DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: **Hamilton Technology, Inc**
Facility Address: **901 Columbia Ave. Lancaster, Pennsylvania**
Facility EPA ID #: **PAD067096370**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	X			
Air (indoors)[2]	X			
Surface Soil (e.g., <2 ft)	X			
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g.>2ft)	X			
Air (outdoors)		X		

☐ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

☒ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

☐ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Acronyms, figures, tables, and superscript references cited herein apply to those items presented in the EI Report completed for the Facility (URS, August 2009). A review of soil/groundwater characterization activities which have occurred at the Site is provided in the following discussion

Groundwater:

Thirty (30) monitoring wells were installed on-Site to monitor shallow, intermediate, and deep groundwater zones(34). Well depths range from approximately 25 to 118 feet bgs. Based on measured groundwater elevations, it appears that there are two separate aquifer zones (shallow and deep) underlying the Site. Groundwater analytical results for these wells are tabulated in **Tables 2** and **3** of the EI report. URS generated TCE isoconcentration maps for both the shallow and deep aquifer zones based on 2005 groundwater analytical data. The isoconcentration maps are presented as **Figures 4** and **5**, respectively in the EI report.

Between June 19 and November 11, 1995, a groundwater recovery system was constructed at the Site to extract and treat impacted groundwater(64). Treated groundwater is discharged to the City of Lancaster's POTW under agreement with effluent limits of less than 500 ppb for total VOCs and less than 360 ppm TSS. The average daily flow rate to the POTW is permitted for 136,800 gallons per day or 95 gallons per minute.

The three on-Site extraction wells and approximately 30 monitoring wells (MWs and VWs) are sampled regularly and analyzed for TCE, TCA, and 1,1-DCE. A summary of beginning and current analytical results for each sampling point is presented below. Bolded concentrations are above the PADEP Residential Nonuse Aquifer Medium Specific Concentrations, which are:

- 200 ug/l for TCA,
- 7 ug/l for 1,1-DCE, and
- 5 ug/l for TCE.

PADEP has approved a nonuse aquifer determination for properties located within the City of Lancaster.

Sample Location	Sample Date	TCA (ug/l)	1,1-DCE (ug/l)	TCE (ug/l)	Sample Location	Sample Date	TCA (ug/l)	1,1-DCE (ug/l)	TCE (ug/l)
EW-1	12/13/1995	**52,200**	ND	**119,000**	MW-12S	12/13/1995	ND	ND	ND
	2/9/2019	**320**	**8**	**910**		2/19/2019	ND	ND	0.2 J
EW-2	12/13/1995	**255**	ND	**1,220**	MW-13D	12/13/1995	**816**	ND	**12,900**
	2/9/2019	170	4	**410**		2/19/2019	0.4 J	ND	**98**
EW-3	5/09/2014	**1,200**	**71**	**4,000**	MW-13M	12/13/1995	**809**	ND	**12,400**
	2/21/2019	0.3 J	2	5		2/19/2019	ND	.05 J	**56**
EW-4	5/08/2014	**21,000**	**650**	**45,000**	MW-14D	12/13/1995	ND	ND	**29.1**
	2/21/2019	**890**	**52**	ND		2/19/2019	ND	ND	ND
EW-5	5/07/2014	48	2	**200**	MW-14M	12/13/1995	ND	ND	ND
	2/9/2019	0.5 J	**72**	**310**		9/12/2016	ND	ND	ND
MW-1	12/13/1995	ND	ND	**24.3**	MW-14S	12/13/1995	ND	ND	ND
	2/20/2019	2	ND	**13**		2/19/2019	ND	ND	ND
MW-2	3/20/1996	ND	ND	8.2	MW-15	12/22/1995	ND	**12.2**	ND
	2/18/2019	ND	ND	0.7 J		2/18/2019	3	**8**	**89**
MW-3	12/13/1995	ND	ND	**5.1**	MW-16	12/13/1995	7.7	ND	**56.2**
	2/18/2019	ND	ND	1		2/19/2019	0.3 J	ND	**18**
MW-4	2/12/1996	ND	ND	**76.4**	MW-17	12/22/1995	ND	ND	ND
	2/18/2019	ND	ND	ND		2/19/2019	0.4 J	ND	4
MW-5	09/09/2013	ND	ND	5	MW-18	3/14/2013	**8,800**	**280**	**30,000**
	05/06/2014	ND	ND	4		2/21/2019	ND	0.8 J	0.2 J
MW-6	12/12/1996	**3,985**	ND	**11,595**	MW-19	3/14/2013	ND	ND	**10**
	2/19/2019	110	5	**280**		2/19/2019	ND	ND	0.6 J
MW-7D	12/22/1995	36.0	**37.0**	**240**	MW-20	9/09/2013	76	2 J	**160**
	2/21/2019	18	**810**	**1,400**		2/21/2019	10	1	3
MW-7S	12/13/1995	142	**159**	**1,070**	MW-21	9/09/2013	8	9	**130**
	2/21/2019	25	**30**	**630**		2/18/2019	0.8 J	0.5 J	**11**

