCE concentrations as high as 8,440 µg/m³
- Sub-Slab – TCE concentrations as high as 9,480 µg/m³ (135 times the sub-slab VISL)
- Indoor air – TCE concentrations as high as 2.53 µg/m³ (basement) and 2.1 µg/m³ (living area) (1.2 times the indoor air VISL and meeting the VISL, respectively)

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

A release of hazardous substances, pollutants, or contaminants is present due to documented vapor intrusion at the Site. A completed exposure pathway exists for vapor intrusion, as TCE has been documented in the groundwater (TCE as high as 160 µg/L), in the soil gas (TCE as high as 8,440 µg/m³), in the sub-slab (TCE as high as 9,480 µg/m³) and in the living area indoor air (TCE as high as 2.1 µg/m³) at the Site.

ODH has concluded that there is a vapor intrusion completed exposure pathway at the Site.

5. NPL status

The Site is not listed on the CERCLA National Priorities List.

Maps, pictures and other graphic representations

Attachment III	Site Location Map
Attachment IV	Site Layout Map
Attachment V	Ohio EPA Groundwater Sampling Location Map (March 2014)

B. Other Actions to Date

1. Previous actions

Previous actions by EPA and Ohio EPA have been documented in the Background Section (Section II.A.1).

2. Current actions

Based on EPA's analysis of sampling results obtained from Ohio EPA, vapor intrusion is occurring at the Site. One residential property has shown a sub-slab TCE concentration ($9,480 \mu\text{g}/\text{m}^3$) 135.4 times greater than the EPA VISL of $70 \mu\text{g}/\text{m}^3$, and an indoor air TCE concentration ($2.1 \mu\text{g}/\text{m}^3$), meeting the EPA VISL indoor air screening level of $2.1 \mu\text{g}/\text{m}^3$. In addition, four other residential properties have sub-slab TCE concentrations ranging between 260 and $4,410 \mu\text{g}/\text{m}^3$, which exceed the EPA VISL action level of $70 \mu\text{g}/\text{m}^3$ and indoor air TCE concentration ranged from ND to $1.61 \mu\text{g}/\text{m}^3$. Two residential properties have shown indoor basement air TCE concentrations between 2.4 and $2.5 \mu\text{g}/\text{m}^3$, which exceed the EPA VISL indoor air TCE screening level of $2.1 \mu\text{g}/\text{m}^3$.

C. State and Local Authorities' Roles

1. State and local actions to date

As described above, on September 1, 2017, ODH, under a Cooperative Agreement with ATSDR, submitted a Health Consultation to EPA. Among other things, the Health Consultation concludes that a completed exposure pathway exists for vapor intrusion at the Site.

Previous actions by Ohio EPA are documented in the Removal Site Evaluation section (Section II.A.1).

2. Potential for continued State/local response

In a letter dated June 2, 2017, Ohio EPA requested assistance from the EPA Removal Branch in evaluating options for addressing current and potential vapor intrusion risks at the Site. The Ohio EPA has indicated that it does not have the resources to address the residential vapor intrusion at the Site. Ohio EPA provided information to EPA that there are presently no viable PRPs to perform the removal action, and has requested EPA assistance (AR# 9).

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Site present a threat to the public health, or welfare, and the environment and meet the criteria for a time-critical removal action set forth in 40 CFR § 300.415(b)(2) of the NCP. These criteria include, but are not limited to, the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants § 300.415(b)(2)(i);

Vapor intrusion occurs when vapors produced by a chemical spill or groundwater contamination

plume migrate through soil into the foundations of structures and into the indoor air. When chemicals are released on the ground, they will seep into the soil and make their way into the groundwater. VOCs, including TCE, produce vapors that travel through soil. These vapors can enter a home or building through cracks in the foundation or into a basement with a dirt floor or concrete slab.

To date, Ohio EPA has conducted vapor intrusion sampling and has documented the following VOC exceedances at the Site:

