7428 Rockville Road | Indianapolis, IN 46214 | 317.347.1111 office | 317.347.9326 fax

October 17, 2018

Ms. Carolyn Bury
Project Manager
Corrective Action Section 2
Remediation and Re-use Branch
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: **Sewer Gas Vapor Intrusion Investigation Work Plan Addendum**
Franklin Power Products, Inc./Amphenol Corporation
Administrative Order on Consent, Docket # R8H-5-99-002
EPA ID # IND 044 587 848
980 Hurricane Road
Franklin, Indiana 46131

Dear Ms. Bury:

In accordance with the United States Environmental Protection Agency (USEPA) letters dated August 30, 2018 and September 13, 2018, Industrial Waste Management Consulting Group, LLC (IWM Consulting), on behalf of the "Performing Respondent", Amphenol Corporation (Amphenol), is submitting this Sewer Gas Vapor Intrusion Investigation Work Plan Addendum (Work Plan Addendum). The Work Plan Addendum outlines the proposed work activities relating to additional investigation of the sewer corridors located in the public right-of-ways (ROWs) within and to the south and southwest of the Study Area. The Study Area includes portions of streets that are near and downgradient of the Former Amphenol facility located at 980 Hurricane Road, Franklin, IN (Site), including Hurricane Road, Upper Shelbyville Road, Hamilton Avenue, Forsythe Street, Glendale Drive, and Ross Court. The Extended Study Area encompasses an additional 700 feet to the south and 920 feet to the west/southwest of the intersection of North Forsythe Street and Hurricane Creek. The objectives of the proposed additional work activities are as follows:

- Determine, through sampling and analysis of sewer gas samples, if additional offsite sewers are acting as preferential pathways for the transport of vapor phase volatile organic compounds (VOCs);
- Determine, through sampling and analysis of sewer gas samples, the background vapor phase VOC concentrations within the sewer mains running west to east along the western portion of the Extended Study Area;
- Determine, through sampling and analysis of sewer gas samples, the presence or absence of vapor phase VOCs within the southern/eastern most manhole within the Extended Study Area;
- Document, through sampling and analysis of sewer gas samples, the vapor phase VOC concentrations of the two (2) southern most sewer manholes located within the original Study Area in order to assist in further evaluating the supplemental Extended Study Area sampling results; and

- Determine whether or not additional Vapor Intrusion (VI) investigation activities are warranted with respect to further defining the extent of vapor phase VOCs within the sewer lines or within residential homes connected to any sewer mains that have the presence of VOCs in excess of the corresponding Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) Residential Indoor Air Screening Levels.

This Work Plan Addendum outlines the proposed methodology and sewer gas vapor sampling activities that will occur in order to further evaluate the potential VI exposure pathway associated with the historical release documented to have occurred at the Site. A map displaying the Study Area and Extended Study Area is provided as **Figure 1**, which also displays the location of the Site and properties in close proximity to the Site. **Figure 2** display the sewer corridors within the Extended Study Area which will be evaluated as part of these proposed work activities. Copies of the August 30, 2018 and September 13, 2018 USEPA letters are provided in **Attachment A**.

The sanitary sewer manhole identification numbers were obtained from the City of Franklin Department of Public Works. Based on discussions with City of Franklin personnel, sanitary sewer flow is from northeast to southwest from manholes 250020 to 220100, from west to east from manholes 260020 to 220090, from the southeast to the northwest from manholes 240030 to 220090, and from the northeast to the southwest from 220090 to 220080.

Proposed Sampling Activities, Procedures, and Laboratory Analytical Methods

IWM Consulting proposes to obtain up to seven (7) individual grab sewer gas vapor samples (plus 1 duplicate) from sanitary sewer manholes located within the public ROWs in the Study Area and Extended Study Area. These proposed sampling locations include Manholes #220090, #220100, #240020, #250010, #250020, #260010, and #260020. Each sewer manhole will be evaluated for accessibility and manhole type (i.e. closed manhole or open grate manhole) prior to sampling. If the sewer manhole is found to be inaccessible or is an open grate, a sewer gas sample will not be obtained from that particular manhole(s). Samples obtained from sewer manholes #260010 and #260020 will be utilized to determine the background vapor phase VOC concentrations within the Extended Study Area. The sample obtained from sewer manhole #240020 will be the eastern and southern most sampling point within the Extended Study Area and will be used to evaluate the eastern extent of the vapor phase VOCs and assist in documenting the background vapor phase VOCs along the eastern edge of the Extended Study Area.