MW-8	12/13/1995	ND	ND	**119**	MW-22	9/10/2013	**30,000**	**1,200**	**89,000**
	2/18/2019	2	ND	**8**		2/21/2019	**380**	**290**	ND
Sample Location	**Sample Date**	**TCA (ug/l)**	**1,1-DCE (ug/l)**	**TCE (ug/l)**	**Sample Location**	**Sample Date**	**TCA (ug/l)**	**1,1-DCE (ug/l)**	**TCE (ug/l)**
MW-9D	12/22/1995	ND	ND	ND	MW-23	9/10/2013	4	ND	**15**
	2/18/2019	ND	ND	0.5 J		2/20/2019	4	ND	**8**
MW-9S	12/22/1995	7.2	ND	**99.9**	MW-A	12/12/1996	ND	ND	**1,060**
	2/18/2019	ND	0.5 J	**6**		2/19/2019	5	ND	**32**
MW-10D	3/20/1996	**718**	ND	**3,730**	VW-1	3/19/1996	ND	ND	**232**
	9/09/1999	**238**	ND	**578**		2/18/2019	2	ND	**47**
MW-11D	12/12/1996	ND	ND	ND	VW-2	6/24/1996	32.0	1.0	**78.0**
	2/19/2019	ND	ND	0.6 J		2/19/2019	ND	ND	5
MW-11S	12/12/1996	ND	ND	13.0	VW-3	3/19/1996	**85,400**	ND	**252,000**
	2/19/2019	ND	ND	4		3/29/2006	**44,500**	**1,340**	**104,000**
MW-12D	12/13/1995	ND	ND	ND	VW-4	6/24/1996	**7,610**	**404**	**23,084**
	2/19/2019	ND	ND	0.4 J		2/19/2019	**14,000**	**300**	**35,000**
Effluent	3/19/1996	13.8	ND	106	VW-5	6/24/1996	ND	ND	**44.1**
	3/5/2018	2	ND	8		2/18/2019	0.3 J	0.9 J	31

Comparison of the 1992 TCE isoconcentration map for the deep aquifer zone (**Figure 5, EI report**) to the 2005 TCE isoconcentration map for the deep zone (**Figure 8, EI report**) shows an increase in concentrations in the area of groundwater extraction EW-1 (8,600 ppb) and verification well VW-3 (130,000 ppb). In addition, concentrations of TCE significantly increased at MW-7S and MW-7D since the startup of the groundwater remediation system, which may indicate a possible deeper source area or a source near the surface in the vicinity of these two wells that is being drawn down as a result of pumping extraction wells EW-1 and EW-2. Review of groundwater elevation data prior to startup of the treatment system (February 26, 1992) indicates there is some communication between the shallow and the deep aquifer zones[40].

A source near the surface of MW-7S/MW-7D is possible because the history of the processes conducted in this area are unknown, and there is little soil gas data (one soil point was tested with concentrations below method detection limits) for this portion of the Site[24,48]. It is also possible that NAPL may be present at depth; however, there is no documentation that NAPL has ever been observed during field activities. Based on this information, further delineation in the area of the MW-7 well pair is recommended

Another possible source of contamination to groundwater was possible via exfiltration from the city sewer lines of treated groundwater discharged to the City's POTW. Discharge limits of 500 ppb or less of total VOCs were stated in the Facility's discharge permit. Performance standards were deemed acceptable based on guidance provided by the USEPA under CERCLA and the Pennsylvania Water Management Office.

