



REGION 3

PHILADELPHIA, PA 19103

Report Title: Clean Air Act Inspection of Univation Technologies, LLC
Inspection Date(s): August 27, 2024
Regulatory Program(s): SIP, MACT, Title V

Company Name: Univation Technologies, LLC
Facility Name: Univation Technologies, LLC
Facility Location: 1100 Science Park Drive
South Charleston, WV 25303

Latitude: 38.35581 **Longitude:** -81.70552
County/Parish: Kanawha County

AFS/ICIS-Air Number: WV00003900618
Permit Number: R30-03900618-2022
NAICS Code: 325110, 325199 **SIC:** 2865, 2869
DSB ID #: ECAD-5523

Facility Representatives:	Point of Contact
Jay Fedczak, EH&S Delivery Manager, DOW	☒
Phone: 304-747-1354 Email: JPFedczak@dow.com	
Christine Westgate, Production Leader, DOW	☐
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Cymry Hughes, Production Engineer, DOW	☐
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EPA Inspectors:

Scott Yanos, Life Scientist, 3ED21
Phone: 215-814-2128 Email: Yanos.Scott@epa.gov
Stafford Stewart, Environmental Engineer, 3ED21
Phone: 215-814-5352 Email: Stewart.Stafford@epa.gov
Steve Ott, Life Scientist, 3ED21
Phone: 215-814-2267 Email: Ott.Steve@epa.gov

State/Local Inspectors:

Dan Bauerle, Technical Analyst, WV DEP
Phone: 304-926-0499 Email: dan.c.bauerle@wv.gov
Ex 41245

Other personnel present included in Attachment 2: Sign-in Sheet

EPA Lead Inspector

Signature

Scott Yanos

1600 John F Kennedy Blvd
Philadelphia, PA 19103-2852

Date

Supervisor

Signature

Kristen Hall

Date

Table of Contents

I. Introduction	4
A. Summary of the Facility.....	4
B. Inspection Opening Conference.....	4
II. Site Activity/Process Description	5
III. Observations	6
IV. Records Review	6
V. Closing Conference	8
VI. List of Attachments	9

I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Univation Technologies, LLC (Univation Technologies or Facility) to verify compliance with applicable State and Federal regulations. The West Virginia Department of Environmental Protection (WVDEP) was notified of the inspection on August 13, 2024 via email. On August 23, 2024, EPA notified the Facility of the planned inspection via phone and email. EPA emailed a list of records for review to Jay Fedczak, EH&S Delivery Manager, prior to the inspection (see Attachment 1). These records are listed in the Records Review section of the report.

The inspection included an evaluation of the Facility's processes and its compliance with the CAA. All information included in this report is the result of statements by the Facility representatives, materials shown to the inspectors by the Facility representatives, and/or documents provided by the Facility representatives to the inspectors at the time of, or subsequent to, the inspection. In addition, information gathered prior to the inspection from a review of EPA and State records may be included in Section A. Summary of the Facility.

A. Summary of the Facility

The Facility is located at 1100 Science Park Drive, South Charleston, WV. Univation Technologies is a facility located in a technology park that produces catalysts that are used in plastic production. It is a part of a system of facilities located in the same geographic area all owned by Dow Inc.

The Facility received a Title V permit (R30-03900618-2022) from WVDEP issued on June 1, 2022.

Univation Technology is classified as a major source for toluene, which is a hazardous air pollutant (HAP). The Facility is subject to, or potentially subject to the following federal regulations:

- 40 CFR Part 63 Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (OLD MACT)
- 40 CFR Part 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON MACT)

B. Inspection Opening Conference

At 09:07 AM on August 27, 2024, EPA inspectors arrived at the Facility for a CAA Inspection and conducted a brief opening conference. Univation Technologies was represented by Jay Fedczak, EH&S Manager, Christine Westgate, Production Leader, Cymry Hughes, Production Engineer, Dave Pue, Activity Coordinator, Mike Shower, Reliability Specialist, Mike Schiefer, Production Specialist, and Anthony Majerich, EHS Tech. Also, Dan Bauerle, WVDEP was present. EPA inspectors, Scott Yanos, Stafford Stewart, and Steve Ott presented their credentials and explained the purpose of the visit was to conduct a CAA inspection to determine compliance with their permit and any applicable regulations. Additionally, EPA informed the facility representatives of their right to claim any confidential business

information (CBI). At that time, Christine Westgate did claim that all photos, the plot plan, process description, production capacity, and the boiler run time hours as CBI.

