United States Environmental Protection Agency

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	02/24/2025 – 02/26/2025	
Media Program:	Air	
Regulatory Program(s)	RMP	
Company Name:	**Dixie Holdings Company**	
Facility Name:	**Dixie Chemical Company**	
Facility Physical Location:	10601 Bay Area Boulevard	
(city, state, zip code)	Pasadena, Texas 77057	
Mailing address:	10601 Bay Area Boulevard	
(city, state, zip code)	Pasadena, Texas 77057	
County/Parish:	Harris	
Facility Phone Number	281-474-3271	
Facility Contact:	Kenneth Brandon	Director of EHSQ
	kbrandon@dixiechemical.com	
FRS Number:	1110031409973	
Identification/Permit Number:	N/A	
Media Identifier Number:	1000 0007 4475	
NAICS:	325199 - All Other Basic Organic Chemical Manufacturing	
SIC:	N/A	
Personnel participating in inspection:		
Sherronda Phelps	US EPA Region 6	CAA RMP Inspector
Chad Kelly	Dixie Chemical	Safety & Training Coordinator
Addie Cormier	Dixie Chemical	Process Safety Engineer
Jake Sobota	Dixie Chemical	Engineering Manager
EPA Lead Inspector Signature/Date	Sherronda Phelps Sherronda Phelps	04/30/2025 Date
Acting Supervisor Signature/Date	Kayla Buchanan Kayla Buchanan	5/1/2025 Date

6ENFORM-019-R8.2 (02/12/2020)

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector, Sherronda Phelps, (I) arrived at the Dixie Chemical Company at 10:00 AM on February 24th for an announced inspection. I was met by Kenneth Brandon, Director of EHSQ, and other Dixie representatives at the Opening Conference. I presented my credentials to Mr. Brandon and Dixie representatives at the Opening Conference and informed them that this was an EPA inspection focused on the implementation of and compliance (PCE), which included an evaluation of the facility's compliance with the Clean Air Act (CAA) Section 112(r), the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68.

FACILITY DESCRIPTION

As stated from the Executive Summary in it's Risk Management Plan, Dixie Chemical Company's 50-acre chemical manufacturing facility is in the Bayport Industrial Complex, 25 miles southeast of Houston, Texas, and operates 24 hours per day, 365 days per year. Dixie is a global supplier of specialty chemicals in three key market segments: Thermoset Materials, Fuel and Lube Additives, Alkaline Paper Sizing.

Dixie's core chemistry expertise is in functionalizing synthetic and renewable materials through epoxidation, hydrogenation, acrylation, and reactions with maleic anhydride, butadiene, propyleneimine (aziridine), and epichlorohydrin. Dixie is the only global manufacturer offering a complete line of derivatives based on Diels-Alder and Ene reactions. Contract chemical processing is also a vital part of Dixie Chemical's operations. Dixie performs sophisticated custom processing under contracts with other chemical manufacturing companies.

Dixie utilizes seven chemicals in quantities that require inclusion in this Risk Management Plan:
Toxic Chemicals: epichlorohydrin, propyleneimine, formaldehyde (37%), and hydrochloric acid (37%)
Flammable chemicals: isoprene, 1,3 butadiene, and Dimethylamine (60% aqueous). Of these chemicals, only propyleneimine is manufactured at Dixie's Bayport Facility. It is sold as a product and is also used as a raw material in another process. All other RMP chemicals are used as raw materials.

The facility RMP includes 6 covered processes which are all considered Program Level 3 for flammables. There are three toxic substances noted in the RMP covered processes also considered Program Level 3.

Section II - OBSERVATIONS

The initial documentation review began on-site with Dixie Chemical personnel as listed on the attached, Appendix A, sign in sheets.

40 C.F.R. Part 68 – CHEMICAL ACCIDENT PREVENTION PROVISION

Subpart A – General

40 C.F.R. § 68.10 Applicability – Dixie Chemical is a stationary source that has more than a threshold quantity of regulated substances in their process. The last submittal was made February 15, 2024, due to the 5-year update per 40 CFR 68.19(b)(1). The facility is subject to the Occupational Safety and Health Administration's (OSHA) Process Safety Management (PSM) Standard (29 CFR § 1910.119).

40 C.F.R. § 68.12 General requirements – Dixie Chemical submitted their most recent RMP submission on February 15, 2024. The regulated substance(s) under the toxic and flammable tables are listed over the threshold quantity for the RMP Program Level 3 processes.

40 C.F.R. § 68.15 Management – The EPA reviewed documentation presented that reflected a general organizational chart. This chart, however, does not align with the requirements of the Management System element of the RMP. There were no listed roles or responsibilities of the RMP that noted who was over the implementation of the RMP nor the many elements of the RMP. Therefore, the lines of authority and individuals responsible for implementing individual program element are not consistently or clearly defined, as required per CFR 68.15(c) [**AOC #1**].