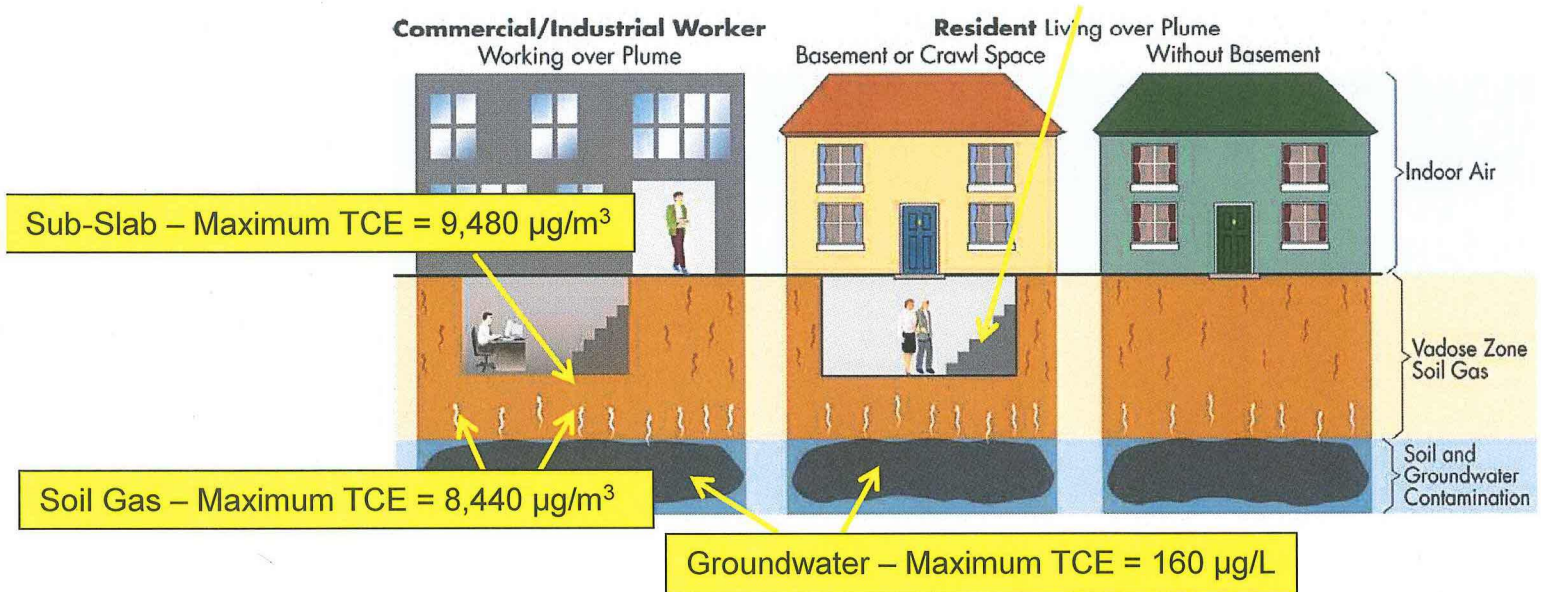
- Ohio EPA observed TCE in sub-slab samples collected from five residential properties at concentrations ranging from 260 to 9,480 $\mu\text{g}/\text{m}^3$, which exceed the EPA VISL residential sub-slab TCE screening level of 70 $\mu\text{g}/\text{m}^3$.
- Ohio EPA observed TCE in indoor (living area) air samples collected from one residential property at a concentration of 2.1 $\mu\text{g}/\text{m}^3$, and TCE in indoor basement air samples collected from two residential properties at concentrations between 2.4 $\mu\text{g}/\text{m}^3$ and 2.5 $\mu\text{g}/\text{m}^3$ which meet or exceed the EPA VISL residential indoor air screening level of 2.1 $\mu\text{g}/\text{m}^3$.

Based on the available sampling data provided by Ohio EPA, one residential home has a completed exposure pathway for vapor intrusion at the Site, and six additional homes have a potentially completed exposure pathway for vapor intrusion at the Site.

The actual or potential exposure pathways for vapor intrusion for the Site are outlined in the Hancock Manufacturing VI Site Vapor Intrusion Conceptual Site Model (CSM) illustrating a completed exposure pathway for TCE, as presented below. Although at specific locations or addresses limited data is available, TCE has been documented in the groundwater (TCE as high as 160 $\mu\text{g}/\text{L}$), in the soil gas (TCE as high as 8,440 $\mu\text{g}/\text{m}^3$), in the sub-slab (TCE as high as 9,480 $\mu\text{g}/\text{m}^3$) and in the indoor air (TCE as high as 2.1 $\mu\text{g}/\text{m}^3$ living area air, 2.5 $\mu\text{g}/\text{m}^3$ basement air) at the Site.

Completed Exposure Pathway

Indoor Air – Maximum TCE = $2.1 \mu\text{g}/\text{m}^3$
Basement Air – Maximum TCE = $2.5 \mu\text{g}/\text{m}^3$



There is an actual vapor intrusion exposure occurring and there is a potential for additional vapor intrusion to occur at this Site.

TCE is a hazardous substance within the definition of Section 101(14) of CERCLA because it is listed at 40 C.F.R. § 302.4. Groundwater, soil gas, sub-slab, and indoor air sampling results from the Site indicate that TCE vapors are migrating into residential structures at levels that ODH considers harmful to human health.

ATSDR has studied toxicological effects of TCE and associated chemicals. Information on the effects of TCE is provided below and further detailed in the Administrative Record (Attachment I).