Indoor Air:

Methodology for evaluating the vapor intrusion pathway is detailed in PADEP's guidance manual entitled "Final Guidance on Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 Statewide Health Standard" (VI TGM) (PADEP, January 2004). The guidance provides a screening methodology for evaluating the potential health effects resulting from

vapor intrusion of chemicals of potential concern using the J&E Vapor Intrusion Model with Pennsylvania-specific, USEPA defaults, or Site-specific parameters.

Two rounds of soil vapor sampling were conducted at the Site (discussed in Section 2.5.5 and 2.5.9, EI report) to evaluate the vapor intrusion pathway to existing on-Site structures. The 1992 soil gas analytical results presented in Table 4 of the EI report were compared to PADEP Residential and Non Residential MSCs for soil gas [which are defined as 100 times the Indoor Air Quality Criteria, to allow for attenuation from the soil vapor to the structure](48). Compounds with the highest toxicity values (benzene [0.27 mg/m3] and TCE [1.2 mg/m3]) were screened against the highest concentrations detected in these soil gas samples which included:

•Sample Point 59 with a benzene concentration of 92 ppb (0.29 mg/m3), and
•Sample Point 83 with TCE concentration of 5,305 ppb (28.5 mg/m3).

According to the PADEP VI TGM, based on the highest concentrations presented above, either indoor air sampling would require or a Site-specific evaluation using the soil gas data would be required to appropriately evaluate the indoor air pathway. As previously discussed, ABB ran two different models, the Empirical Radon Relationship Approach and the Farmer Model, using the available soil gas data. The results were compared to USEPA Region III ambient air screening concentrations. The indoor air concentrations estimated by both models were below the USEPA Region III screening concentrations. The report concludes that "given the acceptable concentration of VOCs for indoor air estimated from these two transport models, indoor air monitoring is not warranted at the Clock Towers Site"(48). PADEP expressed concern that these models were not appropriate for Site; therefore, the Facility completed additional modeling using the Li and Long Model methodology, which further supported the conclusion that there was no significant risk to residents of the Clock Tower Apartments resulting from the presence of high concentrations of TCE in soil and groundwater. PADEP agreed that no further action was necessary relative to the indoor air issue (52).

It appears that only one soil gas sample was collected near MW-7S and MW-7D, where TCE concentrations in groundwater appear to have significantly increased in both the shallow and deep aquifer zones since the startup of the groundwater remediation system. The analytical results for this soil gas sample indicate that none of the constituents analyzed for were detected. In considering the worst case scenario, maximum TCE concentrations detected in groundwater from MW-7S (3,430 ppb in May 2002) and MW-7D (5,210 ppb in September 2005) were compared to Residential Groundwater Screening Values for Protection of Indoor Air (14,000 ug/l) as listed in the PADEP VI TGM. These maximum concentrations are below the screening values.

Surface and Subsurface Soil:
According to information obtained from the USDA Natural Resources Conservation Service Soil Survey, the former Facility is underlain by soil classified as Urban Land. This classification is used when greater than or equal to 85% of the ground surface is covered by roads, buildings, parking lots, or other structures.

On-Site soils were investigated for VOCs in 1990 and 1992 by HRP (Tables 2 and 3, EI Report). Soil samples were collected from various depths near former Buildings 3 and 22 (Figure 3, EI Report). TCE and 1,1,2,2-TCA were detected in soil samples above the PADEP Residential Soil MSCs in several of the samples collected between 1 and 3 feet bgs. All areas north of Buildings 4 and 6 have been paved and are a parking lot for the Clock Tower Apartments. This includes the locations of former Buildings 3 and 22.

