UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852

SUBJECT: Long-Term Stewardship Assessment
Honeywell, Inc.
EPA ID: PAD002386761
1100 Virginia Drive
Fort Washington, PA 19034

DATE: December 15, 2023

TO: Alizabeth Olhasso, Section Manager
Long Term Stewardship File for Electroplaters of York Inc.
RCRA Corrective Action

FROM: Kristin Koroncai, Remedial Project Manager

Remedy Assessment Summary:
On October 25, 2023 the United States Environmental Protection Agency's (USEPA) Land, Chemicals, and Redevelopment Division (LCRD) representative, Kristin Koroncai, conducted a long-term stewardship (LTS) assessment site visit of the Honeywell, Inc. (Facility) in Fort Washington, PA. This LTS will be recorded as CAS88F(2) FURTHER EVALUATION NEEDED, as further described in the conclusions and recommendations section, below.

Introduction:
Long-term stewardship (LTS) refers to the activities necessary to ensure that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be enforced. The purpose of the EPA Region 3 LTS program is to periodically assess the efficacy of the implemented remedies (i.e., ECs and ICs) and to update the community on the status of the RCRA Corrective Action facilities. The assessment is conducted in twofold, which consists of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance with the final decision.

Facility Background:
The Facility was purchased by Honeywell Inc. in 1965; Honeywell constructed a facility on the property to manufacture electronic controls and mechanical valve assemblies. Prior to Honeywell's ownership, the property was used for agricultural purposes. Honeywell sold the property in 1986 and there were multiple sales of the property since then; the property is currently owned by Liberty 1100 VA DR, LLC and managed by Somerset Properties.

Nine phases of environmental investigations were completed between 1986 and 1991, including excavation and disposal of 10 underground storage tanks (USTs) and 70 tons of impacted soil. A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) and Interim Measures Work Plan was approved by EPA in 1992 and an Interim Remedial Measures system was installed in October 1993 to recover and treat groundwater containing volatile organic compounds (VOCs).

EPA issued a Final Decision (FD) for the Facility on December 16, 1994. The selected remedy included:

- Installation of two new recovery wells
- Conduct a pilot study to determine the most effective treatment method; UV/Oxidation or Air Stripping
- Continue operation of the Interim Measures pump and treat system until the new groundwater pump and treat system is installed and operational
- Treat off gases and treated groundwater from Air Stripping with Granulated Activated Carbon (GAC), or treat treated groundwater from UV/Oxidation with GAC
- Determine if the in-place Interim Measures recovery wells should be used with the new pump and treat system or eliminated
- Develop and implement institutional controls providing for periodic monitoring and reporting of groundwater data to track compliance with established media cleanup standards
- Discharge treated groundwater to Pine Creek in accordance with the Clean Water Act NPDES regulations or to the sanitary sewer in accordance with limits required by the Delaware Valley Industrial Sewage Authority

In 1995, EPA and Honeywell Inc. entered an Administrative Order on Consent (Order); the Order established the work to be performed at the site per the FD.

The Corrective Measures Implementation system was initiated in 1997; water was pumped from two recovery wells and treated via ultraviolet oxidation (UVOX) and liquid-phase granular activated carbon (LPGAC) units and then discharged to the local sewer authority. The UVOX unit was removed from the system in 2009 due to an exponential decrease in trichloroethene (TCE) concentrations (early investigation analytical data reported TCE concentrations as high as 85,000 ug/L. Since 2009, the groundwater was only treated by activated carbon.

In 2012, Honeywell submitted a Monitored Natural Attenuation (MNA) Assessment to EPA, presenting MNA as an alternative remedial approach. Honeywell proposed shutting down the remediation system to study static conditions at the Facility for one year- EPA approved this proposal. The study concluded that concentrations in most wells had continued to decrease and the plume had not migrated further downgradient during the year-long study without pumping. After this, a two-year monitoring period with semi-annual groundwater sampling was conducted to provide additional groundwater sample sets intended to better assess TCE trends. A total of 17 wells were monitored for VOCs, including monitoring of shallow groundwater to assess the potential of vapor intrusion (VI) into the onsite building and warehouse facility, then occupied by DeVry University. Results from this two-year monitoring period found elevated TCE concentrations in groundwater at MW06A and increasing TCE concentrations were identified at RW03. Honeywell proposed soil investigation to determine whether TCE-impacted soils were present in this area; EPA approved this proposal in 2016.