Trichloroethylene: TCE is a man-made liquid chemical that is used as a solvent for cleaning metal parts. Exposure to TCE at very high concentrations can cause dizziness, headaches, sleepiness, incoordination, confusion, nausea, unconsciousness, and even death. There is strong evidence that TCE can cause kidney cancer in people and some evidence for TCE-induced liver cancer and malignant lymphoma. Lifetime exposure to TCE resulted in increased liver cancer in mice and increased kidney cancer and testicular cancer in rats. The National Toxicology Program (NTP) has determined that TCE is a "known human carcinogen". The EPA and the International Agency for Research on Cancer (IARC) have determined that TCE is "carcinogenic to humans" (AR# 8).

Limited availability of analytical data necessitates taking early action to mitigate actual and

potential threats to human health associated with vapor intrusion. As described in the *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (EPA OSWER, June 2015), CERCLA § 104 and § 106 provide the federal government with broad authority to take response action(s) to address a release or threatened release of hazardous substances that “may present” a human health risk. The preamble to the NCP issued in the *Federal Register* on March 8, 1990 (55 Fed. Reg. 8,704) states:

EPA expects to take early action at sites where appropriate, and to remediate sites in phases using operable units as early actions to eliminate, reduce or control the hazards posed by a site or to expedite the completion of total site cleanup. In deciding whether to take early actions, EPA balances a number of considerations, including the desire to definitely characterize site risks and analyze alternative remedial approaches for addressing those threats in great detail with the desire to implement protective measures quickly. EPA intends to perform this balancing with a bias for initiating response actions necessary or appropriate to eliminate, reduce, or control hazards posed by a site as early as possible (AR# 5).

High levels of hazardous substances, pollutants, or contaminants in soils largely at or near the surface that may migrate § 300.415(b)(2)(iv);

Ohio EPA detected TCE in subsurface soils above screening or regulatory levels and in groundwater, indicating that migration in soil and groundwater is occurring. According to Ohio EPA, groundwater was encountered at an average of 10 feet to 12 feet below ground surface during their sampling events (AR# 15), indicating that TCE vapor intrusion is a result of TCE groundwater contamination largely at or near the surface that may migrate. TCE migrated through diffusion and/or advection from the source contamination located at the Facility, through the groundwater and/or vadose zone of the subsurface soil, then migrated towards the atmosphere from soil areas beneath residential homes. Volatilization of hazardous substances in the soil and groundwater may be a threat to nearby residents based on concentrations in soil gas samples as described above. The Ohio EPA analytical results indicated that the vapor intrusion pathway is complete or potentially complete for certain properties, which demonstrates that the TCE contamination from the Site may migrate to the indoor air.

The “Multiple Lines of Evidence Approach” outlined in the *Region 5 Vapor Intrusion Guidebook* (EPA Region 5, Superfund Division, 2010) provides guidance on evaluating environmental data to determine if a contaminant detected in indoor air can be attributed to subsurface vapor intrusion, an indoor source, or an outdoor source by examining data generated through groundwater, soil gas, sub-slab, and indoor air sampling. “VI investigations have indicated that the data set for no single medium (groundwater, [soil gas], sub-slab, or [indoor air]) can be reliably used to fully evaluate the potential for risks from VI above health risk-based levels because of the large number of variables affecting the transport of vapors from the subsurface to [indoor air] and the confounding influence of indoor sources of common subsurface contaminants,” *Region 5 Vapor Intrusion Guidebook* at pp. 6-10. In this case,

groundwater is known to be contaminated with TCE in a plume that is not fully delineated, but is documented to extend at least approximately 250 feet radially to the east of the Site. Soil gas, sub-slab, and indoor or basement air sampling exceeded the VISLs for TCE in multiple instances as described above. Utilizing the Multiple Lines of Evidence Approach indicates that TCE subsurface vapor intrusion, beginning with a contamination source and extending through the soil to reach potential human receptors via indoor residential air, is present (AR# 1).

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released § 300.415(b)(2)(v);

The hazardous substances located on Site are likely leachable, as indicated by their presence in surface soil, subsurface soil and groundwater. Rain, melting snow, and flood waters all have the potential to cause additional releases and off-site migration of hazardous substances.

The availability of other appropriate Federal or state response mechanisms to respond to the release § 300.415(b)(2)(vii);

Ohio EPA does not have the resources to respond to this Site. In a letter dated June 2, 2017, Ohio EPA requested assistance from the EPA Removal Branch in evaluating options for addressing current and potential vapor intrusion risks at the Site.