Surface Water and Sediment:
The nearest surface water body is the Little Conestoga Creek located approximately one mile the west of the Site (Figure 1, EI Report). The Little Conestoga Creek eventually discharges to the Conestoga Creek which flows approximately 1 1/2 miles east of the Site. According to the PADEP eMap database, the Little Conestoga Creek is identified as a non-attaining segment of the Integrated List according to the standards set by the Pennsylvania Clean Streams Law (Figure 10, EI Report). These standards are based upon aquatic life, fish consumption, recreational use and potable water supply criteria. The eMap (Figure 10, EI Report) and FEMA floodplain map (Figure 11, EI Report) indicate that there are no portions of the Facility within the 100 year and 500 year flood plains of Little Conestoga Creek.

The Facility previously held a NPDES permit (number 1020) for discharge from the former WWTP, which is no longer active. Currently treated groundwater from the remediation system generated on-Site is discharged under agreement to the City of Lancaster POTW. No violations related to this agreement have been reported.

The potential for indirect discharge of Site contaminants to surface water is possible via the groundwater flow pathway. According to 2005 groundwater elevation data, on-Site groundwater flow is controlled by pumping of EW-1 and EW-2 (impacted groundwater is being drawn in the direction of these extraction wells); therefore, migration of contaminants in the upper groundwater zones appears to be controlled. A water well survey conducted in 1989 indicates that, at that time, downgradient water supply wells had not been impacted (18). The lateral and vertical extent of impacted groundwater has been fully established during groundwater pump and treatment operation. Since the startup of the groundwater remediation system, it is unlikely that impacted groundwater is discharging to nearest surface water body 0.5 mile away.

Outdoor Air:

The former Facility held an Operating Permit (PADER permit no. 36318093) under the PADEP Air Control Act for emissions. This air permit has not been active since the 1980s because the Facility is closed.

A pump and treat groundwater remediation system was installed in 1995. The system started up in November 1995 and is currently in operation. The system includes a low profile tray aerator type stripper with contaminated off-gasses being treated by vapor phase GAC units (64). Correspondence indicates a Request for Determination was submitted by the Facility to PADEP in April 1995, and an exemption was issued by PADEP Air Pollution Control in May 1995(66). It appears that the permit exemption was based on CEM data documenting a discharge of less than 10% of total VOC concentrations.

The Facility later requested a change in the discharge value from 10% to 8 ppmv. CEM data dated between January and September 2005 (presented in Appendix C of the EI Report) indicates that several total VOC concentrations above 7 ppm +were reported for Sample Point #1, which appears to be either a pre-treatment sample point or a point located near the bottom of the multi-story stack. None of the total VOC concentrations reported for Sample Points #2 and #3 exceeded this 7 ppm value. Sample Points #2 and #3 appear to be located nearer the top of the multi-story stack.

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater	No	No	No	No	No	No	No
Air (indoors)	Yes	Yes	Yes	No	No	No	No
Soil (surface, e.g., <2 ft)	Yes	Yes	Yes	Yes	Yes	No	No
~~Surface Water~~							
~~Sediment~~							
Soil (subsurface e.g., >2 ft)	No	No	No	Yes	No	No	No
~~Air (outdoors)~~							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

☐ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

☒ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

☐ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Indoor Air:
A vapor mitigation system was installed. Previous consultants to the former Facility conducted modeling in 1992 to evaluate the indoor air pathway for residents of the Clock Tower Apartments.

Surface Soil (<2 feet) and Subsurface Soil (>2 feet):
Impacted surface and subsurface soils have been identified near former Buildings 3 and 22. It is unknown whether these impacted soils have been removed; however, the area is completely paved. Therefore, direct contact with any remaining impacted soil would be limited to excavation activities (construction/utility workers). The remaining portion of the Site (southern portion of the Site) is not paved and is easily accessible. It appears that little to no soil investigation work has been done on this portion of the Site, particularly near MW-7S and MW-7D. It is possible that impacted soils may be present in these areas and could pose a direct contact risk to Site workers, visitors, residents, trespassers, and construction/utility workers.

Groundwater
GFG Environmental Inc. (GFG) conducted a study of drinking water wells in the area of the Facility in 1989. Information gathered during the investigation indicated that two drinking water wells were identified downgradient of the Clock Towers Apartments property, where known contamination exists. One well was located directly downgradient on the far bank of the Little Conestoga Creek to which the groundwater discharges. GFG indicated that this well is probably protected by the creek. A second well was located downgradient but is not in the direct flow path of the Facility according to GFG.