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – Dixie Chemical operates an RMP program level 3 process which is subject to this subpart and thus is required to prepare a worst-case release scenario analysis and complete the five-year accident history. I reviewed the documentation provided to make this analysis and identified no areas of concern with this subpart.

40 C.F.R. § 68.22 Offsite Consequence Analysis Parameters – Dixie Chemical employed the parameters specified by EPA in this rule by using the RMP*Comp™ software. I reviewed the offsite consequence analysis and supporting documentation to assure the data was accurate and correct.

40 C.F.R. § 68.25 Worse-case release scenario analysis – Dixie Chemical identified and analyzed at least one worst-case scenario in its Program 3 processes using the RMP* Comp™ software, thus meeting the requirements of the regulation.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – Dixie Chemical identified and analyzed at least one alternative release scenario in its Program 3 processes using the RMP* Comp™ software, thus meeting the requirements of the regulation.

40 C.F.R. § 68.30 Defining offsite impacts- Population – Dixie Chemical 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 offsite impacts- Environment – Dixie Chemical used US Geological Survey maps data to determine the environmental receptors and the distances to endpoints.

40 C.F.R. § 68.36 Review and update – Dixie Chemical understands documentation associated with the worst-case scenarios should be updated and reviewed at least every five years and are anticipating a review in 2029.

40 C.F.R. § 68.39 Documentation – Dixie Chemical operates a RMP program level 3 process which is subject to this subpart and thus is required to prepare a worst-case release scenario analysis and complete the five-year accident history. I reviewed the documentation provided to make this analysis and identified no areas of concern with information pertaining to this subpart to include the Offsite Consequence Analysis (OCA) data. The facility used the EPA Model RMP*Comp™.

40 C.F.R. § 68.42 Five-year accident history – Dixie Chemical had no accidental releases from covered processes to report within the last five years.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process safety information (PSI) – EPA reviewed various sections of the process safety information (PSI) for the RMP covered processes at Dixie Chemical. There were no areas of concern identified at this time.

40 C.F.R. § 68.67 Process Hazard Analysis (PHA) – Dixie Chemical provided me with their PHA Schedule detailing completion dates and due dates. All revalidation dates were met per the regulation. EPA reviewed the PHA conducted for the covered process, ECA Synthesis and Distillation Processes. The PHA is conducted In-House with their team of knowledgeable and experienced personnel. The last revalidation occurred in November of 2023, and they are on schedule to complete the next revalidation in 2028. Recommendations made from the PHA are tracked via spreadsheet, re-ranked and added to their EHS software tracking system Velocity. EPA reviewed several recommendations. The PHA study was conducted using the Hazard and Operability Analysis (HAZOP) method. No areas of concern were observed from the information reviewed.

40 C.F.R. § 68.69 Operating procedures – EPA reviewed and discussed with Dixie Chemical personnel operating procedures of several units, which included the Standard Operating Procedure (SOP) certification procedure, confined space entry, and lockout/tag out procedures. EPA requested the last 5 years of annual operating procedure certifications for the DCE 410 and they were provided as requested.

40 C.F.R. § 68.71 Training – Dixie Chemical established operator training as required by this subpart and is detailed in the document titled "Plant Personnel Training Procedure" Document No. 07-EHS-SOP-5300C. Operator Training consists of both On the Job Training and Computer Based Training. Written tests were used to evaluate operator competency. As a new hire, at least six months to a year is allocated to initial job training while, refresher training is required every three years per the regulation or sooner. Given that Dixie is a batch process facility there are times that a process may be down for at least 6 months then an initial training will be conducted. EPA requested training records for review and was provided the files for several employees at different experience levels. I reviewed employee training records and determined training to operate in the unit is current and refresher trainings are administered as required. There were no areas of concern noted from the information reviewed at this time.

40 C.F.R. § 68.73 Mechanical integrity –EPA reviewed the Mechanical Integrity (MI) procedure for their Mechanical Integrity program. Inspections are managed and tracked with the Velocity EHS software. There was a recent switchover from a previously used software, Two Rivers, so a new baseline must be created for the equipment pieces. This is still a work in progress for some equipment pieces. EPA made several requests to review a sample of the inspection and maintenance records for equipment in the DCE process. EPA requested Piping Inspection historical data and EPA was provided data that detailed eleven circuits of this query. Of the 11 circuits listed 10 of them appear to be overdue on their UT and external inspections. A second query of pressure vessels and tanks in the 1400 area was requested, Dixie provided EPA with a list of 63 pieces of equipment listed where 25 of the 63 equipment pieces listed appear to be overdue on their UT and internal Inspections. The facility did not conduct inspections of process equipment consistent with the recommended frequency of applicable manufacturer's recommendation and good engineering practice, per 40 CFR 68.73(d)(3) [**AOC #2**].