IV. ENDANGERMENT DETERMINATION

Given the conditions at the Site, the nature of the known and suspected hazardous substances at the Site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The response actions described in this Action Memorandum directly address actual or potential releases of hazardous substances at the Site, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment. The proposed action will include the following removal activities:

- 1) Assess the Site;
- 2) Develop and implement a Site Health and Safety Plan;

- 3) Conduct vapor intrusion sampling (for TCE) and extent of contamination sampling utilizing soil gas, sub-slab, and indoor air sampling techniques. The area of investigation includes the Facility on the west, North 4th St. on the east, Myers St. on the north and Cleveland St. on the south, and is inclusive of residences on both sides of these streets. This area covers approximately one residential block and twenty-seven total residences. Additional properties beyond the boundaries of this area may be assessed, in accordance with EPA guidance, if vapor intrusion is detected at properties at the edges of these boundaries;
- 4) If the EPA Indoor Air VISL ($2.1 \mu\text{g}/\text{m}^3$) for a contaminant of concern (i.e., TCE) is exceeded for a residential structure, design and install a vapor abatement mitigation system in the structure impacted by subsurface gas migration (7 residences identified utilizing Ohio EPA data). The abatement system will include installation of a SSDS or crawl space depressurization system, sealing cracks in walls and floors of the basement, and sealing drains that could be a pathway. Residences with dirt floors or otherwise porous basements will be sealed with vapor block or another sufficiently impermeable membrane as part of the SSDS or crawl space depressurization system design and installation. The vapor abatement mitigation system will be designed to control levels of VOCs to below VISLs;
- 5) Develop and implement a performance sample plan to confirm that ODH screening levels are achieved for contaminants of concern, specifically TCE, following installation of a SSDS, and;
- 6) Take any necessary response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA determines may pose an imminent and substantial endangerment to the public health or the environment.

Post Removal Site Controls

The removal action will be conducted in a manner not inconsistent with the NCP. The On-Scene Coordinator (OSC) has initiated planning for provision of post-removal site control consistent with the provisions of Section 300.415(l) of the NCP. Operation and maintenance (O&M) of the vapor abatement systems will be the responsibility of the residential property owner following installation and performance monitoring by EPA. The EPA will require the property owner, and tenant if different, to sign an O&M agreement prior to installation. The O&M agreement states that the property owner will provide electricity to power the vapor abatement system inline fan.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

The estimated costs to complete the activities outlined above are summarized below. These activities will require an estimated 24 on-site working days to complete. Detailed cleanup contractor costs are presented in Attachment V.

2. Contribution to remedial performance

The proposed action will not impede future actions based on available information. Future remedial action is not presently known for this Site.

3. Engineering Evaluation/Cost Analysis (EE/CA)

Not Applicable

4. Applicable or relevant and appropriate requirements (ARARs)

All applicable and relevant and appropriate requirements (ARARs) of federal and State law will be complied with to the extent practicable. The OSC submitted an email dated August 1, 2017, to Daniel Tjoelker, Ohio EPA Central District Office, requesting State ARARs for the Site (AR# 13). On August 10, 2017, Brian Tucker, Ohio EPA Central District Office, responded and identified the following potential State ARARs, located in the Ohio Administrative Code (AR# 16):

- OAC 3745-15-07: General Ban On Air Pollution Nuisances
- OAC 3745-1505: de minimis Emission Levels that Trigger the Need for an Air Permit

Ohio EPA also provided a list of general ARARs (AR# 20).

B. Estimated Costs

The detailed cleanup contractor cost is presented in Attachment VI and the Independent Government Cost Estimate is presented in Attachment VII. Estimated project costs are summarized below:

<u>Regional Removal Allowance Costs</u>	
Total Cleanup Contractor Costs (Includes a 20% contingency)	\$335,507
Total START, including multiplier costs	\$61,975
<u>Other Extramural Costs Not Funded from the Regional Allowance</u>	
<i>Not Applicable</i>	\$0

Subtotal, Extramural Costs	\$397,482
Extramural Costs Contingency (20% of Subtotal, Extramural Costs)	\$79,496
TOTAL REMOVAL ACTION PROJECT CEILING	\$476,978

The response actions described in this Action Memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the Site which may pose an imminent and substantial endangerment to public health and safety and the environment. These response actions do not impose a burden on affected properties disproportionate to the extent to which the properties contribute to the conditions being addressed.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed or no action at the Site increases the potential that additional hazardous substances will be released, thereby further endangering public health, welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$821,749.¹

$$(\$476,978 + \$30,400) + (61.96\% \times \$507,378) = \$821,749$$

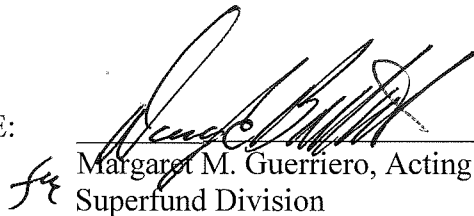
¹ Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Hancock Manufacturing VI Site, located in Toronto, Jefferson County, Ohio, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record (Attachment I) for the Site. Conditions at the Site meet the NCP Section 300.415(a) criteria for a removal, and I recommend your approval of the proposed removal action.