In response to TCE concentrations above USEPA Vapor Intrusion Screening Levels (VISL) for groundwater in shallow monitoring well MW06A and the proximity to an occupied building, Honeywell installed a sub-slab depressurization system (SSDS) in April 2015 to mitigate potential exposure to VOCs present below the onsite building. Sub-slab soil gas and indoor air is sampled annually per the 2014 VI Workplan; VOC concentrations have remained below the VISL and Indoor Air VISL since installation of the SSDS.

The soil investigation and continued groundwater monitoring was conducted from 2016-2018 and included delineation of the former UST area. The initial soil investigation was completed in 2016 and results indicated that TCE was not detected in samples collected near MW06A and source material in

unconsolidated soils were not observed on boring logs. This initial soil investigation was limited due to the overburden soil and highly weathered bedrock, limiting direct push drilling equipment depth to 7-9 feet below ground surface (bgs). MW06A is screened from 5-15 feet bgs, several feet into fractured bedrock. In 2017 and 2018, additional borings were installed to investigate the former UST areas and area surrounding MW06A; results showed that TCE concentrations exceeded the EPA Industrial Soil RSL in soil/weathered bedrock samples collected near the former UST area, suggesting a possible source area. Honeywell reported this area remains a potential source of TCE to groundwater.

In 2019, Honeywell installed an additional monitoring well, MW29, to characterize groundwater within the potential source area. Data from this well since installation show TCE concentrations lower than concentrations at MW06A and RW03. To remove potential VOC sources from soil and groundwater, Honeywell conducted a Dual-phase vacuum extraction test during six events between October 2019 and September 2021. Post-extraction groundwater sampling was conducted throughout the extraction test. Results can be seen in the table in the section below. RW03 was sampled at four depths due to the extended screen length; highest concentrations of TCE were encountered at the 25' depth.

Current Site Status:

The Facility continues to conduct semi-annual groundwater sampling at 17 monitoring wells on site (Figure 1). Per the 1994 FD, the Facility compares data to the Corrective Measure Objectives (CMO) for groundwater which are equivalent to the EPA Maximum Contaminant Levels (MCL) for drinking water for 1,1-dichloroethene, tetrachloroethene, TCE, and vinyl chloride. The most recent data results (2020-2022) were collected while the vacuum extraction test was active and the year following; detected exceedances of MCLs during this time period are included in the table below.

		Concentration (ug/L)					
Well ID	**Analyte**	**CMO/MCL**	Oct-20	Apr-21	Oct-21	Apr-22	Oct-22
RW03	TCE	5	**8,150**	**6,480**	**9,260**	**5,880**	**7,630**
	1,1-dichloroethene	7	**13.6**	**14.2**	**22.5**	**13.9**	**16.9**
MW05	TCE	5	3.9	**5.5**	4.9	2.1	2.0
MW06A	TCE	5	**7,690**	**5,370**	**9,420**	**12,000**	**7,740**
MW07D	TCE	5	**9.2**	U	**7.3**	3.9	0.6
MW15	TCE	5	**36.2**	2.5J	**24.1**	**15.5**	**11.9**
MW27	TCE	5	**46.8**	1.9	**27.5**	U	**21.3**
MW28	TCE	5	**14.1**	**98.7**	**16.4**	**106**	**214**
	Vinyl Chloride	2	U	U	**33.8**	U	**5.9**
MW29	TCE	5	**13.1**	**8.1**	4.6	4.5	**6.9**
	Vinyl Chloride	2	**35.1**	**4.8**	**9.7**	1.7	**4.0**

*Bold indicates exceedance of the applicable CMO/MCL. U indicates undetected.

