

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

|                                        |                                                                                                                                                          |                         |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Inspection Date(s):                    | April 15 – 18, 2025                                                                                                                                      |                         |
| Media Program:                         | Air                                                                                                                                                      |                         |
| Regulatory Program(s)                  | Clean Air Act Section 112(r) and 40 Code of Federal Regulations (C.F.R.) Part 68 Chemical Accident Prevention Provisions – Risk Management Program (RMP) |                         |
| Company Name:                          | <b>Occidental Chemical Holding Corporation</b>                                                                                                           |                         |
| Facility Name:                         | <b>Oxy Vinyls, LP – Deer Park PVC Plant</b>                                                                                                              |                         |
| Facility Physical Location:            | 1000 Tidal Road                                                                                                                                          |                         |
| (city, state, zip code)                | Deer Park, Texas 77536                                                                                                                                   |                         |
| Mailing address:                       | P.O. Box 500                                                                                                                                             |                         |
| (city, state, zip code)                | Deer Park, Texas 77536                                                                                                                                   |                         |
| County/Parish:                         | Harris County                                                                                                                                            |                         |
| Facility Contact                       | Jeff Anderson, Process Safety Management Engineer                                                                                                        | (281) 476-2350          |
|                                        | Jeffrey_Anderson@oxy.com                                                                                                                                 |                         |
| RMP ID:                                | 1000 0007 8015                                                                                                                                           |                         |
| Identification/Permit Number:          | Air Permit: FOP-3018                                                                                                                                     |                         |
| FRS:                                   | 110043782788                                                                                                                                             |                         |
| NAICS:                                 | 325211 – Plastics Material and Resin Manufacturing                                                                                                       |                         |
| Personnel participating in inspection: |                                                                                                                                                          |                         |
| Charese Simpson                        | EPA Region 6                                                                                                                                             | Lead Inspector          |
| Sherronda Phelps                       | EPA Region 6                                                                                                                                             | Sr. Inspector           |
| Chris Keran                            | Oxy-Vinyls                                                                                                                                               | Process Risk Director   |
| Jeff Anderson                          | Oxy-Vinyls                                                                                                                                               | Process Safety Engineer |
| J. Narvaez                             | Oxy-Vinyls                                                                                                                                               | Emergency Services      |
| Laura Trujillo                         | Oxy-Vinyls                                                                                                                                               | HR Manager              |
| John Moore                             | Oxy-Vinyls                                                                                                                                               | MI Inspector            |
| Amy Gay                                | Oxy-Vinyls                                                                                                                                               | Principal Process Risk  |
| Kristen Eason                          | Oxy-Vinyls                                                                                                                                               | Maintenance Manager     |
| John Groetsch                          | Oxy-Vinyls                                                                                                                                               | Production Manager      |
| Ryan Swenk                             | Oxy-Vinyls                                                                                                                                               | Safety Manager          |
|                                        |                                                                                                                                                          |                         |
| EPA Lead Inspector Signature/Date      | <i>Charese Simpson</i>                                                                                                                                   | July 22, 2025           |
|                                        | Charese Simpson                                                                                                                                          | Date                    |
| Supervisor Signature/Date              |                                                                                                                                                          |                         |
|                                        | Kayla Buchanan                                                                                                                                           | Date                    |

## **Section I – INTRODUCTION**

### **PURPOSE OF THE INSPECTION**

The United States Environmental Protection Agency (EPA) Region 6 Inspectors Charese Simpson and Sherronda Phelps (“we”) arrived at the Oxy Vinyls, LP – Deer Park PVC Plant (Oxy-Vinyls) facility at 9:00 AM on Tuesday, April 15, 2025, for an announced inspection. We met with Jeff Anderson (Process Safety Engineer) and other Oxy-Vinyls employees for an opening meeting **[Appendix #1]**. I, Charese Simpson, presented my credentials and informed Oxy-Vinyls personnel that this was an EPA inspection to determine compliance with the federal Chemical Accident Prevention Program. The scope of the inspection was a partial compliance evaluation (PCE), which included an evaluation of the facility’s compliance with the Clean Air Act (CAA) Section 112(r)(1) & (7), the General Duty Clause and the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68. Oxy-Vinyls Risk Management Plan (RMP) is listed as a Program Level Three (3) facility. I inquired if an employee representative was available pursuant to Section 112(r)(6)(L) of the CAA to participate in this inspection and was informed that Oxy-Vinyls is a non-union facility.

### **FACILITY DESCRIPTION**

Oxy-Vinyl’s is located at 1000 Tidal Road Deer Park, Texas 77536. Oxy-Vinyl’s site is in Harris County and operates a plastics material and resin manufacturing plant.