The total removal action project ceiling, if approved, will be \$476,978. Of this, as much as \$415,003 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE:


Margaret M. Guerriero, Acting Director
Superfund Division


Date

DISAPPROVE:

Margaret M. Guerriero, Acting Director
Superfund Division

Date

Enforcement Addendum

Attachments

- I. Administrative Record Index
- II. EJ Analysis
- III. Site Location Map
- IV. Site Layout Map
- V. Ohio EPA Groundwater Sampling Map
- VI. Detailed Cleanup Contractor Cost Estimate
- VII. Independent Government Cost Estimate

cc: B. Schleiger, U.S. EPA, 5104A, (email: Brian.Schleiger@EPA/US)
L. Nelson, U.S. Department of Interior, **w/o Enf. Addendum**
(Email: valincia_darby@ios.doi.gov)
Craig Butler, Director, Ohio EPA **w/o Enf. Addendum**
(Email: craig.butler@epa.state.oh.us)
Mike DeWine, Ohio Attorney General **w/o Enf. Addendum**
(Email: Mike.DeWine@ohioattorneygeneral.gov)

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**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – FOUR PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

ATTACHMENT I

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION**

**ADMINISTRATIVE RECORD
FOR THE
HANCOCK MANUFACTURING VI SITE
TORONTO, JEFFERSON COUNTY, OHIO**

**ORIGINAL
SEPTEMBER, 2017**

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	935901	10/1/10	U. S. EPA	File	Vapor Intrusion Guidebook	323
2	935926	12/5/13	Partners Environmental Consulting, Inc.	Ohio EPA and City of Toronto	Exposure Pathway Risk Management Assessment and Remedial Alternatives Assessment	54
3	935935	12/5/13	Partners Environmental Consulting, Inc.	Ohio EPA and City of Toronto	Appendix I - Groundwater Fate and Transport Modeling	9
4	935930	3/28/14	Vandenberg, D., Microbac Laboratories	Sigler, V., Ohio EPA	Laboratory Report L14030287	39
5	935902	6/1/15	U.S. EPA	File	OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air	267
6	935934	1/1/16	Ohio EPA	File	Former Hancock MFG Toronto Ohio - Residential Vapor Sampling Results (2016-2017)	1
7	935931	4/29/16	Ohio EPA	File	Hancock USEPA Removal Referral	365
8	935939	11/1/16	ATSDR	Public	Tox FAQs Fact Sheet - Trichloroethylene - CAS #79-01- 6	2
9	935929	6/2/17	Proffitt, M., Ohio EPA	Augustyn, J., U.S. EPA	Letter re: Time-Critical Removal Action Referral	10

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10	935938	6/2/17	ALS Environmental	File	Field Chain-of-Custody Record	1
11	935937	6/9/17	Nieman, R., ALS Environmental	Armstrong, G., Ohio EPA	Hancock MFG Analytical Report (W/Cover Letter)	48
12	935925	8/1/17	Tjoelker, D., Ohio EPA	Pohl, E., U.S. EPA	Email re: Hancock TCE	2
13	935959	7/1/17	Pohl, E., U.S. EPA	Tjoelker, D., Ohio EPA	Email re: Request for ARARs - Hancock Manufacturing Site	1
14	935928	8/2/17	Tjoelker, D., Ohio EPA	Pohl, E., U.S. EPA	Email re: Hancock Appendix I GW Model Narrative	3
15	935932	8/7/17	Armstrong, G., Ohio EPA	Pohl, E., U.S. EPA	Email re: Toronto Ohio - Hancock MFG Vapor Site	4
16	935936	8/10/17	Tucker, B., Ohio EPA	Pohl, E., U.S. EPA	Email re: Request for ARARs - Hancock Manufacturing Site	2
17	935968	9/1/17	Frey, R., Ohio Dept. of Health	Pohl, E., U.S. EPA	Letter Health Consultation (Vapor Intrusion Pathway Evaluation)	12
18	935970	9/1/17	Frey, R., Ohio Dept. of Health	Pohl, E., U.S. EPA	Email re: Letter Health Consultation for the Hancock Manufacturing Site	1
19	935971	9/5/17	Colledge, M., ATSDR	Pohl, E., U.S. EPA	Email re: Letter Health Consultation for the Hancock Manufacturing Site	2
20	935927	Undated	Ohio EPA	File	Revised 2017 ARARs	32
21	935933	Undated	Ohio EPA	File	Figure 3 Hancock Manufacturing Vapor Sampling	1
22	-	-	Pohl, E., U.S. EPA	Guerriero, M., U.S. EPA	Action Memorandum re: Request for a Time-Critical Removal Action at the Hancock Manufacturing VI Site (PENDING)	-