The Facility continues to conduct annual surface water monitoring of Pine Run Creek at four locations. TCE was not detected above the CMO/MCL in 2022.

The Facility continues to conduct annual monitoring of sub-slab soil gas and indoor air at the property (Figure 2). Additional inspections of the SSDS system were conducted twice in 2022 by the property

owner's consultant. The system continues to run consistently with no shutdowns reported. TCE was not detected above applicable standards in neither sub-slab soil gas or indoor air in 2022.

On October 17, 2023, Honeywell submitted to EPA a Technical Impracticability (TI) Evaluation report. Honeywell has requested a remedy modification that includes a TI determination for a portion of the site and MNA for the remainder of the site. This report and request are currently under review by EPA.

During the site visit on October 25, 2023, the facility property was toured and select groundwater wells observed. The facility is currently used as office space for various companies with a large area paved for parking. The SSDS fan system room was observed; two fan systems were observed to be operating at 5 and 7 ΔP in H_20. The following select groundwater wells were observed and in satisfactory condition: RW03, MW29, MW06A, MW9D, MW07, MW10, MW05, MW08A, MW15, MW1R.

Long-term Stewardship Site Visit:
A site visit was conducted on October 25, 2023. The visit included a walk-through inspection of the property.

The attendees were:

Name	Organization	Email Address
Kristin Koroncai	US EPA Region 3	Koroncai.kristin@epa.gov
John Heller	WSP USA	John.heller@wsp.com
John Zatyczyc	PADEP	Jzatyczyc@pa.gov

Implementation Mechanism(s):

The Implementation Mechanism is the method for implementing IC and ECs required as a condition of the Statement of Basis and Final Decision. The summary of implementation mechanisms are described in Attachment 1.

Financial Assurance:

The 1995 Order requires Honeywell to hold financial assurance for the costs associated with work described in the Order; Honeywell obtained an irrevocable letter of credit from Mizuho Corporate Bank for these costs. As of March 2014, the financial assurance was for $2,492,422, having been adjusted for inflation. In March 2014, Honeywell requested, and EPA approved, a decrease in the financial assurance obligation due to the majority of work under the 1995 Order having been completed. The letter of credit was adjusted to $300,000 on April 12, 2019 with Mizuho Corporate Bank; EPA received verification from U.S. Bank that this FA mechanism is still in place on April 13, 2023.

Reporting Requirements/Compliance:

The Facility provides reports in accordance with the 1995 Order between EPA and Honeywell Inc. (RCRA-III-079-CA). The Order requires reporting on an annual and 5 year basis; the most recent report received was the 2022 Annual Progress Report. The next report for reporting period of 2023 is due to be submitted to EPA in February 2024.

Mapping:

The Facility area was mapped on September 30, 2017 and was entered into the R3 Corrective Action geodatabase and RCRA Info. It is also available on the EPA Website factsheet for this facility.

Conclusions and Recommendations:

Based upon the Facility background and current status described above, it is recommended that further evaluation is conducted. Further evaluation is currently in progress by the Facility and EPA to reevaluate the effectiveness of the 1994 Final Decision and objectives of the 1995 Order. As further evaluation of an alternative remedy progresses, the recommendations below should be considered:

1. EPA reviews and provides an approval decision of the TI Evaluation/Remedy Modification report submitted to EPA in October 2023.
2. Reassess the Financial Assurance currently in place ($300,000) to adjust for inflation and/or changes in remedial approach.
3. Assess the need for institutional controls of land use and activity via an enforceable mechanism.
4. Further evaluation of whether MNA is occuring in groundwater at the Facility.

Files Reviewed:

Annual Progress Report Period Ending December 2021. February 2023. WSP USA Environment & Infrastructure, Inc.

Annual Progress Report Period Ending December 2022. February 2023. WSP USA Environment & Infrastructure, Inc.

Dual-Phase Vacuum Extraction Results Report. October 2022. WSP USA Environment & Infrastructure, Inc.

Final Administrative Order on Consent, Honeywell Inc. August 1995. US EPA.