Oxy-Vinyl’s regulated process includes four Program Level 3 RMP-Covered Processes: Polyvinyl Chloride (PVC) Manufacturing, Chlorine Injection at the Cooling Water Tower, Chlorine Injection at the Process Water Tank, and the Chlorine Injection at the Waste Treatment Outfall 005. These processes handle three regulated chemicals under the Risk Management Program: Vinyl Chloride (flammable), Anhydrous Ammonia (toxic), and Chlorine (toxic). Oxy-Vinyl has approximately 80 full-time employees that work at the site, in addition to independent contractors that work at the plant.

## **Section II – OBSERVATIONS**

On Wednesday, April 16, 2025, I was accompanied by Chris Keran, Jeff Anderson, and other Oxy-Vinyl representatives to conduct a tour of the site, specifically the PVC Manufacturing area. While on the tour, EPA observed the covered processes, emergency equipment, and the control room. Oxy-Vinyl’s operators can access standard operating procedures (SOPs) electronically. Prior to the tour, EPA was provided with piping and instrumentation diagrams (P&IDs) of the process unit that assisted in the tour.

### **Subpart A – General**

**40 C.F.R. § 68.10 Applicability** – Oxy-Vinyl is subject to the Occupational Safety and Health Administration (OSHA) process safety management (PSM) standard, 29 C.F.R. § 1910.119, and has four Program Level 3 processes under OSHA PSM.

**40 C.F.R. § 68.12 General Requirements**– EPA reviewed Oxy-Vinyl’s RMP registration submitted on July 26, 2023. It listed the toxic and flammable chemical(s) for its Program 3 processes.

**40 C.F.R. § 68.15 Management** – Oxy-Vinyl developed a management system to oversee the implementation of risk management program elements, documented the positions for implementing

the individual requirements of the risk management program, and defined the lines of authority using its RMP Management Organizational Chart, which lists responsibilities.

### **Subpart B – Hazard Assessment**

**40 C.F.R. § 68.20 Applicability** – Oxy-Vinyl has four Program Level 3 processes subject to this subpart. Oxy-Vinyl is required to prepare an off-site consequence analysis and complete the five-year accident history.

**40 C.F.R. § 68.22 Off-Site Consequence Analysis Parameters** – Oxy-Vinyl used parameters required in this part to calculate flammable and toxic worst-case and alternative release scenarios. Oxy-Vinyl utilizes RMP\*Comp™ as the technique for modeling the release scenarios. For the worst-case and alternative case scenarios involving the toxic and flammable chemicals, the facility used the endpoints provided in Appendix A of 40 C.F.R. Part 68, appropriate wind speeds and stability classes, ambient temperatures and humidity values, values for height of the release, and surface roughness values for the release scenario analyses.

**40 C.F.R. § 68.25 Worst-Case Release Scenario Analysis** – During the inspection, EPA reviewed documentation from Oxy-Vinyl regarding the worst-case release scenario analysis for their toxic and flammable processes. This analysis used RMP\*Comp™ which is a dispersion modeling suite that includes toxic dispersion, fire, and explosion models. Oxy-Vinyl analyzed and reported in the RMP their worst-case release scenario, estimated to create the greatest distance to endpoint, and resulting from an accidental release of a regulated toxic and flammable substance from a covered process under worst-case conditions. The worst-case release quantity was determined by the greatest amount held in a single vessel, considering administrative controls that limit the maximum quantity released.

**40 C.F.R. § 68.28 Alternative Release Scenario Analysis** – Oxy-Vinyl identified and documented the alternative release scenario to represent all toxic and flammable substances held in a covered process, using a scenario that is likely to occur. Oxy-Vinyl utilizes RMP\*Comp™. They maintain aerial photos showing the alternative release scenario endpoint distance radius and a circle centered on the approximate location of the unit that is considered in the alternative release scenario; therefore, meeting the requirements of the regulation.

**40 C.F.R. § 68.30 Defining Off-Site Impacts - Population** – Oxy-Vinyl used the most current Census Bureau population data and the distances to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP.

**40 C.F.R. § 68.33 Defining Off-Site Impacts - Environment** – Oxy-Vinyl identified environmental receptors in the distance to the endpoint or in the vicinity of the facility, as appropriate, in the area maps used for the modeling.

**40 C.F.R. § 68.36 Review and Update** – Oxy-Vinyl reviewed and updated the off-site consequence analyses at least once every five years, as required by this subpart.

