



**Region 6 - Enforcement & Compliance Assurance Division**  
**INSPECTION REPORT**

|                                        |                                                                        |                                                     |
|----------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------|
| Inspection Date(s):                    | 02/06/2024                                                             |                                                     |
| Media Program:                         | Air                                                                    |                                                     |
| Regulatory Program(s)                  | Title V, NESHAP                                                        |                                                     |
| Company Name:                          | <b>Dow Chemical Company Texas Operations</b>                           |                                                     |
| Facility Name:                         | <b>Dow Beaumont Aniline</b>                                            |                                                     |
| Facility Physical Location:            | 5470 North Twin City Highway, Suite A (Lat 30.015406, Long -94.029378) |                                                     |
| (city, state, zip code)                | Nederland, TX 77627                                                    |                                                     |
| Mailing address:                       | P.O. Box 1646                                                          |                                                     |
| (city, state, zip code)                | Nederland, TX 77627                                                    |                                                     |
| County/Parish:                         | Jefferson County                                                       |                                                     |
| Facility Phone Number                  | 409-651-8881                                                           |                                                     |
| Facility Contact:                      | Ansley Godwin                                                          | Environmental Health and Safety<br>Delivery Manager |
|                                        | Ansley.godwin@dow.com                                                  |                                                     |
| FRS Number:                            | 110067678392                                                           |                                                     |
| Identification/Permit Number:          | RN109031641 / Title V: O1961                                           |                                                     |
| Media Identifier Number:               | AFS 36-0042-3792                                                       |                                                     |
| NAICS:                                 | 325192 (Cyclic Crude and Intermediate Manufacturing)                   |                                                     |
| SIC:                                   | 2865 (Cyclic Organic Crudes and Intermediates)                         |                                                     |
| Personnel participating in inspection: |                                                                        |                                                     |
| Kenneth R. McPherson                   | EPA Region 6 ECDAT                                                     | Life Scientist                                      |
| Justin Chen                            | EPA Region 6 ECDAT                                                     | Environmental Engineer                              |
| Ben Donaldson                          | EPA Region 6 ECDAT                                                     | Environmental Engineer                              |
| Dan Hoyt                               | EPA OECA AED                                                           | Environmental Engineer                              |
| Nathan Hicks                           | EPA OECA AED                                                           | Physical Scientist                                  |
| Phil Myers, PhD                        | EPA NEIC                                                               | Mechanical Engineer                                 |
| Richard Helmich, PhD                   | EPA NEIC                                                               | Senior Chemist                                      |
| Ben Fregia                             | Dow Beaumont Aniline                                                   | Technical Advisor                                   |
| Liz McIntosh                           | Dow Beaumont Aniline                                                   | Environmental Health and Safety<br>Leader           |
| Ansley Godwin                          | Dow Beaumont Aniline                                                   | Environmental Health and Safety<br>Delivery Manager |
| Fran Falcon                            | Dow Beaumont Aniline                                                   | Regional Environmental Leader                       |
| Charles Grant                          | Dow Beaumont Aniline                                                   | Environmental Specialist                            |
| EPA Lead Inspector<br>Signature/Date   |                                                                        |                                                     |
|                                        | Kenneth R. McPherson                                                   | Date                                                |
| Supervisor<br>Signature/Date           |                                                                        |                                                     |
|                                        | James Leathers                                                         | Date                                                |

## Section I – INTRODUCTION

### PURPOSE OF THE INSPECTION

EPA inspectors Kenneth McPherson (EPA Region 6, “Region 6”), Justin Chen (Region 6), Ben Donaldson (Region 6), Dan Hoyt and Nathan Hicks (EPA Office of Enforcement and Compliance Assurance, “OECA”) accompanied by Philip Myers and Richard Helmich (National Enforcement Investigations center, “NEIC”) arrived at the Dow Beaumont Aniline facility (“Facility”) in Nederland, Texas at 15:20 on February 6, 2024, for an unannounced inspection. The EPA inspectors held an opening conference with Facility representatives Fran Falcon, Regional Environmental Leader (on phone); Liz McIntosh, Environmental Health, and Safety Leader; Ansley Goodwin, Environmental Specialist (on phone); John Fregia, Technical Advisor; and Charles Grant, Environmental Specialist. Inspector Chen presented his credentials to Liz McIntosh and John Fregia, while Inspector McPherson informed them that we were conducting an EPA inspection to evaluate potential sources of excess emissions using EPA’s Geospatial Measurement of Air Pollution (“GMAP”) vehicle and to evaluate compliance with the Facility’s Title V Air Permit and the Clean Air Act (“CAA”). The scope of the inspection was a partial compliance evaluation (“PCE”). This inspection occurred as part of a multi-scale monitoring project in the Beaumont-Port Arthur, Texas area. The sign-in sheet for the opening conference is attached as Appendix 1.