Static Conditions Report. 2013. Amec.

Enc.:

Attachments
Figures

Attachment 1: Remedial EC/IC Summary Table.

Facility Name	Honeywell, Inc.			
Address	1100 Virginia Drive, Fort Washington, PA 19034			
EPA ID#	PAD002386761			
Are there restrictions or controls that address:	**Yes**	**No**	**Area(s)**	**Description of restrictions, controls, and mechanisms**
Groundwater Use		x		
Residential Use		x		
Excavation		x		
Vapor Intrusion		x		
Capped Area(s)		x		
Other Engineering Controls		x		
Other Restrictions		x		

Attachment 2: Remedial Review Questionnaire

LTS Checklist Template

IC Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Have the ICs specified in the remedy been fully implemented? Implementation mechanism in place?			N/A. There are no institutional control mechanisms described in the remedy or 1995 Order.
• Do the ICs provide control for the entire extent of contamination (entire site or a specific portion)?			N/A
• Are the ICs eliminating or reducing exposure of all potential receptors to known contamination?			N/A
• Are the ICs effective and reliable for the activities (current and future) at the property to which the controls are applied?			N/A
• Have the risk of potential pathway exposures addressed under Corrective Action changed based on updated screening levels and new technologies?		X	
• Are modifications to the IC implementation mechanism needed? (i.e. UECA Covenant, Permit or Order)	X		An enforceable institutional control is needed at this Facility.
• Are there plans to develop or sell the property?			No.
• Have all reporting requirements been met?			Annual reports have been submitted on time. The 1995 Order requires a Corrective Measures Assessment report every five years; reports were submitted in 2002 and 2008, however since 2012 the Facility has coordinated with EPA to reassess remedy effectiveness and modifications as necessary.

Groundwater Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is groundwater onsite used for potable purposes?		X	
• Is the Facility connected to a public water supply?	X		
• Have any new wells been installed at the facility?		X	No new wells in the most recent reporting period.
• Are the current groundwater flow rate and direction similar as mentioned in the previous studies?	X		
• Groundwater contaminants stable or decreasing in concentration?		X	Sporadic and/or increasing trends in some wells (see table on page 3).
• Are groundwater monitoring wells still in place (# wells)?	X		
• Any evidence or reason to re-evaluate the number and location of monitoring points and/or monitoring frequency?		X	
• For wells where groundwater monitoring is no longer required, have the wells be decommissioned?	X		
• Is there evidence of monitored natural attenuation occuring in groundwater?			Further evaluation needed.
• Has (active remediation system) been maintained as necessary?	X		
• Is the (groundwater containment system) effectively containing COCs and protecting potential receptors			N/A. Active system is no longer in use.

(surface water body and/or groundwater resource) via hydraulic control?			
• Have notification letters been sent to the local POTW, County Department of Health, and Planning and Zoning Department regarding groundwater use restrictions?		X	

Surface and Subsurface Soil Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is the facility being used for residential purposes?		X	
• Have there been recent construction or earth-moving activities or plans for such?	X		

Engineered Cap or Cover Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Have geosynthetic/vegetative landfill caps (name) been properly maintained?			N/A
• Have any repairs been necessary? (i.e. regrading, filling, root removal)			N/A
• Is the leachate collection system operating and effectively preventing groundwater contamination?			N/A

Vapor Intrusion Review and Assessment Questions:	**Yes**	**No**	**Notes**

• Have there been construction of new structures within the vapor intrusion restriction zone(s)?	X		Renovations in 2019 covered several vapor monitoring points and sampling ports. Monitoring locations were changed in 2020 and new sampling ports installed.
• Is the vapor intrusion mitigation system radius of influence effective for the structure in which its installed?	X		

Miscellaneous Review and Assessment Questions:	**Yes**	**No**	**Notes**
• Is the security fence intact?			N/A
• Is the appropriate signage posted?			N/A

Figure 1. Groundwater Elevation Contour Map, October 2022, showing groundwater monitoring well locations.