When evaluating the type and accessibility of the manholes within the Extended Study Area, IWM Consulting personnel will also try to obtain the depth of the sewer line (including invert) and depth to any fluid within the sewer line. This information will allow for a proper length of sample tubing to be attached to each sampling canister during the future sewer gas sampling event. Since the measurements will require the manholes to be fully removed during the inspection, IWM Consulting will complete these activities approximately 24-hours prior to the sampling event in order to minimize the amount of ambient air being introduced into the sewer manhole prior to initiating the sampling activities.

IWM Consulting will obtain all of the grab sewer gas vapor samples in individually certified clean, laboratory provided stainless steel 1-liter summa canisters. All of the summa canisters will be equipped with 10-minute flow regulators (~100 milliliters per minute (mL/minute) flow rate) and the samples will be obtained over an approximate 10-minute period of time.

All of the samples will be labeled in the field utilizing the sample tags attached to the summa canisters by the laboratory. Information included on the sample labels includes the sample ID, sample date, sample time, and the requested analysis. A site-specific chain-of-custody (COC) will also be completed and includes all of the pertinent sampling information (i.e. sample ID, sample date, sample start and end time, initial and final field pressure readings, summa canister ID, flow controller ID, field PID readings (if applicable), and the requested analysis).

All of the samples collected will be submitted under chain-of-custody control to Pace Analytical Services, LLC (Pace) located in Minneapolis, Minnesota for laboratory analysis of shortlist VOCs using analytical method TO-15. The shortlist VOCs include the following compounds: vinyl chloride (VC), trans-1,2-dichloroethene (trans-1,2 DCE), 1,1-dichloroethane (1,1-DCA), cis-1,2-dichloroethene (cis 1,2-DCE), 1,2-dichloroethane (1,2-DCA), methylene chloride, 1,1,1-trichloroethane (1,1,1-TCA), trichloroethylene (TCE), and tetrachloroethylene (PCE). The samples will be analyzed using a combination of EPA Method TO-15 and EPA Method TO-15 SIM. Specifically, EPA Method TO-15 SIM will be utilized when analyzing for VC, 1,2-DCA, and TCE in order to meet the most stringent USEPA Regional Screening Levels. An expedited turnaround time will be requested from the laboratory and the results of the sampling event are anticipated to be received within 2-3 working days from the date the samples are received by the laboratory.

For Quality Assurance/Quality Control (QA/QC) purposes, one (1) field duplicate sample will be collected at a rate of one (1) sample per every twenty (20) confirmatory samples and will be analyzed for the same analytical parameters. All of the summa canisters will also be individually certified clean by the laboratory using a combination of EPA Method TO-15 and TO-15 SIM. The duplicate sample will be attached to the parent sample with a brass tee fitting (ensuring only one common air intake) and Nylaflow or tygon tubing. Both the parent sample and duplicate sample will have their own individual flow regulator set for the sampling period but the start and end time for these samples will be the same.

Pertinent information such as laboratory certifications, a table summarizing the corresponding method detection and reporting limits for Pace, and a copy of the Pace COC which will be utilized during the work activities were previously submitted to the USEPA as part of the *Ambient Air Investigation Work Plan* submitted on July 25, 2018 and are not being resubmitted as part of this Work Plan Addendum.

Reporting

Preliminary results (copy of the laboratory report) will be supplied to representatives from the USEPA as soon as possible once the information has been received and reviewed. A brief letter report will also be generated and submitted to the USEPA within approximately 3-4 weeks of receiving the third pary validated analytical results. The sewer gas vapor analytical results will be compared to the IDEM

RCG Residential Indoor Air screening levels. The analytical results will be validated by a third party and the validation will be included within the letter report being submitted to the USEPA. The letter report will summarize the sampling activities, results, and make recommendations regarding the need for additional sampling or investigation activities. A copy of the applicable IDEM RCG Screening Levels (shortened to be Site specific) are included in **Attachment B**.