ATTACHMENT II

EJ Analysis

**HANCOCK MANUFACTURING VI SITE
TORONTO, JEFFERSON COUNTY, OHIO**

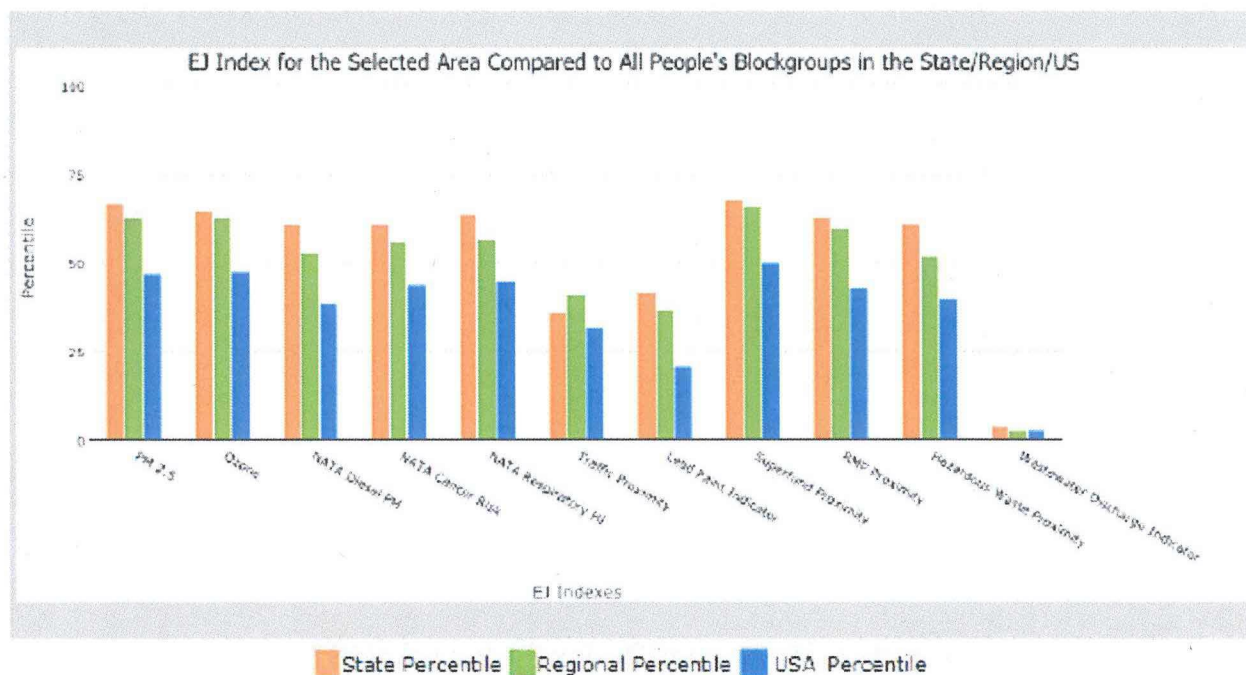
AUGUST 2017

1 mile Ring around the Area, OHIO, EPA Region 5

Approximate Population: 4,098

Input Area (sq. miles): 3.80

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	67	63	47
EJ Index for Ozone	65	63	48
EJ Index for NATA* Diesel PM	61	53	39
EJ Index for NATA* Air Toxics Cancer Risk	61	56	44
EJ Index for NATA* Respiratory Hazard Index	64	57	45
EJ Index for Traffic Proximity and Volume	36	41	32
EJ Index for Lead Paint Indicator	42	37	21
EJ Index for Superfund Proximity	68	66	50
EJ Index for RMP Proximity	63	60	43
EJ Index for Hazardous Waste Proximity	61	52	40
EJ Index for Wastewater Discharge Indicator	4	3	3