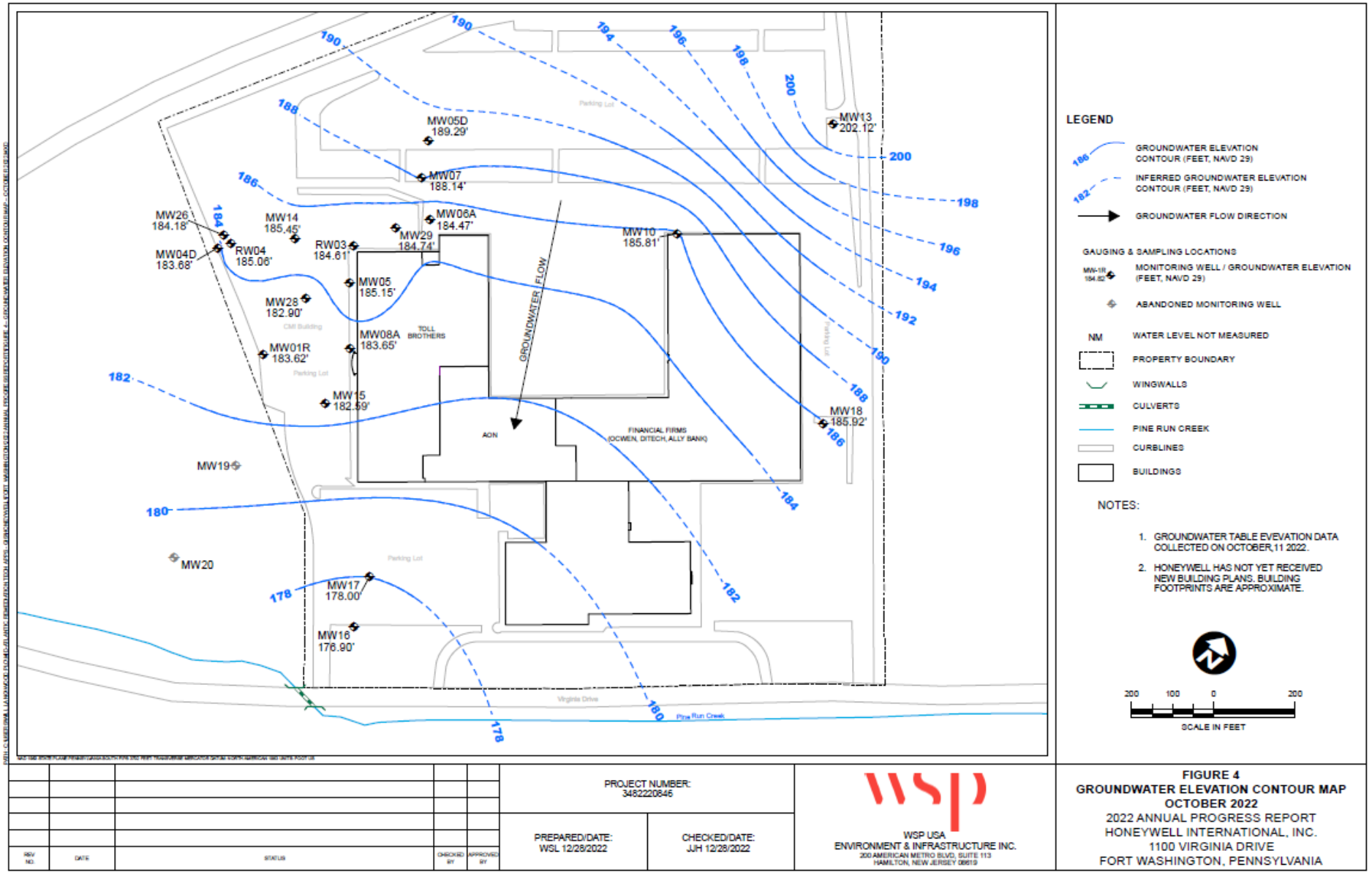

Figure 2. Map of sub-slab depressurization system configuration and sub-slab soil gas sampling locations.