Contingency Plan/Future Work Activities

If the sewer gas vapor sampling event confirms the presence of vapor phase VOCs in excess of the corresponding IDEM RCG screening level for Residential Indoor Air, then IWM Consulting and Amphenol will work closely with the USEPA to quickly develop the appropriate next steps. The next steps may include obtaining additional sewer gas vapor samples from the sewer mains (if not defined), video logging the sewer mains to inspect and document the condition of the sewer mains, obtaining sewer gas samples directly from the sewer laterals servicing the applicable residential properties, or attempting to identify additional source areas.

Estimated Timeline

The table below is the estimated timeline associated with implementing this Work Plan Addendum.

Task	Anticipated Estimated Completion Date	Comments
Locate and Evaluate Applicable Sewer Manholes	October 17, 2018	
Submittal of Work Plan	October 17, 2018	
USEPA Conditional Approval of the Work Plan	October 19, 2018	Anticipated date based upon previous communication with the USEPA
Conduct Sewer Gas Vapor Sampling Activities	Week of October 22, 2018	
Receipt of Preliminary Laboratory Analytical Results	October 24, 2018	Expedited analysis required, results anticipated to be received by close of business on October 24, 2018
Submittal of Preliminary Laboratory Results to the USEPA	October 26, 2018	
Contingency Work Plan Development	Week of November 19 & November 26, 2018	Will be completed if sampling results suggest additional sampling and/or investigation activities are necessary.
Submittal of Letter Report to the USEPA	December 3, 2018	

As noted above, IWM Consulting will implement the proposed work activities as quickly as possible upon receiving USEPA approval of this Work Plan Addendum. Please do not hesitate to contact the undersigned with questions or if you require additional information regarding this submittal.

Sincerely,

IWM CONSULTING GROUP, LLC

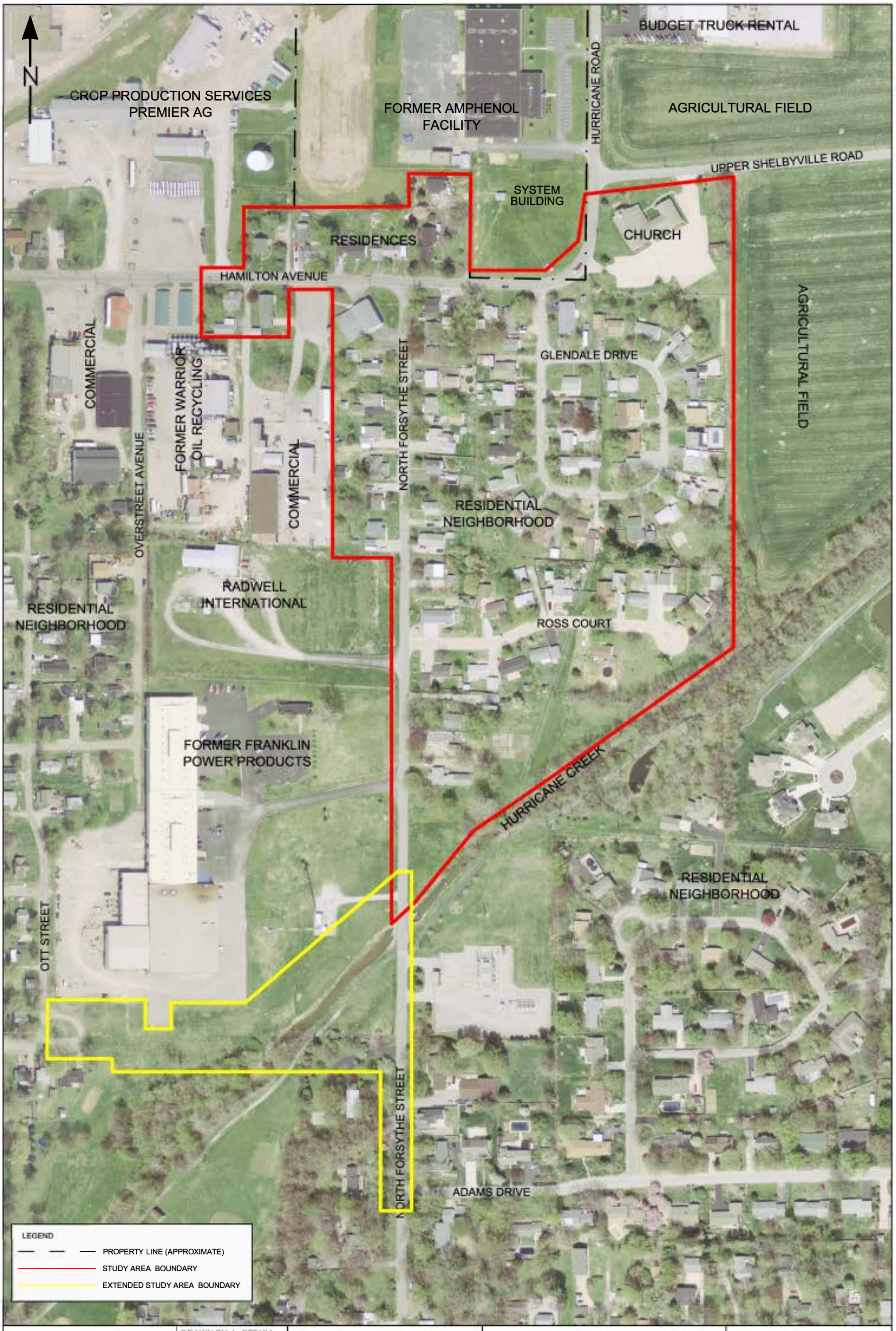
Christopher D. Parks, LPG #2169
Senior Project Manager