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

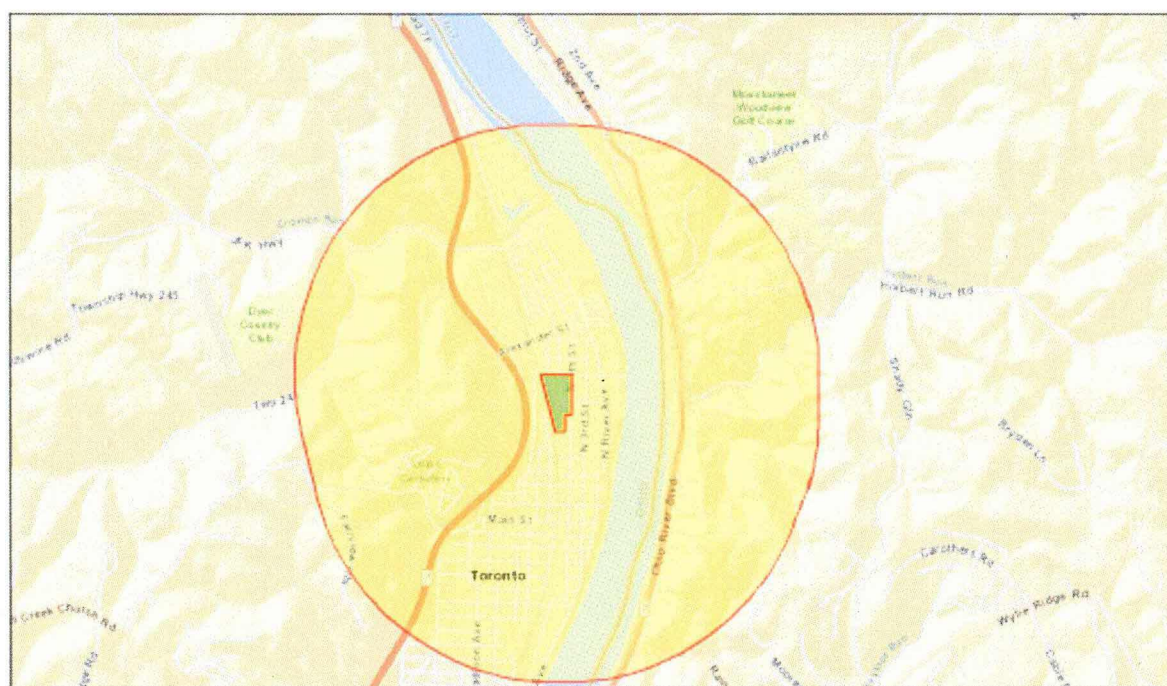
August 16, 2017

1/3

1 mile Ring around the Area, OHIO, EPA Region 5

Approximate Population: 4,098

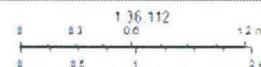
Input Area (sq. miles): 3.80



August 16, 2017

Buffer Area

Digitized Polygon

[illegible]

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2017)

1 mile Ring around the Area, OHIO, EPA Region 5

Approximate Population: 4,098

Input Area (sq. miles): 3.80



Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	10	10.7	10	10.1	42	9.14	71
Ozone (ppb)	40.2	37.6	99	37.6	94	38.4	76
NATA* Diesel PM ($\mu\text{g}/\text{m}^3$)	0.917	0.997	49	0.932	50-60th	0.938	60-70th
NATA* Cancer Risk (lifetime risk per million)	46	37	87	34	90-95th	40	70-80th
NATA* Respiratory Hazard Index	1.7	1.8	46	1.7	50-60th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	90	170	64	370	53	590	49
Lead Paint Indicator (% Pre-1960 Housing)	0.62	0.42	74	0.39	75	0.29	83
Superfund Proximity (site count/km distance)	0.026	0.095	27	0.13	16	0.13	23
RMP Proximity (facility count/km distance)	0.23	0.7	43	0.81	39	0.73	43
Hazardous Waste Proximity (facility count/km distance)	0.053	0.097	50	0.091	52	0.093	50
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.69	17	95	4.2	96	30	95
Demographic Indicators							
Demographic Index	25%	27%	60	29%	58	36%	41
Minority Population	6%	20%	37	25%	29	38%	15
Low Income Population	45%	34%	71	33%	73	34%	69
Linguistically Isolated Population	0%	1%	67	2%	58	5%	44
Population With Less Than High School Education	9%	11%	53	11%	55	13%	47
Population Under 5 years of age	6%	6%	59	6%	57	6%	54
Population over 64 years of age	18%	15%	69	14%	73	14%	74

