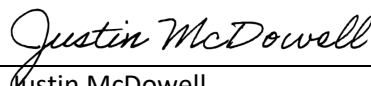


Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	May 17-19, 2022	
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:	Nouryon	
Facility Name:	Nouryon – Deer Park	
Facility Physical Location:	730 Independence Parkway South	
(city, state, zip code)	La Porte, Texas 77571	
Mailing address:	730 Independence Parkway South	
(city, state, zip code)	La Porte, Texas 77571	
County/Parish:	Harris County	
Facility Phone Number	(312) 544-7000	
Facility Contact:	Kevin Sharp	Site Director
	Kevin.Sharp@Nouryon.com	
FRS Number:	110000463374	
Identification/Permit Number:	CAA Title V Permit; Air Operating Permit ID: O-03331	
Media Identifier Number:	RMP ID: 1000 0008 3312 / TX0000004820100052	
NAICS:	325199 (All Other Basic Organic Chemical Manufacturing)	
SIC:	2869 Industrial Organic Chemicals, Not Elsewhere Classified	
Personnel participating in inspection:		
Justin McDowell	US EPA Region 6	Inspector / Enforcement Officer
Paul Phillips	Nouryon	Houston Area PSM Manager
William Wu	Nouryon	Process Quality Control Manager
Tobey Hooks	Nouryon	Maintenance Manager
Kevin Sharp	Nouryon	Site Director
Tim Nugent	Nouryon	HSS Manager
Brian Ventura	Nouryon	Production Superintendent
Ronny Riman	Nouryon	Maintenance/ Reliability Engineer
Ted Olsezansei	Nouryon	Production Superintendent
Shelby Sustala	Nouryon	Environmental Manager
Chris Perry	Nouryon	Sr. Lab Tech/ Dec Control
Matisha Banks	Nouryon	Continuous Improvement Manager
EPA Lead Inspector		
Signature/Date		7/15/2022
	Justin McDowell	Date
Supervisor		
Signature/Date		7/18/2022
	Samuel Tates	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

I, United States Environmental Protection Agency (EPA) Region 6 inspector Justin McDowell, arrived at the Nouryon Deer Park facility (Nouryon Deer Park) at 9:00 AM on Tuesday, May 17, 2022, for an announced inspection. I met with Paul Phillis, William Wu, Tobey Hooks, Kevin Sharp, Tim Nugent, Brian Ventura, Ronny Riman, Ted Olsezansei, Shelby Sustala, and Chris Perry of Nouryon for an opening meeting. I presented my credentials and informed Nouryon Deer Park 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), the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68, and the General Duty Clause. Nouryon Deer Park's Risk Management Plan (RMP) is listed as a Program Level Three (3), Title V 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 the Nouryon Deer Park plant is a non-union facility.

FACILITY DESCRIPTION

Nouryon Deer Park is a metal alkyl manufacturing facility. The manned facility has approximately 116 employees and 52 nested contractors. The site operates 22 production units. The site produces a variety of highly reactive metal alkyls including Aluminum, Magnesium, Boron, Zinc, Gallium, and Indium-based products. A solvent recovery process recovers solvents from plant waste streams and produces Poly-Aluminum Chloride as a saleable byproduct.

Section II - OBSERVATIONS

On Wednesday May 18, 2022, I was accompanied by Nouryon Deer Park personnel to conduct a site tour of selected RMP covered processes, which included the Trimethylaluminum (TMAL), Isoprenyl and Trialkyls process areas. After arrival at the facility, I was given a general site safety orientation, and was escorted by Nouryon employees throughout the facility tour.