II. Site Activity/Process Description

Univation Technologies, LLC leases the facility from West Virginia Regional Technology Park. The buildings that the facility reside in were built in the 1950s with Univation Technologies leasing the location in 2009 where they leased a 100ft-by-100ft space for their current production. All the current equipment at the facility was installed in 2009 when Univation Technologies began leasing the location. When Univation Technologies began operation in 2009. At that time, it was a joint operation between ExxonMobil and Dow Chemical. In 2015, Dow Chemical began full ownership of Univation Technologies, LLC. Univation Technologies is a subsidiary of Dow Chemical.

Univation Technologies produces two versions of a catalyst that is used in the production of plastic. Univation Technologies packages the catalyst in 120-gallon drums. The chemical reaction process is done using reactor tanks as well as solvent and separation tanks where the product is separated from the solvent before being put in the drums to be shipped to customers. The process to produce the catalysts utilizes toluene as the main HAP. Most of the tanks, except for SP1 Tank, SP2 Tank, SP3 Tank, and SP6 Tank, vent to the flare, which has a working capacity of 2MMbtu/hour. Univation also employs a fabric filter baghouse in the production process to control particulate matter emissions during solids loading into the reactor. The process is blanketed with nitrogen due to the catalysts being made are pyrophoric, and the addition of nitrogen keeps the oxygen low which lowers the chances of ignition. Univation Technologies operates two natural gas fired boilers with an input capacity of 1.26 MMbtu/hr. Boilers are used for both process heat and comfort heat.

During the inspection, EPA was informed that production had been shut down since March 2024 and was not scheduled to resume until October 2024 due to customer issues. During normal operations, production is conducted for 24 hours a day, seven days a week with four 12-hour shifts. There is an annual turnaround when the Facility shuts down for three weeks for routine maintenance. This does not have a regular interval and is determined by customer and production demands. Currently, Univation Technologies has 14 employees for the site which is down from the 16 employees they are in full production.

On June 2, 2023, Univation Technologies requested to be re-classified and to be no longer subject to the MON MACT. On June 13, 2023, WVDEP approved this re-classification. On December 4, 2023, Univation Technologies requested to be re-classified and no longer to be subject to the OLD. On January 31, 2024, WVDEP approved this re-classification. Univation Technologies remains a Title V permitted facility and a major source because it is co-located with other Dow Chemical facilities in the area.

The opening conference concluded at 10:39 AM.

III. Observations

EPA inspectors were led on a walkthrough of the Facility at 10:55 AM by Dave Pue, Cymry Hughes, Mike Shower, Mike Schiefer and Anthony Majerich of Dow Chemical/Univation Technologies. Dan Bauerle (WVDEP) was also present for the walkthrough. EPA inspectors noted photos would be taken during the Facility walkthrough (Attachment 3 - **CBI**).

The walkthrough began at the control room. No readings were observed due to the Facility being shut down but it was demonstrated to the EPA inspectors what was able to be monitored within the control room which includes: condenser functionality and throughput, temperature for all processes, pressure checks for the baghouse and the emission output for the flare.

Next, the EPA inspectors were shown the K04 Tank Solvent 1 which is used for the solvent in the reaction process. Next observed was the K08 Hold Tank and the K18 Tank – Solvent 3 which both have a connection to K06 Product Separator and Solvent Recovery which recovers solvent to send it back to K04 for re-use. K06 also controls the emissions load going to the flare. None of the tanks had material in them due to the shutdown.

The EPA inspection team then proceeded to the K02 Bag Dumping Station, where the solid chemical is introduced into the system. From here, the EPA inspectors observed K05 Reactor and then the flare which is labeled as L15 within the permit.