**40 C.F.R. § 68.39 Documentation** – Oxy-Vinyl maintained records of the off-site consequence analyses, in accordance with this subpart. These records included:

- documentation of vessels or pipelines;
- substances selected for worse case and alternative release scenarios;

- documentation of estimated quantity released, release rate, and duration of release;
- methodology used to determine distance to endpoint; and,
- data used to estimate population and environmental receptors.

**40 C.F.R. § 68.42 Five-year accident history** – EPA reviewed Oxy-Vinyl five-year accident history and OSHA logs for 2022 – 2024. EPA did not identify accidental releases from the covered process that resulted in one or more of the following: on-site deaths, injuries, significant property damage on-site, known off-site deaths, evacuations, sheltering in place, property damage, or environmental damage in its accident history.

#### **Subpart D – Program 3 Prevention Program**

**40 C.F.R. § 68.65 Process Safety Information** – Oxy-Vinyl compiled written process safety information, which included information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process. Safety Data Sheets (SDSs) for the process chemicals were provided and detailed process safety information was provided that contained the following data for the hazards of the substances used: toxicity information, permissible exposure limits, physical data, reactivity data, corrosivity data, thermal and chemical stability data, and the hazardous effects of inadvertent mixing of materials that could foreseeably occur. EPA reviewed documentation concerning the technology of the process, which included a block flow diagram, process chemistry, maximum intended inventory, safe upper and lower limits for such items as: temperatures, pressures, flows or compositions, and an evaluation of the consequences of deviation for each covered process. EPA reviewed documentation pertaining to the equipment of the process, including materials of construction, P&IDs, electrical classification, relief system design and design basis, ventilation system design, design codes and standards employed, material and energy balances, and safety systems.

**40 C.F.R. § 68.67 Process hazard analysis (PHA)** – Oxy-Vinyl has a comprehensive program to help ensure that hazards associated with the various processes are identified and controlled. Within this program, each covered process is systematically examined to identify hazards and ensure that adequate controls are in place to manage these hazards. Oxy-Vinyl primarily uses the hazard and operability (HAZOP) and Layer of Protection Analysis (LOPA) techniques to perform these evaluations. The analyses are conducted using a team of people who have operating, maintenance, and engineering expertise. The PHA was performed by a team with expertise in engineering and process operations. The team included at least one employee who had experience and knowledge that was specific to the process being evaluated and one employee who was knowledgeable in the specific PHA methodology used.

EPA reviewed the following PHAs: September 2021 Vinyl Chloride Monomer (VCM) Recovery System PHA, August 2024 PVC Reactor System PHA, and the April 2023 Ammonia Refrigeration System PHA. In addition, EPA reviewed Oxy-Vinyls facility siting, the most recent Baker Risk Study, and human factors checklist. The PHA addressed the hazards of the process and included: identification of any incident that had a likely potential for catastrophic consequences; engineering and administrative controls applicable to hazards and their interrelationships; human factors; and an evaluation of a range of the possible safety and health effects of failed controls.

Oxy-Vinyls currently utilizes Deer Park Action Tracking System (DPATS) to track and promptly address the PHA team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken;

complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions. During the inspection, EPA reviewed the facility's tracking system that contained actions items from all PHAs. I also followed up to ensure the actions were officially closed through the facility's management of change process. All action items are currently closed in the system.

**40 C.F.R. § 68.69 Operating Procedures** – Oxy-Vinyls developed and implemented written operating procedures that provide instructions or steps for conducting activities associated with each covered process, consistent with the safety information. The SOPs EPA reviewed addressed: the steps for each operating phase (initial and normal startup, normal operations, temporary operations, emergency operation and shutdown, normal shutdown, and startup following a turnaround or after emergency shutdown); the consequences of deviation and mechanisms to correct and/or avoid deviation; safety and health considerations; the properties of, and hazards presented by, chemicals used in the process; the precautions necessary to prevent exposure; quality control for raw materials; and, the safety systems and their functions. Operating procedures are accessible to process operators and other employees electronically through SharePoint. In addition, hard copies of SOPs are kept in the control room and are updated whenever a change is made. During the inspection, EPA reviewed Oxy-Vinyls safe work procedures, including lock out/tag out procedures and confined space entry procedures. The company utilizes safe work permits, which are required prior to any contractor entering a confined space. Oxy-Vinyls is required to annually certify that operating procedures are current and accurate. EPA reviewed Oxy-Vinyls operating procedure certifications which were kept in the Sharepoint site. The operating procedures and certifications were current and accurate.