Subpart A – General

40 C.F.R. § 68.10 Applicability – Nouryon Deer Park is the owner/operator of a stationary source that has more than threshold quantities of one regulated toxic substance (methyl chloride) and five regulated flammable substances (isopentane, ethyl chloride, 1-butene, 2-methylpropene, and isoprene) in a covered process, as listed in 40 C.F.R. § 68.130; therefore, Nouryon Deer Park is subject to the Chemical Accident Prevention Provisions. Nouryon Deer Park has a Clean Air Act Title V Operating Permit (ID# O-03331) and is classified under the North American Industrial Classification System (NAICS) code 325199 (All Other Basic Organic Chemical Manufacturing). Nouryon Deer Park is subject to the Occupational Safety and Health Administration (OSHA) process safety management (PSM) standard, 29 C.F.R. § 1910.119, and has six Program Level Three (3) processes under OSHA PSM and RMP.

40 C.F.R. § 68.10 Program Eligibility – Nouryon Deer Park re-submitted an RMP registration, as required under 40 C.F.R. § 68.190 (b)(6), after completing a revised off-site consequence analysis (OCA) due to change, on September 26, 2018. Nouryon Deer Park's next registration re-submittal is due on

September 26, 2023, 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 date.

40 C.F.R. § 68.12 General requirements – The re-submitted RMP plan requires the facility to: develop and implement a management system; conduct a hazard assessment; implement the prevention requirements of 40 C.F.R. § 68.65 - § 68.67; develop and implement an emergency response program; and, include the data elements from 40 C.F.R. § 68.175 in their RMP.

40 C.F.R. § 68.15 Management – Nouryon Deer Park has developed a management system to oversee the implementation of risk management program elements and documented the lines of authority defined through an organization chart / roles and responsibilities list document broken down into site building blocks.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – Nouryon Deer Park has six Program Level 3 processes subject to this subpart. The facility 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 (OCA) Parameters – Nouryon Deer Park used RMP*Comp™ as the technique for modeling the release scenarios. For both the worst-case and alternative case scenarios involving flammables, 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 Worse-case Release Scenario Analysis – Nouryon Deer Park analyzed and reported in the RMP one worst-case release scenario, estimated to create the greatest distance to endpoint, and resulting from an accidental release of a regulated toxic substance from a covered process under worst-case conditions and one worst-case release scenario, estimated to create the greatest distance to endpoint, and resulting from an accidental release of a regulated flammable substance from a covered process under worst-case conditions.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – Nouryon Deer Park identified and analyzed one toxic alternative release scenarios and one alternative release scenarios to represent all flammable substances held in a covered process.

40 C.F.R. § 68.30 Defining Off-site Impacts - Population – Nouryon Deer Park uses Google Maps to define the affected off-site population. The documentation describes how the facility estimated the population that would be affected in the distance to endpoint in the RMP, based on a circle with the point of release at the center.

40 C.F.R. § 68.33 Defining Off-site Impacts - Environment – Nouryon Deer Park identified environmental receptors within a circle where its center is the point of the release and a radius determined by the distance to endpoint.

40 C.F.R. § 68.36 Review and Update – Nouryon Deer Park has not reviewed and updated the off-site consequence analyses at least once every five years. The documentation was reviewed between 2008, 2009 and 2011, and not again until 2018 prior to the most recent RMP submittal. **[Area of Concern (AOC) 1 – §68.36(a)]**

40 C.F.R. § 68.39 Documentation – Nouryon Deer Park did not have documentation for assumptions and parameters used, and the **rationale** for selection of the release scenarios. When reviewing the consequence analysis documentation for flammables, isopentane was used for both worst-case and alternative case scenarios. I questioned the facility about the analysis of ethyl chloride, another flammable regulated substance, due to its greater quantity stored on site than isopentane, to assure the correct chemical was used for release scenarios, but rationale for not using ethyl chloride was not documented, nor were calculations provided in support of the OCA at the time of the inspection. **[AOC 2 – §68.39(a)/(b)]**