Also, available information indicates that groundwater beneath the Site is not anywhere within Lancaster City as a source of drinking water. Because the City is extensively served by centralized public water supply, Lancaster has enacted on ordnance (non-use aquifer determination) which prohibits the use of groundwater within the City for drinking water purposes.

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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

☒ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

☐ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

☐ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

Indoor Air:
Previous 1992 modeling relative to indoor air indicated that no further action was warranted for Clock Tower Apartments residents. This modeling was completed prior to the startup of the groundwater remediation system, which is successfully drawing significantly impacted groundwater toward the center of the Site. In addition, concentrations of TCE increased significantly at MW-7S and MW-7D located east of Building 8, then occupied by the New School of Lancaster. It was possible that with the significant increase in groundwater concentrations, occupants of the on-Site buildings may be exposed to concentrations of TCE in indoor air at are potentially unacceptable.

Additional vapor intrusion investigation was conducted in 2011 to determine if indoor air in four of the Clocktower Apartment Complex buildings contain elevated levels of TCE. Results were screened against the EPA Region III indoor air screening level for TCE at a 1 in 100,00 carcinogenic target risk of 12 ug/m^3. Elevated TCE levels in indoor air and sub-slab samples were observed at New School of Lancaster building and Building #1. As a result, mitigation and diagnostic testing was conducted to design an Active Soil Depressurization (ASD) system at both The New School of Lancaster building and Building #1 in the areas of the highest TCE sub-slab concentrations at the facility.

Two ASD systems were installed in 2011 with the New School of Lancaster system having seven (7) sub-slab suction points for vapor extraction and the Building #1 system having six (6) suction points. Rooftop blowers vent vacuumed TCE vapors and do not require an air permit for ASD system emissions. Both systems were confirmed to be effective by maintaining negative pressure field at each sub-slab suction point suction point between -0.035 inches of water column and -0.020 inches of water column with an absolute minimum negative pressure field of -0.0040 water column. The ASD systems meet EPA standards in eliminating the potential for VOC vapors to enter structures and will operate indefinitely.

Surface and Subsurface Soils:
Exposure could be reasonably expected to be significant for construction/utility workers that may excavate areas in the vicinity of former Buildings 3 and 22 where surface and subsurface soil with TCE concentrations above the PADEP Residential Soil MSC has been identified. This area is completely paved; therefore, it is expected that other receptors (e.g., residents, site workers, trespassers, and visitors) would not be directly exposed to these soils, unless the soils are not properly managed (e.g., covered/contained) to prevent access by these receptors. In 2012 and 2013, additional soil sampling was conducted throughout the site ranging from depths of 2 to 20 feet bgs. Results show that VOCs were detected in soils below PADEP Residential MSCs for direct contact and unsaturated soil to groundwater scenarios.

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5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

☐ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

☐ If no - (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

☐ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code.

Rationale and Reference(s):

More information is needed to determine if the significant exposures identified in #4 are within acceptable limits (i.e., documentation that accessible soils on the southern portion of the property are not impacted above regulatory standards, that the significant increase in groundwater concentrations beneath the on-site structures is not impacting indoor air quality, and that the significant increase in groundwater concentrations near MW-7S and MW-7D is not indicative of a nearby shallower source).

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI (event code CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

☒ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **Hamilton Technology Incorporated** facility, EPA ID # **PAD067096370**, located at **Lancaster, Pennsylvania** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

☐ NO - "Current Human Exposures" are NOT "Under Control."

☐ IN - More information is needed to make a determination.

Completed by (signature) _____ Date 12/18/2019
(print) John Hopkins
(title) Remedial Project Manager

Supervisor (signature) _____ Date 12-19-2019
(print) Paul Gothold
(title) Chief, RCRA Corrective Action Branch
(EPA Region) EPA Region 3

Locations where References may be found:

US EPA Region III
Land, Chemicals and Redevelopment Division
1650 Arch Street (3LC20)
Philadelphia, PA 19103

Contact telephone and e-mail numbers
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