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

August 16, 2017

3/3

ATTACHMENT III

SITE LOCATION MAP

HANCOCK MANUFACTURING VI SITE TORONTO, JEFFERSON COUNTY, OHIO

SEPTEMBER 2017

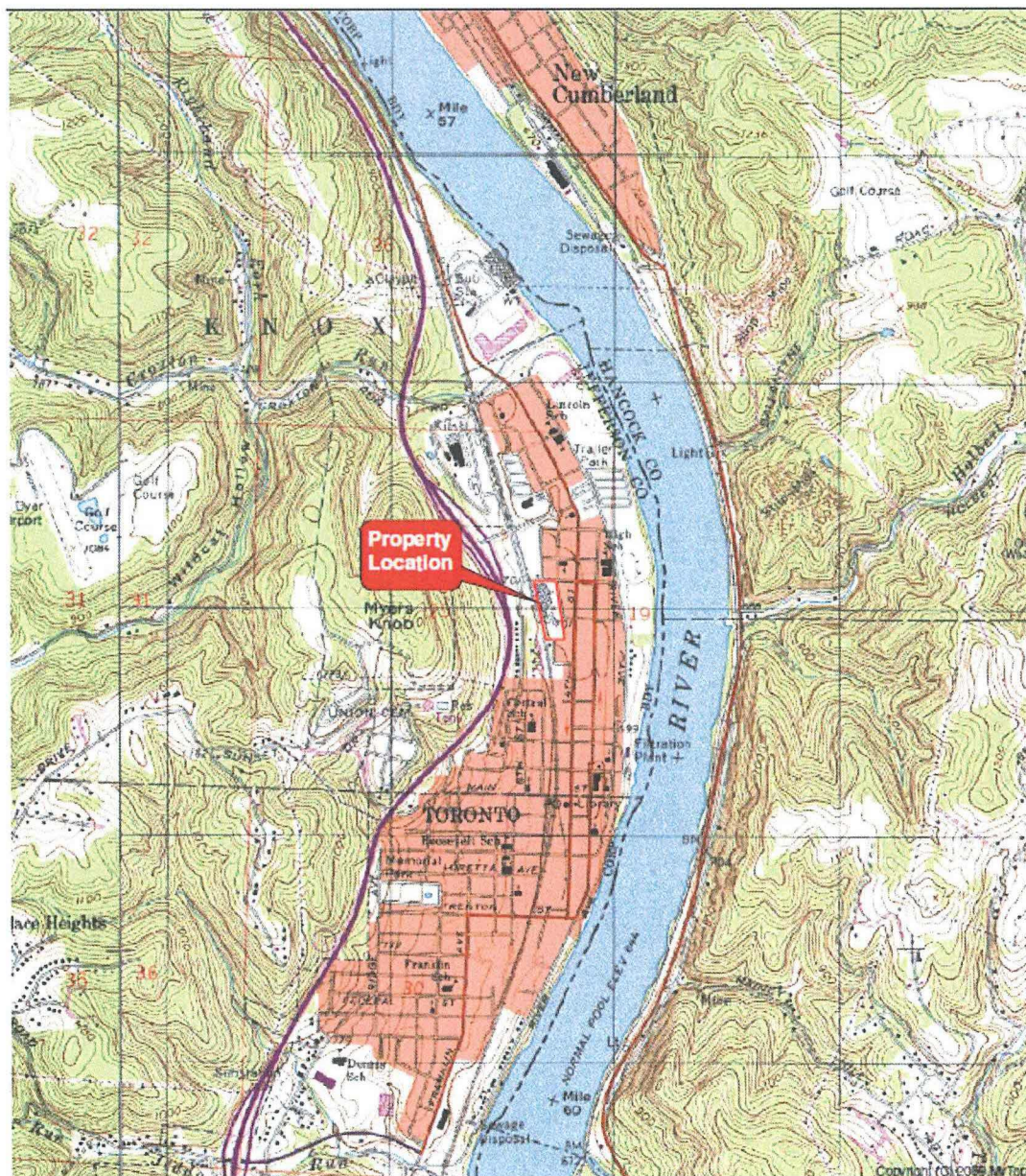
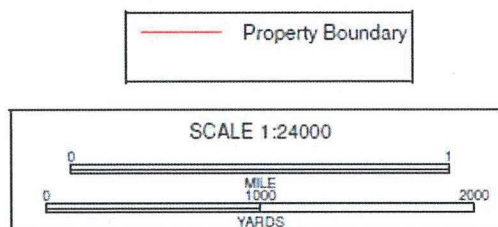


Figure 1: Property Location Map
Former Hancock Manufacturing Facility
709 North Fifth Street
Toronto, Jefferson County, Ohio

Map Name: WEIRTON
Print Date: 12/03/13
Map Center: 040° 28' 20.93" N 080° 36' 13.96" W



Declination
★
MAGN
GN 0.26° E
MN 8.82° W

ATTACHMENT IV

SITE LAYOUT MAP

HANCOCK MANUFACTURING VI SITE TORONTO, JEFFERSON COUNTY, OHIO

SEPTEMBER 2017



ATTACHMENT V

OHIO EPA GROUND WATER SAMPLING MAP

HANCOCK MANUFACTURING VI SITE TORONTO, JEFFERSON COUNTY, OHIO



Hancock Manufacturing
Ground Water Sampling Event
March 2014
Results Reported in ug/L

0 55 110 220 330 440 550 Feet

OhioEPA
Geographic Information Systems

Legend

♦ MW Sampled March 2014

ATTACHMENT VI

DETAILED CLEANUP CONTRACTOR ESTIMATE

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**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ATTACHMENT VII

**INDEPENDENT GOVERNMENT COST
ESTIMATE HAS BEEN REDACTED – TWO
PAGES
NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**