40 C.F.R. § 68.42 Five-year accident history – Nouryon Deer Park has not reported any accidental releases from the covered process in the past five years that resulted in one or more of the following: on-site deaths, injuries, significant property damage on-site, known off-site deaths, injuries, 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 – Nouryon Deer Park compiled written process safety information, which includes 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. I reviewed the Safety Data Sheets for the process chemicals (Methyl Chloride and Isopentane) that details process safety information, and which includes the following data for the hazards of the substance 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. I reviewed documentation concerning the technology of the process, which included block flow diagrams, 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 (inside operating procedures). I also reviewed documentation pertaining to the equipment of the process, including materials of construction, piping and instrumentation diagrams (P&IDs), electrical classification, ventilation system design, design codes and standards employed, material and energy balances, and safety systems. The facility has begun a process safety valve (PSV) improvement project facility wide.

40 C.F.R. § 68.67 Process hazard analysis (PHA) – Nouryon Deer Park provided an overview of their PHA procedure. The facility performed initial PHAs that identified, evaluated, and controlled the hazards involved in the processes. The facility completes each PHA based on the five-year cycle from the previous PHA. PHAs are divided among the covered process units and work areas using the Hazard and Operability Study (HAZOP) methodology. I requested a schedule of PHA review dates and current PHAs along with the recommendations. I reviewed the PHAs and revalidations for the Halide II and Logistics processes, but the facility was missing PHA recommendations for the Butylethylmagnesium (BEM), Metal Peroxide Resin (MPR), TMAL, and Trialkyls processes, partially due to the facility's change from the *AIRSWeb* to the *Enablon* tracking system software platform. I could not determine if all recommendations shown, as well as the recommendations that could not be verified, were resolved in a timely manner, or that the resolutions were documented. The facility was unable to provide

documentation to show records of completion for all PHA recommendations for the BEM, MPR, TMAL, and Trialkyls covered processes. **[AOC 3 – §68.67 (e)]** Additionally, several PHAs were not updated and revalidated at least every five years after the completion of the initial or previous PHA. **[AOC 4 – §68.67 (f)]** --see Table 1. The facility failed to retain documentation of completed resolutions of recommendations for the life of the BEM, MPR, TMAL, and Trialkyls covered processes, as described in paragraph 68.67 (e). **[AOC 5 – §68.67 (g)]**

Table 1

Year	Unit	Due Date	Type of Review	Actual Completed Date
2014	Trialkyls	8/4/2014	Unit Revalidation	8/31/2014
2015	Logistics	9/5/2015	Unit Revalidation	10/1/2015
2016	Ethylaluminum sesquichloride (EASC)/ Diethylaluminum chloride (DEAC)/Halide II	8/6/2016	Re-evaluation	8/1/2016
2017	BEM	10/1/2017	Re-evaluation	10/31/2017
2017	TMAL	12/1/2017	Re-evaluation	12/1/2017
2019	N TEAL	5/1/2019	Re-evaluation	5/23/2019
2019	MPR	5/1/2019	Re-evaluation	4/20/2020
2019	Trialkyls	8/4/2019	Re-evaluation	2/20/2020
2020	Logistics	10/1/2020	Unit Revalidation	7/29/2021
2021	EASC/DEAC/ Halide II	8/1/2021	Re-evaluation	8/19/2021

40 C.F.R. § 68.69 Operating Procedures – Nouryon Deer Park has developed and implemented written operating procedures that provide clear instructions for safely conducting activities involved in each covered process, consistent with the process safety information, and which address required elements. The operating procedures I reviewed addressed steps for each operating phase, operating limits, safety and health considerations, and safety systems with their functions. Operating procedures are maintained inside the facility’s online document Information Management System (IMS), which is accessible to all employees. However, the facility has not annually certified that its operating procedures are current and accurate in a manner consistent with the rule language. There are instances documented in which the facility has certified a procedure multiple times in a year, followed by gaps in certification that extended as much as four years. **[AOC 6 – §68.69 (c)]** - see Table 2] EPA notes that Nouryon has developed and implemented safe work practices to provide for the control of hazards during operations such as lockout/tagout and confined space entry.