Bradley E. Gentry, LPG #2165
Vice President/Brownfield Coordinator

cc: Joseph Bianchi, Amphenol (electronic only)
Bhooma Sundar, U.S. EPA Region 5, RRB CAS2 (electronic only)
Conor Neal, U.S. EPA Region 5, RRB CAS2 (electronic only)

Attachments

Figures



0' 200'
SCALE IN FEET

DRAWN BY: L. STRUM	
DATE: 9/27/99	
REVISED: 10/04/2018	
HWPA #111291-01	
DWG. NO. 111291S1	

FIGURE 1
STUDY
AREA MAP

FORMER AMPHENOL RFI/CMS
980 HURRICANE ROAD
FRANKLIN, INDIANA

IWM CONSULTING GROUP

N

FORMER FRANKLIN POWER PRODUCTS

OTT STREET

250020

MW-32

HURRICANE CREEK

250010

N. FORSYTHE STREET

POWER STATION

260014

KENTUCKY STREET

260020

260010

220100

220090

240010

RESIDENTIAL AREA

HURRICANE CREEK

220080

RESIDENTIAL AREA

RESIDENTIAL AREA

240020

ADAMS DRIVE

240030

LEGEND

- ABANDONED MONITORING WELL
- MONITORING WELL
- RECOVERY WELL
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- (SEWER MAIN INVERT DEPTH AT MANHOLE IN FEET)
- PROPERTY LINE (APPROXIMATE)
- STORM SEWER
- SANITARY SEWER
- O/H POWER

IWM CONSULTING GROUP

FORMER AMPHENOL RFI/CMS
980 HURRICANE ROAD
FRANKLIN, IND ANA

FIGURE 2
EXTENDED STUDY AREA
LAYOUT MAP

DRAWN BY: L. STRUM
DATE: 9/27/99
REVISED: 10/12/2018
HWPA #111291-01
DWG. NO. 111291S1

100'
0'
SCALE IN FEET

Attachments

Attachment A

USEPA Letters Dated August 30, 2018 and September 13, 2018

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

REPLY TO THE ATTENTION OF:

LU-16J

Via E-mail and Certified Mail 7009 1680 0000 7671 2323
RETURN RECEIPT REQUESTED

August 30, 2018

Mr. Joseph M. Bianchi
Group EHS Manager
Amphenol Corporation
40-60 Delaware Avenue
Sidney, NY 13838

Mr. Matt Kupcak
Director, Global Environmental Programs
BorgWarner Inc.
3850 Hamlin Road
Auburn Hills, MI 48326

Subject: Franklin Power Products, Inc./Amphenol Corporation
Request for Vapor Intrusion Investigation
Administrative Order on Consent, Docket # R8H-5-99-002
EPA ID# IND 044 587 848

Dear Mr. Bianchi and Mr. Kupcak:

Under Section VIII, Paragraph N (Additional Work) of the RCRA 3008(h) Administrative Order on Consent dated November 24, 1998 (Order), EPA has determined that Respondents Amphenol Corporation and Franklin Power Products, Inc. (FPP/Amphenol), must perform Additional Work at the facility at 980 Hurricane Road in Franklin, Indiana ("Facility" or "Site"). The Additional Work described in this letter is necessary to meet the purposes of the Order, including but not limited to, assuring the selected corrective measures address the actual and potential threats to human health and the environment presented by the actual and potential releases of hazardous wastes or hazardous constituents at or from the Facility.

Summary of Requested Work

EPA met with Amphenol Corp. on August 7 and 8, 2018 to outline the approach to the overall vapor intrusion (VI) investigation in the off-Site Study Area (see below and enclosure). to be proposed to EPA in a Work Plan. The purpose of this investigation is to evaluate the potential for vapors to enter indoor spaces through volatilization from groundwater or *via* direct entry from sewer lines. The Work Plan must propose field and

analytical approaches to measuring VOCs in environmental media, including indoor air, and propose measures to mitigate unacceptable exposures and protect human health.

As discussed during the August 7 and 8 meetings, exterior soil gas samples will be taken along rights-of-ways (ROWS) within the Study Area to expedite the investigation. Amphenol Corp. met with City of Franklin representatives to discuss an access agreement soon after the meeting with EPA and later, on August 20, 2018, Amphenol Corp. attended a City of Franklin Public Works Board Meeting and formally requested a blanket ROW access agreement for the Study Area.

By September 17, 2018, EPA requests that you submit a Vapor Intrusion Investigation Work Plan ("Work Plan") to investigate potential vapor intrusion (VI) in the Study Area. Respondents must investigate whether a complete pathway of volatile constituents is present from historical solvent releases at the Site to off-Site receptors. Primary migration pathways of concern include storm and sanitary sewers, and groundwater to soil. The Work Plan must be consistent with EPA guidance found in *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* (EPA OSWER, 2015).

Respondents and EPA will coordinate closely during plan development with the objective of Work Plan execution upon approval.

Purpose of Sampling Event

The primary objective of the requested investigation is to determine whether potential Study Area vapor intrusion requires mitigation measures to protect human health.

Study Area

The investigation will focus on the Study Area where VOCs were historically present in groundwater, soil gas, and sewer gas downgradient of the Site at elevated levels. EPA evaluated historical environmental data provided under the Corrective Action order (circa 1990's) to guide the planning and scope of the investigation. The Study Area boundary was based on historical data and current remedial operations reports: the remedial facility investigation; corrective measures study; and (ongoing) corrective measures implementation phases of the corrective action work. Data from the VI investigation will be used to inform next steps, including a need to expand the Study Area, and to determine a need for additional remedial measures.

The Study Area includes portions of streets that are near and downgradient of the former facility: Hurricane Road, Hamilton Avenue, Forsythe Street, Glendale Drive, and Ross Court (figure provided by Amphenol Corp. enclosed).

Please provide a draft Conceptual Site Model (CSM) with the investigation report using the collected data for evaluating conditions and informing next steps. In a subsequent work plan request, EPA will require that current groundwater conditions be delineated. This work will update the CSM and inform decisions regarding a need to expand the Study Area.