**40 C.F.R. § 68.71 Training** – EPA reviewed Oxy-Vinyls training program procedure and employee training records. The facility's training program ensured that each employee presently operating the covered process, and each employee newly assigned to a covered process are trained or tested to qualify as competent in an overview of the process and in the operating procedures that pertain to their duties. In addition, Oxy-Vinyls operators must go through a training program, which includes the following: on-the-job training, a testing process that is written and computer-based, and a series of field demonstration tests. The Learning Management System database is Oxy-Vinyls online system to house training documents and certifications. EPA reviewed several individuals' training documents. Oxy-Vinyls is required to provide refresher training every three years, and more often, if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. EPA requested documentation to ensure that operators understood the training. Oxy-Vinyl provided sufficient documentation for the means of verification that the operators understood the training.

**40 C.F.R. § 68.73 Mechanical Integrity** – EPA reviewed the written procedures Oxy-Vinyls established to maintain the ongoing integrity of its process equipment. EPA spoke with Oxy-Vinyls Lead Inspector, who explained the facility's mechanical integrity program and procedures. EPA reviewed the facility's inspection records for several vessels, pressure relief valves, and other RMP covered equipment. Oxy-Vinyls utilizes appropriate equipment surveillance and preventative maintenance activities for the process equipment. The facility uses a third-party contractor, Turner Specialty Service (TSS), to maintain and conduct inspections on equipment. During the inspection, Oxy-Vinyls provided training records of personnel who are American Petroleum Institute (API) certified. In addition, EPA requested any overdue inspection or testing on fixed or rotating equipment. Oxy-Vinyls indicated and provided documentation to show that there was no overdue process equipment at the time of the inspection.

**40 C.F.R. § 68.75 Management of Change (MOC)** – EPA reviewed Oxy-Vinyls MOC procedure. The written MOC procedure assured the facility managed changes to process chemicals, technology, equipment, procedures, and changes to stationary sources that effect a covered process. The procedure assured that the following considerations were addressed prior to any change: technical basis for change, impact of change on safety and health, modifications to operating procedures, necessary time period for the change, and authorization requirements for a proposed change. Oxy-Vinyls MOC procedure indicates that the “Action Items Assignees” complete all assigned action items in a timely manner and update and close action items in the electronic MOC system. After EPA reviewed several MOCs, we ensured Oxy-Vinyls employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change were trained prior to start up.

**40 C.F.R. § 68.77 Pre-startup Safety Review (PSSR)** – EPA reviewed Oxy-Vinyls selected pre-startup safety reviews for the associated MOCs. The PSSRs documented that, when the facility installed a new stationary source, or significantly modified an existing source, a review was conducted prior to the introduction of a regulated substance into the process, the construction and equipment design were completed in accordance with design specifications, and the required safety, operating, and maintenance and emergency procedures are in place.

**40 C.F.R. § 68.79 Compliance Audits** – Oxy-Vinyls provided their two most recent certified RMP Compliance Audits conducted in August 2019 and May 2022. Both compliance audits were conducted by at least one person knowledgeable in the process. The audit team consists of Oxy-Vinyls employees and resources not residing at the facility. When conducting its RMP compliance audits, Oxy-Vinyls uses procedural reviews, interviews, field verifications, and a representative sampling of records which provided insight into the adequacy of the design and implementation of the program relative to the requirements of EPA’s RMP rule and OSHA PSM standards. Oxy-Vinyls failed to provide their 2019 and 2022 compliance audit certification [**Appendix #2**] [**AOC #1 - 40 C.F.R. § 68.79(a)**]. Oxy-Vinyls did indicate that they have a revised RMP Compliance Audit report that includes a certification statement.

**40 C.F.R. § 68.81 Incident Investigation** – Oxy-Vinyls provided a list of all incident investigations that occurred within the past five years. Of those reviewed, the incident investigation team consisted of at least one person knowledgeable in the process involved. Oxy-Vinyls has an incident management standard work practice procedure for both near-miss and incident reporting. Oxy-Vinyls investigated each incident that resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance.

**40 C.F.R. § 68.83 Employee Participation** – Oxy-Vinyls developed a written plan of action regarding the implementation of the employee participation required by this section, which is integrated into the program elements. Oxy-Vinyls written plan describes how they consult with employees on the performance and development of process hazard analyses, and on the development of the other elements of process safety management required under the rule. The action plan provides employees access to process hazard analyses and to all other information that must be developed under this rule.

**40 C.F.R. § 68.85 Hot Work Permit** – Oxy-Vinyls provided their hot work and safe work procedure that detailed guidance for hot work/safe work activities at the site. The facility discussed the process for conducting hot work onsite. EPA requested and reviewed a sample of hot work permits. There were no areas of concern noted from the review and follow up on implementation of hot work permits.