Table 2

Operating Procedures – Annual Certifications	
SOP – 107.055 Methyl chloride (MeCl) Tank Truck Unloading Procedure	5/17/2022
	2021 - missing
	6/29/2020
	9/30/2019
	9/3/2019
	5/21/2019
	5/11/2018
SOP – 103.019 Ethyl Chloride T-93 TT Unloading	5/17/2022
	2020 – missing
	2019 - missing
	3/26/2018

40 C.F.R. § 68.71 Training – Nouryon Deer Park discussed the process of training a new hire through the completion of a three-year training program. Employees begin with a two-week orientation followed by unit specific training. Each operator is required to learn and become competent in operation of four units within the covered processes. After three to six months of hands-on training, the operator then completes a unit walk-through qualification and written test. I requested six operator training files to review the documentation related to this rule section. The most recent three-year refresher training for three employees was past due: JR (Halide II), CV (Back loading recertification), and DF (Trialkys). **[AOC 7 – §68.71 (b)]**

40 C.F.R. § 68.73 Mechanical Integrity (MI) – Nouryon Deer Park provided mechanical integrity procedures for selected equipment. The procedures include information on how the facility will maintain the on-going integrity of fixed equipment such as pressure vessels, storage tanks, and piping systems. Maintenance inspections are conducted by a third-party contractor, and the results are sent to a Nouryon engineer for approval. Nouryon uses a System Applications and Products (SAP) database for generating and completing maintenance activity work orders.

Also, the frequency of inspections and tests of process equipment was not consistent with applicable manufacturers' recommendations and good engineering practices **[AOC 8 – §68.73 (d)(3)]**, as summarized as follows:

- a. Nouryon has four open work orders for equipment related to an RMP process area that is currently past due for inspection: R-800 BEM Reactor; R-541 EASC Reactor; A-800 R-800 Reactor Agitator; and R-541 EASC Reactor.
- b. Nouryon's frequency of inspections and tests of process equipment was not consistent with applicable manufacturers' recommendations for the following equipment:
 - T-1285 five-year external inspections: 5/13/2022, 4/11/2017 (one month past due)
 - R-1201 five-year external inspections: 5/16/2022, 6/14/2010 (no inspections documented for 2015 and 2020)
 - T-93 five-year external inspections: 11/2/2021 (tank in service over 10 years, no previous inspections documented)
 - R-541 five-year external inspections: 5/16/2022, 9/16/2012, 12/31/2001 (no inspections documented for 2006; 2011 inspection conducted a year late; no inspection documented for 2016; and 2021 inspection conducted six months late)
- c. PSV data, including isometric drawings and quality assurance information, was missing and not provided for all PSVs in RMP covered processes.
- d. There are MI inspection frequencies ranging from one to three years related to Management of Change (MOC) tasks, such as "MOC – Change R-800 RD," that are not associated with a dedicated API Standard 581 Risk Based Inspection (RBI) program; that have not been evaluated by a certified RBI inspector; or that do not have documented data points to validate decisions on inspection frequency.

40 C.F.R. § 68.75 Management of Change (MOC) – Nouryon Deer Park has established written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and other changes to the stationary source that may affect a covered process. I requested a list of MOCs for review. One MOC dated January 13, 2021, and titled "Temporary operated with replacement methyl chloride hose," was not implemented as specified by the written MOC procedure. The hose was modified and replaced within several hours; however, the MOC did not go through all the required steps, and there was no subsequent MOC to return the permanent hose to

its original operating status. **[AOC 9 – §68.75 (a)]** Additionally, employees involved in operating a process whose job tasks were affected by a change were not informed of or trained in the change prior to start-up of the affected part of the process. **[AOC 10 – §68.75 (c)]** For MOCs titled “Temporary operated with replacement methyl chloride hose” and “Add spectacle blind to methyl chloride and add procedure for unfreezing X-1218,” dated November 25, 2020, there was no documentation of training for affected employees prior to startup.