The EPA inspectors then observed boilers #1 (BLR1) and #2 (BLR2) which are used for process heat which were operating during the inspection due to the facility running tests. After recording the specifications of the boilers, the EPA inspectors observed Unit 3 which contained SP1 Tank – Solvent 2, SP2 Tank – Solvent 2, SP3 Tank – Propylene Glycol/Water and SP6 Tank – Solvent 2. The emissions from Unit 3 are collected and sent to K18 Tank – Solvent 3.

The walkthrough concluded at 11:40 AM.

IV. Records Review

The records review commenced immediately after the plant walkthrough at 12:51 PM. EPA inspectors reviewed documents requested in the August 23, 2024 email to Jay Fedczak (see Attachment 1). Records were provided at the time of the inspection by Jay Fedczak. Below are the records requested and what was provided:

1. Provide a plot plan of the Facility. The plot plan should identify each production process unit to include but not limited to: The production of organo metallic compounds for chemical manufacturing.

*Provided at the time of inspection – **CBI***

2. Provide a detailed process description of the facility. This should include a description of each production process unit to include but not limited to: The production of organo metallic

compounds for chemical manufacturing.

Provided at the time of inspection – CBI

3. For each of the chemical process production unit and tank, provide the following information:
 - a. Date of construction, date operation commenced at the facility;
 - b. Date the unit was modified or reconstructed;
 - c. Provide the current and historical (as built) production capacity for each unit;
Provided at the time of inspection
4. A list of all combustion sources at the Facility such as furnaces, boilers, and/or engines.
 - a. For each boiler or engine identified, provide:
 - i. Date of installation;
 - ii. Type of fuel(s) combusted;
 - iii. Maximum heat input rating (MMbtu, HP or kW/hr);
 - iv. Days each unit operated and hours of operation¹ monthly from January 2022 to the present. - **CBI**
 - b. Fuel usage on a monthly basis for any combustion equipment at the Facility (boilers, emergency generators, fire pumps, etc.) since January 2022.
 - c. Records of each tune-up conducted at each unit since January 2022.
Provided at the time of inspection
5. Provide copies of the emission statements submitted to WVDEP for the years 2021-2023. These emission statements shall include the emission factors used to determine emissions and the derivation of each factor (stack test, CEMS, AP-42, etc.).
Provided at the time of inspection
6. Annual emissions calculations (preferably emailed in an unlocked Microsoft Excel format) since 2020, including but not limited to:
 - a. Annual emissions of VOCs, HAPs and NOx for each process unit and facility wide along with supporting calculations for 2021-2023 (lbs/hr).
Provided at the time of inspection
7. Provide a list of any and each control device currently in use at Univation Technologies used to control or reduce emissions from any emission point at the site. The list should include:
 - a. The make/model of the control;
 - b. Date of installation at the Facility;
 - c. Which pollutant(s) are being controlled;
 - d. Each source or emission point being controlled;

¹ Hours of operation for each month should identify whether the hours were for testing, emergency, or non-emergency purposes.

- e. The capture and destruction efficiency for each control;
Provided at the time of inspection

- 8. Copies of any stack tests conducted on any chemical process units and tanks to determine emission rate, control efficiency, or for compliance demonstrations, etc. conducted at the Facility since 2010.

No stack testing has been required to determine emission rate, control efficiency or for compliance demonstration since 2010.

- 9. Provide a list of each request for permit determination or permit application submitted to the WVDEP since January 2020. Also, provide a list of each permit or permitting determination issued to Univation Technologies. This should include the date of the request/permit and the permit number, if applicable.

Provided at the time of inspection

- 10. Provide copies of any initial notifications, compliance reports, and/or periodic reports submitted to either EPA or WV DEP pursuant to applicable regulations under 40 C.F.R. Part 60 and 63.

Provided at the time of inspection

V. Closing Conference

After the records review, EPA inspectors, Jay Fedczak, Christine Westgate, Cymry Hughes, Dave Pue, Mike Shower, Mike Schiefer, Anthony Majerich, and Dan Bauerle held a brief closing conference to discuss any additional questions and observations. The EPA inspectors noted that the investigation is on-going, and any areas of concern identified in the final report do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within 60 days, with a copy to the State. Simultaneously, EPA will perform a detailed review of records and may have additional questions. The inspection concluded at 13:32 PM.