### FACILITY DESCRIPTION

Dow Aniline is a chemical manufacturing facility that operates under the CAA Title V Federal Operating Permit Number O1961 issued on March 17, 2021. Dow Aniline operates an integrated mono-nitrobenzene and aniline production complex located on a 20.5-acre site at the Beaumont Works Industrial Park (“BWIP”) south of Beaumont, Texas on the Neches River. Other facilities at the BWIP include OCI Beaumont and Jefferson Terminal South. Dow Aniline acquired the facility in 2016 from The Chemours Chemical Company. The Facility has 90 employees, including contractors, and operates 8760 hours per year. The primary feedstock for the mono-nitrobenzene is benzene which undergoes a direct nitration through a mixed acid process. The benzene is delivered to the facility via barge where it is unloaded into a holding tank and then piped to the mono-nitrobenzene unit. The mono-nitrobenzene is sent to the aniline unit, where it is reduced through catalytic hydrogenation to produce aniline. The aniline is shipped via barge, rail tank car, and pipeline to various end use customers. Dow Aniline is categorized as Risk Management Program Level 3 under Section 112(r) of the Clean Air Act.

## Section II – OBSERVATIONS

At 15:52 on February 6, 2024, we entered the Facility to conduct GMAP surveillance and to identify and observe emission sources. The NEIC GMAP vehicle was driven by Inspector Helmich, and the instruments were operated by Inspector Myers. I was present in the GMAP vehicle observing. Dow Aniline representatives Charles Grant and Derick Singleton were present in a lead company vehicle, guiding the GMAP vehicle. The meteorological conditions during the inspection consisted of a partly cloudy sky, winds from the north/northwest at 7 mph, temperature of 69° F, and a relative humidity of 60%. Inspectors Hoyt and Hicks followed the GMAP in a Data Acquisition in Real Time mobile air

monitoring system (“DART”) equipped vehicle. Inspectors Chen and Donaldson followed the DART equipped vehicle in a support vehicle. The GMAP vehicle, followed by the DART equipped vehicle and support vehicle, drove on all available Facility roads measuring air pollutant concentrations downwind of each of the process areas, if possible. A full report from the GMAP will be issued by NEIC on a later date.

At 16:36 on February 6, 2024, the GMAP vehicle detected an ambient benzene ( $C_6H_6$ ) plume of 25 parts per billion (“ppb”) at the intersection near the Aniline Lab (AOC 1). We could not determine the specific emission source using optical gas imaging (“OGI”) cameras or hand-held benzene specific photo-ionization detectors (“PID”).

At 16:49 on February 6, 2024, the GMAP vehicle detected an ambient benzene ( $C_6H_6$ ) plume of 45 ppb near the Maintenance Shop (AOC 1). Inspector Myers collected an air sample using a summa canister for benzene at the site at 17:05. We could not determine the specific emission source using OGI cameras or the hand-held benzene specific PID.

The GMAP survey of the Facility ended at 17:10 on February 6, 2024, and we departed the facility and returned to the OCI Beaumont LLC conference room.

### **Section III – AREAS OF CONCERN**

Inspectors McPherson, Chen, Donaldson, Hoyt, Hicks, Helmich, and Myers conducted a closing conference with Dow Beaumont Aniline / Dow Aniline at 17:15 on February 6, 2024, for the inspection. See Appendix 1 for closing conference sign in sheet. Inspectors McPherson and Myers summarized the facility survey and presented their emissions observations, including the following Areas of Concern (“AOC”). We completed the closing conference with the Dow Aniline representatives at 17:30, and they departed the OCI Beaumont conference room.

AOC 1) EPA inspectors observed elevated ambient levels of benzene ( $C_6H_6$ ) with the GMAP vehicle and hand-held benzene specific PID at the intersection near the Aniline Lab and near the Maintenance Shop. Though we could not identify the specific source(s) of the benzene in the ambient air, the levels are concerning. Dow Aniline should identify the source to determine compliance with applicable regulations.

### **Section IV – FOLLOW UP**

On March 29, 2024, EPA requested additional information relating to verify the acquisition history of the Facility by Dow Aniline, the size of the Facility, the number of employees at the Facility, and the hours per year the Facility operates. This information was received on March 29, 2024.

**Section V – LIST OF APPENDICES**

Appendix 1 – Opening and closing conference sign-in sheets.

Appendix 2 – Federal Operating Permit No. O1961, dated 03/17/2021, signature page.

Appendix – 1  
OPENING AND CLOSING CONFERENCE SIGN-IN SHEETS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Opening and Closing Conference Sign-in Sheets

|                                                                    |                                 |                     |
|--------------------------------------------------------------------|---------------------------------|---------------------|
| Location: <b>Dow Chemical Company Texas / Dow Beaumont Aniline</b> |                                 |                     |
| City: <b>Nederland</b>                                             | County: <b>Jefferson County</b> | State: <b>Texas</b> |