40 C.F.R. § 68.77 Pre-startup Safety Review (PSSR) – I also reviewed Nouryon Deer Park’s pre-startup safety reviews for the associated MOCs reviewed. The PSSRs documented that, when the facility installed a new process at the stationary source, or significantly modified a process at an existing source, a review was conducted prior to the introduction of the newly regulated substances. The PSSRs included the appropriate required communication and notification elements.

40 C.F.R. § 68.79 Compliance Audits – Nouryon Deer Park certified that they evaluated compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed in its two most recent audit reports completed on March 9, 2021, and March 19, 2018. The audits were conducted by Nouryon staff. The facility did not promptly determine and document an appropriate response to each of the findings of the compliance audits, and document that deficiencies had been corrected. There were instances in each audit report where the recommendations were blank, without describing what actions were recommended, and which actions have been completed or are overdue. **[AOC 11 – §68.79 (d)]**

40 C.F.R. § 68.81 Incident Investigation – Nouryon Deer Park has investigated incidents which resulted in, or could reasonably have resulted in, a catastrophic release. The *Enablon* database was used to establish and document incident investigation teams and incident review findings, to ensure report components were present, and to route reports for the necessary reviews and final repository. The facility did not establish a system to promptly address and resolve the incident report findings and recommendations for one incident investigation I reviewed. There was a repeat incident that occurred related to the R-1201 SIS activation incident on March 7, 2022. **[AOC 12 – §68.81 (e)]**

40 C.F.R. § 68.83 Employee Participation – Nouryon Deer Park has developed a written action plan regarding implementation of employee participation as required by this section. This action plan is integrated into the RMP program elements. The plant has consulted with employees and their representatives on the methods to be used and development of the process hazard analyses, and on the development of the other elements of process safety management in the Chemical Accident Prevention Provisions. The plant has provided employee access to the process hazard analyses and all other information required to be developed under this rule.

40 C.F.R. § 68.85 Hot Work Permit – Nouryon Deer Park provided the hot work procedure (HSSE 165.017) and a copy of the hot work permit used during hot work operations. The facility had not conducted any hot work on or near any RMP covered process to review at the time of the inspection.

40 C.F.R. § 68.87 Contractors – Nouryon Deer Park uses the *ISNetWorld* contractor database to evaluate information regarding contractor safety performance and programs. Contractors receive *Basic Plus* and site-specific training at the Houston Area Safety Counsel prior to coming on site to receive information about the known potential fire, explosion, or toxic release hazards related to the contractors’ work and the affected covered processes. I selected random contractor records to review in *ISNetWorld* for dedicated contractors currently working on site. One contractor (BR) had a grade of “F”, and the facility

could not provide documentation of periodic evaluation of the contractor's owner/operator performance in fulfilling their obligations, as specified in 68.87 (c), or by means a variance while this contractor was still performing work on site. A variance was subsequently put in place on May 19, 2022, prior to the conclusion of this inspection.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability – Nouryon Deer Park has designated itself as a responding stationary source.

40 C.F.R. § 68.93 Emergency Response Coordination Activities – Nouryon Deer Park has coordinated response needs with the local emergency planning commissions (LEPCs) and response organizations to determine how the covered processes at the facility are addressed in the community emergency response plan. The facility provided documentation of coordination with the La Porte LEPC, Deer Park LEPC, Channel Industries Mutual Aid (CIMA) and Community Action Committee (CAC).

40 C.F.R. § 68.95 Emergency Response Program – Nouryon Deer Park has developed and implemented an emergency response program for the purpose of protecting public health and the environment. All employee emergency responders are required to have basic emergency response training, including 40-hour hazardous materials (HAZMAT) and annual refresher, along with interior/exterior firefighting. Other emergency responders may have more rigorous specialized training, such as rope and rescue, incident command, and medical response training.