**40 C.F.R. § 68.87 Contractors** – EPA reviewed Oxy-Vinyls contractor procedure. Oxy-Vinyls utilizes the Avetta contractor database to evaluate information regarding a contractor’s safety performance and programs. The program requires each contractor to be evaluated based on the risk category of their work. The information and documentation that is housed in Avetta for each contractor will be used to evaluate the contractor’s safety performance and programs. All contractors that will perform work at the facility shall receive and maintain the following training prior to work: OSHA Training, Oxy-Vinyls Site Specific Training, Unit Specific Training, and Contractor Specific Training. Contractors are also informed of known potential hazards, provisions of the Emergency Action Plan (EAP), and health and safety procedures through the work permit procedure. The Oxy-Vinyls site implements safe work practices consistent with 40 C.F.R. § 68.69(d), to control the entrance and exit of the contract employees via the security gate and badging system.

#### **Subpart E – Emergency Response**

**40 C.F.R. § 68.90 Applicability** – Oxy-Vinyls is designated as a “responding” stationary source in case of an accidental release of a regulated substance; therefore, the facility shall comply with the requirements of 40 C.F.R. § 68.95.

**40 C.F.R. § 68.93 Emergency Response Coordination Activities** – Oxy-Vinyls coordinates with Pasadena Fire Department and other local emergency planning and response organizations. At the time of the inspection, Oxy-Vinyls provided documentation of coordination with local authorities that included the names of the individuals involved, their contact information, and the nature of the coordination for the recent coordination activities that took place.

**40 C.F.R. § 68.95 Emergency Response Program** – EPA reviewed Oxy-Vinyls emergency response plan. The plan included: procedures for informing the public and local emergency response agencies about accidental releases; documentation of proper first aid and emergency medical treatment necessary to treat accidental human exposures; and procedures and measures for emergency response after an accidental release of a regulated substance. The plan included procedures for the use of emergency response equipment such as Self-Contained Breathing Apparatus (SCBAs), fire extinguishers, safety shower and eye wash stations, and for its inspection, testing, and maintenance. However, Oxy-Vinyls emergency response plan failed to include procedures for the maintenance and testing of their ammonia detectors. In addition, EPA requested to review the ammonia detector’s calibrations for the past 12 months. According to Oxy-Vinyl, the calibration frequency for these detectors is anywhere from zero to 12 months, per the manufacturer’s recommendation. Oxy-Vinyl has implemented a 6-month schedule for performing calibrations of the ammonia monitors, with calibrations to occur in June and December of each year. Ammonia detectors serve as a critical safety control because they monitor for hazardous ammonia leaks to prevent toxic exposure and trigger alarms and automated safety responses, such as ventilation or system shutdowns. Therefore, calibration or testing must be performed at manufacturer-recommended intervals, and records must be maintained.

**40 C.F.R. § 68.96 Emergency Response Exercises** – As part of coordination with local emergency response officials required by §68.93, Oxy-Vinyls consulted with officials to establish an appropriate frequency for field exercises.

#### **Subpart G – Risk Management Plan**

**40 C.F.R. § 68.190 Updates** – Oxy-Vinyls RMP was submitted on July 26, 2023.

**40 C.F.R. § 68.195 Required corrections** – Oxy-Vinyls next RMP registration re-submission is due by July 26, 2028, unless an update or correction is required by 40 C.F.R. § 68.190 or 40 C.F.R. § 68.195 prior to the five-year renewal deadline.

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

#### **AOC 1 – 40 C.F.R. § 68.79(a) Compliance Audits**

*“(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart, at least every three years to verify that the procedures and practices developed under this subpart are adequate and are being followed. When required as set forth in paragraph (f) of this section, the compliance audit shall be a third-party audit.”*

Oxy-Vinyls failed to provide their 2019 and 2022 compliance audit certification. Oxy-Vinyls did indicate that they have a revised RMP Compliance Audit report that includes a certification statement.

**Closing Meeting** – EPA conducted a closing conference at Oxy-Vinyls on April 18, 2025. During the closing conference, I (Charese Simpson) reviewed the Areas of Concern noted during the inspection.

### **Section IV – FOLLOW UP**

Documents received by EPA after exiting the facility on April 18, 2025, were comments to EPA’s inspection report.

### **Section V – LIST OF APPENDICES (Confidential Business Information (CBI) is not included in published version of the report)**

Appendix #1 – Opening conference/Exit briefing sign-in sheet

Appendix #2 – Compliance Audit