Work Plan

The Work Plan must describe the general approach to collecting VOC samples for evaluating potential soil vapor intrusion pathways in the Study Area and provide the field and analytical SOPs for completing the work.

Following the demonstration of a complete exposure pathway of VOCs in indoor air, determinations will be made regarding the need for mitigation in individual homes and remediation in areas of preferential pathways. To the extent practical, investigations within buildings and on individual properties should ensue with the goal of limiting return visits, which can cause disruption and inconvenience for building occupants and owners. EPA recognizes potential delays with obtaining formal access to homes/buildings and the potential need for more than one mobilization.

Soil Gas Samples To expedite the investigation, exterior soil gas samples will be taken along rights-of-ways (ROWS) within the Study Area where Amphenol Corp. has formally requested a blanket access agreement with the City of Franklin. Sample results above EPA soil gas screening levels at the ROW locations near homes initiates the requirement for concurrent collection of sub-slab and indoor air samples at adjacent homes.

Sub-Slab and Indoor Air Samples The Work Plan must identify the approach to sub-slab and indoor air sampling and include a summary of the plan to obtain access to homes.

Sewer Gas VOC Samples The Work Plan should propose sample locations and describe the rationale for continuing the VI investigation along the pathway. Include the following locations in the work plan:

1) manholes within the streets identified in the Study Area;
2) lateral sewer lines if sewer gas exceeds EPA indoor air screening levels; and,

3) indoor samples in bathrooms if lateral sewer samples exceed EPA indoor air screening levels.

Where sewer gas levels exceed EPA indoor air screening levels, a sewer video survey should be completed to characterize conditions that could provide a pathway for entry of soil vapors from underlying soil or groundwater (cracks and other defects).

The Work Plan should include a table showing which sample type will be compared to which screening value for each chemical on the analyte list.

Groundwater Samples

As part of this investigation, you must sample groundwater any intact monitoring wells in the Study Area, and measure water levels.

Analyte List

Samples will be analyzed for these Site-related constituents identified in previous investigations and sampling events conducted under the AOCs: vinyl chloride (VC), trans-1,2-dichloroethylene (trans-1,2-DCE), 1,1-dichloroethane (1,1-DCA), cis-1,2-dichloroethylene (cis-1,2-DCE), 1,2-dichloroethane (1,2-DCA), methylene chloride, 1,1,1- trichloroethane (1,1,1 TCA), trichloroethylene (TCE), and tetrachloroethylene (PCE).

Third-party Validation

Analytical results must be validated by a qualified data validation that is independent of the project.

Quality Assurance

The Quality Assurance (QA) Plan must be consistent with EPA's QA/R-5, *EPA Requirements for Quality Assurance Project Plans* (EPA 2001) found at https://www.epa.gov/sites/production/files/2016-06/documents/r5-final_0.pdf. All samples must be analyzed by a laboratory with appropriate ELAP certification, as specified in the guidance. Please also refer to *Guidance for Quality Assurance Project Plans*, EPA QA/G-5 (EPA 2002) when developing the QA/Quality Control portions of the Work Plan.

Response Plan

Respondents' proposed Work Plan must include the proposed response measures for mitigating vapor entry into buildings from the soil column and terminating the potential migration of soil vapors into buildings via a sewer pathway. If the investigation results in additional VI pathways (along other utilities), then Respondents must propose corresponding remedial measures.

Potential On-Site Investigative Work

During the August 7 and 8, 2018 meeting and site visit, EPA and Amphenol Corp discussed the need for and approach to indoor air sampling in the occupied buildings on the former facility property. Respondents may include the on-Site VI work in the subject Work Plan. Alternatively, that investigation could be included in the second ambient air sampling event scheduled for this fall.

Schedule

The proposed Work Plan must include a schedule of activities from pre-work plan activities through final report submittal.

Next Steps - Other Corrective Action Work

When this investigation is completed, EPA will determine whether there is a need for additional VI investigation in an expanded area. EPA will require a groundwater investigation to determine whether a plume is present downgradient of the Site and whether Site constituents of concern (COCs) impact human health and the environment.