BPAGMAP2024

Facility Name/FRS

Dow

Page 10 of 77

## Inspection Notes:

Dow sign in

| Name                  | Title                              | email                           | Phone          |
|-----------------------|------------------------------------|---------------------------------|----------------|
| Ben Donaldson         | env. eng.                          | Donaldson.benjamin@epa.gov      | (214) 664-7726 |
| John D. Feege         | Technical Advisor                  | jdfeege@dow.com                 | 409-227-9226   |
| Liz McIntosh          | EHS Leader                         | <del>liz.mcintosh@dow.com</del> |                |
| (phone) Fran Falcon   | Regional Storage Delivery Director | ffalcon@dow.com                 | 409-223-1020   |
| (phone) Ansley Godwin | Environmental Specialist           | ansley.godwin@dow.com           | 409-238-9704   |
| Philip Myers (EPA)    | Mech. Engineer                     | myers.philip@epa.gov            | (303) 462-9301 |
| Nathan Hicks          | EPA Physical Scientist             |                                 | 865-878-0393   |
| Daniel Hoyt           | EPA Env Eng                        | hoyt.daniel@epa.gov             | 202-584-7878   |
| Richard Helmich       | EPA Chemist                        | helmich.richard@epa.gov         | 303-462-7149   |
| Justin Chen           | EPA Env Eng                        | chenjustin@epa.gov              | 214-665-2273   |
| Kenneth R. McPherson  | EPA Life Scientist                 |                                 | 214-665-6754   |
| Charles Grant         | Env. Specialist                    | cggrant@dow.com                 | 409-460-9500   |
| Eden Sawyer           | EHS Specialist                     | esawyer@jeffersonenergy.com     | 409-226-5509   |

Initials / Date:

BL, 7/6/24



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Opening and Closing Conference Sign-in Sheets

|                                                                    |                                 |                     |
|--------------------------------------------------------------------|---------------------------------|---------------------|
| Location: <b>Dow Chemical Company Texas / Dow Beaumont Aniline</b> |                                 |                     |
| City: <b>Nederland</b>                                             | County: <b>Jefferson County</b> | State: <b>Texas</b> |

BPAGMAP2024 Facility Name/FRS OCI-Dow-Jefferson Page 11 of 77

Inspection Notes:

Closing conference DOW-OCI-Jefferson

| Name                  | Title                    | Company   | Email                            |
|-----------------------|--------------------------|-----------|----------------------------------|
| Ben Donaldson         | Env. Eng.                | EPA R06   | donaldson.benjamin@epa.gov       |
| Philip Myers          | Mech. Eng.               | EPA       | myers.philip@epa.gov             |
| Richard Helmrich      | Chemist                  | EPA       | helmrich.richard@epa.gov         |
| Daniel Hoyt           | Env Eng                  | EPA       | hoyt.daniel@epa.gov              |
| Nathan Hicks          | Phy scientist            | EPA       | Hicks.Nathan@EPA                 |
| Frank VanDulcer       | Process Eng              | OCI       | frank.vandulcer@oci-global.com   |
| Lisa Anderson         | Env Specialist           | OCI       | lisa.anderson@oci-global.com     |
| Brian Lucas           | HSE Mgr.                 | OCI       | Brian.Lucas@OCI-Global.com       |
| Liz McIntosh          | EHS Leader               | Dow       | liz.mcintosh@dow.com             |
| (phone) Ansley Godwin | Environmental Specialist | Dow       | ansley.godwin@dow.com            |
| (phone) Fran Falcon   | Reg Environmental Leader | Dow       | ffalcon@dow.com                  |
| John D. Fregia        | Technical Advisor        | Dow       | jdfregia@dow.com                 |
| Derrick Singleton     | EHS Tech                 | Dow       | dsingleton@dow.com               |
| Charles Grant         | Env. Specialist          | Dow       | cgrant1@dow.com                  |
| Esmer Sawyer          | EHS Specialist           | Jefferson | esawyer@jeffersonenergycorp.com  |
| GREG Killian          | Operations Manager       | Jefferson | RKillian@jeffersonenergycorp.com |
| Justin Chen           | Env Engineer             | EPA       | chen.justin@epa.gov              |

Initials / Date: BP, 7/6/24

Appendix – 2  
FEDERAL OPERATING PERMIT NUMBER: O1961  
Date 03/17/2021  
(Signature Page)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Federal Operating Permit Number: O1961

|                                                                    |                                 |                     |
|--------------------------------------------------------------------|---------------------------------|---------------------|
| Location: <b>Dow Chemical Company Texas / Dow Beaumont Aniline</b> |                                 |                     |
| City: <b>Nederland</b>                                             | County: <b>Jefferson County</b> | State: <b>Texas</b> |

## FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
The Dow Chemical Company

AUTHORIZING THE OPERATION OF  
Dow Beaumont Aniline  
Cyclic Crude and Intermediate Manufacturing

LOCATED AT  
Jefferson County, Texas  
Latitude 30° 0' 48" Longitude 94° 1' 47"  
Regulated Entity Number: RN109031641

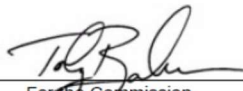
This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1961 Issuance Date: March 17, 2021

  
For the Commission

### Table of Contents

| Section                                                                                          | Page |
|--------------------------------------------------------------------------------------------------|------|
| General Terms and Conditions.....                                                                | 1    |
| Special Terms and Conditions:.....                                                               | 1    |
| Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting..... | 1    |
| Additional Monitoring Requirements.....                                                          | 11   |
| New Source Review Authorization Requirements.....                                                | 12   |

Renewal- Effective Page i