40 C.F.R. § 68.75 Management of change (MOC) – EPA reviewed and discussed written procedures for MOCs with site personnel and their implementation at the facility. The MOCs were implemented using their onsite share point site. EPA reviewed a list of MOCs created in 2023 in relation to the DCE unit to review. EPA did not identify any areas of concern at this time.

40 C.F.R. § 68.77 Pre-startup safety review (PSSR) – Dixie Chemical provided documentation regarding pre-startup safety procedures and site plan. EPA did not identify any areas of concern at this time.

40 C.F.R. § 68.79 Compliance audits – EPA requested the two most recent compliance audits for review. Dixie Chemical provided compliance audit reports completed in June of 2020 and May of 2023, both conducted by Dixie Chemical personnel. The audit does not evaluate the Management System element of the RMP as required by 68.79(a). EPA also noted that certifications for the compliance audits completed were not provided. These certifications must ensure the facility evaluated compliance with the provisions of the RMP regulation. The facility provided an email that discussed the audit schedule, but this was not sufficient. EPA advised the facility to add a statement of certification to their compliance audit as required by 68.79(a). The facility failed to certify and evaluate provisions of this subpart as required by 68.79(a)[**AOC #3**].

40 C.F.R. § 68.81 Incident investigation - I reviewed a list of incident reports/investigations for all incidents, which resulted in, or could have reasonably resulted in, a catastrophic release of a regulated substance for the last five years. All incident investigations reported appear to have been conducted as required per the subpart.

40 C.F.R. § 68.83 Employee participation – Dixie Chemical has implemented the requirements of this subpart. No areas of concern noted at the time of the inspection.

40 C.F.R. § 68.85 Hot work permit – Dixie Chemical discussed the process for conducting hot work onsite. Several hot work permits were reviewed from within the last quarter of 2025. All hot work permits are retained for a minimum of one year upon completion of work. There were no areas of concerned noted at this time of the inspection.

40 C.F.R. § 68.87 Contractors – Dixie Chemical provided documents that establish the roles and requirements for the facility and the contractors on site. The facility does not have any nested contractors. Most are hired on an as needed basis. They have a primary and secondary list of contractors they use. Primary contractors handle services such as turnarounds, major renovations, maintenance/repair services. The secondary list handles non-process related tasks or even uniform supply. A Pre-Job Meeting is held with the contractors to discuss known potential hazards related the contractor's work and the processes. Contractors are required to complete Dixie Safety Orientation and General Safety training with the Houston Area Safety Counsel. Contractors are provided controlled key card entrance which is tied to the completion of the safety training and other metrics. EPA did not identify any areas of concern at this time.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability –Dixie Chemical is a first responder stationary source in case of an accidental release of a regulated substance, therefore, the facility is subject to the requirements of part 68.95.

40 C.F.R. § 68.95 Emergency Response – Dixie Chemical is a first responder facility. EPA reviewed the facility's Integrated Contingency Plan -Emergency Response Plan. Dixie Chemical has an Emergency Response Team (ERT) of 40 employees from varied process units and participation is voluntarily. The Emergency Response Plan details the steps to take in the event of a release of the regulated substances. EPA reviewed training records for several ERT members, and no areas of concern were identified at this time.

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates – No updates.

40 C.F.R. § 68.195 Required corrections -The next RMP re-submission is due by February 15, 2029, unless an update or correction is required by 40 C.F.R. § 68.190 and § 68.195.

Section III – AREAS OF CONCERN (AOC)

1) **Management System, 40 C.F.R. § 68.15 (c) –** There were no listed roles or responsibilities of the RMP that noted who was over the implementation of the RMP nor the many elements of the RMP. Therefore, the lines of authority and individuals responsible for implementing individual program element are not consistently or clearly defined, as required per CFR 68.15(c).

2) **Mechanical Integrity, 40 CFR § 68.73(d)(3**) - EPA requested Piping Inspection historical data and EPA was provided data that detailed eleven circuits of this query. Of the 11 circuits listed 10 of them appear to be overdue on their UT and external inspections. A second query of pressure vessels and tanks in the 1400 area was requested, Dixie provided EPA with a list of 63 pieces of equipment listed where 25 of the 63 equipment pieces listed appear to be overdue on their UT and internal Inspections. The facility did not conduct inspections of process equipment consistent with the recommended frequency of applicable manufacturer's recommendation and good engineering practice, per 40 CFR 68.73(d)(3).

3) **Compliance Audits, 40 CFR § 68.79(a)** – The facility failed to evaluate compliance with the provisions of this subpart, specifically the Management System element. In addition, the facility failed to certify their compliance audits for the year 2020 and 2023, as required by the subpart 68.79(a).

EPA Region 6 inspector, Sherronda Phelps, conducted a closing conference Closeout/Exit Briefing on February 26, 2025, for the inspection. During the closing conference, EPA reviewed the Areas of Concern noted and any comments or questions while on site.

Section IV – FOLLOW UP

No follow up correspondence was provided from the facility nor were there any requests made.

Section V – LIST OF APPENDICES

No Appendices.