The plume will be defined two ways:

1) COCs exceeding EPA Maximum Contaminant Levels (MCLs) or Vapor Intrusion Screening Levels (VISLs); and,
2) COCs exceeding water quality standards at Hurricane Creek.

In addition, the extent of any source materials must be determined, including DNAPL or contaminated soils contributing to a groundwater plume related to Site activities. The extent of soil contamination will be determined by:

1) COCs exceeding Indiana's Residential Soil Migration to Groundwater Screening Levels (MTGSLs) in unsaturated soils; and,

2) Saturated soils exceeding a soil screening level calculated using EPA's *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites* (EPA OSWER, 2002). See https://semspub.epa.gov/work/HQ/175878.pdf.

If you have any questions, please contact me at (312) 886-3020. Also, please feel free to contact Dr. Bhooma Sundar, EPA risk assessor, at (312) 886-1660 to assist you in Work Plan development.

Sincerely,

Carolyn Bury

Carolyn Bury
Project Manager
Corrective Action Section 2
Remediation and Re-use Branch

Enclosure

ecc: Brad Gentry, IWM Consulting Group, LLC.
Don Stilz, IDEM
Bhooma Sundar, RRB CAS2
Conor Neal, RRB CAS2

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

REPLY TO THE ATTENTION OF:
LU-16J

Via E-mail and Certified Mail 7009 1680 0000 7671 2354
RETURN RECEIPT REQUESTED

September 13, 2018

Mr. Joseph M. Bianchi
Group EHS Manager
Amphenol Corporation
40-60 Delaware Avenue
Sidney, NY 13838

Subject: Conditional Approval *Sewer Gas Vapor Intrusion Investigation Work Plan Franklin Power Products, Inc./Amphenol Corporation*
Administrative Order on Consent, Docket # R8H-5-99-00
EPA ID# IND 044 587 848

Dear Mr. Bianchi:

Thank you for preparing and submitting the *Sewer Gas Vapor Intrusion Investigation Work Plan, Franklin Power Products, Inc./Amphenol Corporation,* dated September 10, 2018 ("Work Plan"). The Work Plan is a component of a broader vapor intrusion (VI) investigation in the residential area near the former Franklin Power Products, Inc./Amphenol Corporation facility ("facility" or "site").

EPA discussed the Work Plan with Mr. Brad Gentry, of IWM Consulting, yesterday. EPA conditionally approves the Work Plan with the following comments and conditions.

Comments:

1) EPA will review the sewer and soil gas data lines of evidence with Amphenol to determine the scope of homes where sewer laterals and/or sub slab samples will be needed.
2) The statement on page 1, bullet two, describing the sampling objective to, "Determine the lateral extent of vapor phase VOCs within the sewer corridors ..." needs clarification. The objective is to ensure that the scope of the main sewers and the laterals, as indicated by the data, will be evaluated within the study area, and beyond the study area, as warranted.

3) Page 2, paragraph 4 – EPA requested paired sampling of a grab sample with a longer-term sample such as the eight-hour sample duration proposed in the Work Plan, to verify that the grab samples would be representative. EPA considers that an on-site sample could be too variable due to the potential influence of the recovery well system. Amphenol should select one of the northern manholes on Forsythe Streets for this work; EPA suggests manhole # 250051. For the paired sampling, the procedures described in Work Plan section titled "Proposed Sampling Activities, Procedures, and Laboratory Analytical Methods" must be followed.
4) Page 4, Timeline. EPA assumes that the data validation step is implied and both raw and validated data will be submitted to EPA upon receipt.
5) Manhole # 250130 to the NE should be considered a background location.
6) The final report should include a summary of the sewer reconfiguration work completed at the site in the 1980's to correspond to the sewers labeled "old" and "new" in Figures 2-7.
7) The final report should include the details from the surface inspection to document manhole type/design, photo of manhole, and condition of the ground surface within a 10-foot radius of the cover.
8) Figures 2 – 7, the legends have a place-holder for sewer depths which will be determined during the Work Plan activities and be added to figures/tables in the final report.
9) Attachment B, *IWM Consulting SOP Group F Sewer Gas Vapor Sampling Activities* – this SOP should be dated; include the date in the final report.
10) Appendix A to SOP F should be revised to be project-specific before using it in the field. For example, "Building #" should be changed to "Manhole #."