VI. List of Attachments

- Attachment 1: Email correspondence to Jay Fedczak of records requested to review during inspection
- Attachment 2: Sign-in Sheet
- Attachment 3: Photo Log - **CBI**

From: [Yanos, Scott \(he/they\)](#)
To: jpfedczak@dow.com
Cc: [Ott, Steven](#); [Stewart, Stafford](#)
Subject: Upcoming EPA Clean Air Act Inspection
Date: Friday, August 23, 2024 1:11:00 PM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[Univation Technologies LLC Inspection Record Request.docx](#)

Dear Univation Technologies, LLC Representative:

As discussed over our phone call today, EPA Region 3 will be conducting a Clean Air Act (CAA) inspection of Univation Technologies, LLC on August 27, 2024. My colleague, Stafford Stewart, Steve Ott, and I anticipate arriving at 1100 Science Park Drive around 9 AM. We would like to begin with an opening meeting that will provide EPA with the current and historical operations at the facility and a brief overview of its process(es). EPA inspectors will have FR long sleeved clothing, hard hats safety glasses and safety toe shoes as you noted on our call which is required at the facility.

The scope of the inspection will include, but may not be limited to, a review of all air pollution sources, a facility walk-through (during which photographs will be taken), and a review of records. WV DEP has been notified of the inspection and plans to attend.

To help facilitate the inspection, it would be appreciated if the records in the attached document were made available for review.

Please confirm receipt of this message and don't hesitate to contact me with any questions.

Regards,

Scott Yanos (He/They)

Life Scientist (Enforcement and Compliance Officer)
Enforcement & Compliance Assurance Division
US EPA Mid-Atlantic Region

Phone 215-814-2128

Email yanos.scott@epa.gov



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Return to Agency Visit Protocol

Agency Visit Attendance List

Purpose: USEPA - CAA InspectionDate: 8/27/24 Time: 9:30 Location: SCCP

Name	Address	Organization	Title	Citizen of what country	Agency Contract or Yes/No	Telephone	Fax	E-mail address
Jay Fedczak	437 McCrack Ave SW, S. Charleston WV 25303	DOW	ERTS Delivery Manager	USA	NI	304.947.1354	—	JP.Fedczak@dow.com
Chishine Westgate	1100 Science Park Dr. S. Charleston WV	DOW	Production Leader	USA	NO	979-319-7028	—	cmw.estgate@dow.com
Cynthia Hughes	1100 Science Park Dr. S. Charleston WV	DOW	Production Engineer	USA	NO	214-779-3691	—	Chughes1@dow.com
Dave Poe	1100 Science Park Dr. S. Charleston WV	DOW	Activity Coordinator for Catalysts	USA	NO	304-747-1867	—	Poe.dan@dow.com
Mike Showen	1100 Science Park Drive S. Charleston WV	DOW	Reliability Specialist	USA	NO	(304) 542-1137	—	DMShowen@dow.com
Mike Schiefer	1100 Science Park Drive S. Charleston WV	DOW	Prod. Specialist	USA	NO	304 205-8442	—	mschiefer2@dow.com

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Page 1 of 2

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Return to Agency Visit Protocol

Agency Visit Attendance List

Purpose: USEPA - CAA InspectionDate: 8/27/24 Time: 9:30 Location: Scarp

Name	Address	Organization	Title	Citizen of what country	Agency Contract or Yes/No	Telephone	Fax	E-mail address
Ashley Majetich	1100 Science Park Dr. S. Charleston, WV	Dow	EHS Tech	USA	No	304-312-1111	—	amajetich@dow.com
Dan Bauele	CHARLESTON WV	WV DEP	TECH. ANALYST	USA	No	304 926-0439 8-41245	—	dan.c.bauele@wv.gov
STAFF STEWART	Region 3 Philadelphia	EPA	Env. Engr	USA	No	215-814-5352	—	stewart.staff@epa.gov
Scott Yanos	Region 3 Philadelphia	EPA	Life Scientist	USA	No	215-814-2128	—	Yanos.Scott@epa.gov
Steve Ott	Region 3 Philadelphia	EPA	Life Scientists	USA	N/A	215-814-2267	—	Ott.Steven@EPA.gov

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Page 1 of 2

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