Approval Conditions:

1) **Condition One:** The Work Plan is project-specific, while the sewer sampling SOP presented in Attachment B is generic. Where the Work Plan and the SOP differ, the sampling approaches in the Work Plan should take precedence. For example, procedure # 4 of the SOP is superseded by the steps described under "Proposed Sampling Activities, Procedures, and Laboratory Analytical Methods" on page 2 of the Work Plan. The site-specific sampling approaches must be communicated to the field team.
2) **Condition Two**: Provide the updated IWM Chain of Custody SOP and the worker health and safety plan to EPA, for inclusion in the Work Plan, before sampling within the Study Area.
3) **Condition Three**: During the sampling event, Amphenol must confirm that manhole # 250054 is the terminus for the sewer line running east-west on Hamilton.

If you have any questions, please contact me at (312) 886-3020. Also, please feel free

to contact Dr. Bhooma Sundar, EPA risk assessor, at (312) 886-1660 with VI investigation questions.

Sincerely,

Carolyn Bury

Carolyn Bury
Project Manager
Corrective Action Section 2
Remediation and Re-use Branch

cc: Matt Kupcak, BorgWarner, Inc.
Certified Mail 7009 1680 0000 7671 2361

ecc: Brad Gentry, IWM Consulting Group, LLC.
Bhooma Sundar, RRB CAS2
Motria Caudill, ATSDR
Conor Neal, RRB CAS2

Attachment B

IDEM RCG Screening Levels

IDEM - Remediation Closure Guide - Table A-6: 2018 Screening Levels

Chemical		Soil Exposure			Ground Water		Vapor Exposure			
		Direct Contact			Soil MTG	Tap	Ground Water		Indoor Air	
Name	CASRN	Residential (mg/kg)	Com/Ind (mg/kg)	Excavation (mg/kg)	Residential (mg/kg)	Residential (ug/L)	Residential (ug/L)	Com/Industrial (ug/L)	Residential (ug/m3)	Com/Ind (ug/m3)
Dichloroethane, 1,1-	75-34-3	50 C	160 C	1700 S	0.16 C	28 C	130 C	550 C	18 C	77 C
Dichloroethane, 1,2-	107-06-2	6.4 C	20 C	730 N	0.028 M	5 M	50 C	210 C	1.1 C	4.7 C
Dichloroethylene, 1,2-cis-	156-59-2	220 N	2300 N	2400 S	0.41 M	70 M				
Dichloroethylene, 1,2-trans-	156-60-5	1900 S	1900 S	1900 S	0.62 M	100 M				
Methylene Chloride	75-09-2	490 N	3200 N	3300 S	0.025 M	5 M			630 N	2600 N
Tetrachloroethylene	127-18-4	110 N	170 S	170 S	0.045 M	5 M	110 N	470 N	42 N	180 N
Trichloroethane, 1,1,1-	71-55-6	640 S	640 S	640 S	1.4 M	200 M	13000 N	54000 N	5200 N	22000 N
Trichloroethylene	79-01-6	5.7 N	19 N	95 N	0.036 M	5 M	9.1 N	38 N	2.1 N	8.8 N
Vinyl Chloride	75-01-4	0.83 C	17 C	1300 C	0.014 M	2 M	2.1 C	35 C	1.7 C	28 C

C = Carcinogenic endpoint
CASRN = Chemical Abstracts Service Reference Number
L = Capped at 100,000 mg/kg (soil direct contact only)
M = Set to maximum contaminant limit (MCL; ground water only) or based on MCL (migration to ground water)
mg/kg = milligrams per kilogram
MTG = Migration to ground water
N = Noncarcinogenic endpoint
R = Capped at 1,000,000 mg/kg (migration to ground water only)
S = Capped at soil saturation limit
ug/L = micrograms per liter
ug/m^3 = micrograms per cubic meter