40 C.F.R. § 68.96 Emergency Response Exercises – Nouryon Deer Park provided documentation that the facility conducts monthly and quarterly emergency response tabletop drills in coordination with local emergency planning and response organizations.

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates – Nouryon Deer Park's RMP was last re-submitted on September 26, 2018.

40 C.F.R. § 68.195 Required corrections – Nouryon Deer Park's next RMP registration re-submission is due by September 26, 2023, 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.

Closing Meeting- On the last day of the inspection (May 19, 2022), I conducted a closing conference, during which I presented the following areas of concern identified during the inspection.

Section III – AREAS OF CONCERN

AOC 1 – 40 C.F.R §68.36 (a)

“(a) The owner or operator shall review and update the off-site consequence analyses at least once every five years.”

Nouryon failed to review the OCA documentation between 2011 and 2018, prior to the most recent RMP submittal.

AOC 2 – 40 C.F.R §68.39 (a)/ (b)

“(a) For worst-case scenarios, a description of the vessel or pipeline and substance selected as worst case, assumptions and parameters used, and the rationale for selection; assumptions shall include use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released. Documentation shall include the anticipated effect of the controls and mitigation on the release quantity and rate.”

“(b) For alternative release scenarios, a description of the scenarios identified, assumptions and parameters used, and the rationale for the selection of specific scenarios; assumptions shall include use of any administrative controls and any mitigation that were assumed to limit the quantity that could be released. Documentation shall include the effect of the controls and mitigation on the release quantity and rate.”

Nouryon Deer Park failed to retain documentation for assumptions and parameters used, and the rationale for selection of the release scenarios. The OCA documentation for flammables used isopentane for both worst-case and alternative case scenarios, instead of considering ethyl chloride, another flammable regulated substance, due to its greater quantity stored on site higher than isopentane. The rationale for not using ethyl chloride was not documented, nor were calculations provided in support of the OCA during the inspection.

AOC 3 – 40 C.F.R §68.67 (e) Process Hazard Analysis

“(e) The owner or operator shall establish a system to promptly address the 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.”

The facility was unable to provide documentation to show records of completion for all PHA recommendations for the BEM, MPR, TMAL, and Trialkyls covered processes. This deficiency was partially due to the facility switching tracking database systems from *AIRSWeb* to *Enablon*.

AOC 4 – 40 C.F.R §68.67 (f) Process Hazard Analysis

“(f) At least every five (5) years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the requirements in paragraph (d) of this section, to assure that the process hazard analysis is consistent with the current process. Updated and revalidated process hazard analyses completed to comply with 29 CFR 1910.119(e) are acceptable to meet the requirements of this paragraph.”

The facility failed to update and revalidate several PHAs at least every five years after the completion of the initial or previous PHA. See Table 1 on page 5 of the report.

AOC 5 – 40 C.F.R §68.67 (g) Process Hazard Analysis

The owner or operator shall retain process hazards analyses and updates or revalidations for each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e) of this section for the life of the process.

The facility failed to retain documentation of completed resolutions of recommendations for the life of the BEM, MPR, TMAL, and Trialkyls covered processes, as described in paragraph 68.67 (e).

AOC 6 – 40 C.F.R §68.69 (c) Operating Procedures

“(c) The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.”

The facility failed to annually certify that its operating procedures are current and accurate. There are instances in which the facility has certified a procedure multiple times in a single year, but then failed to completed certifications for as much as four years.

AOC 7 – 40 C.F.R §68.71 (b) Training

“(b) *Refresher training.* Refresher training shall be provided at least 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. The owner or operator, in consultation with the employees involved in operating the process, shall determine the appropriate frequency of refresher training.”

Refresher training for three employees was past due the required three-year interval for JR (Halide II), CV (Back loading recertify), and DF (Trialkyls).

AOC 8 – 40 C.F.R §68.73 (d)(3) Mechanical Integrity

“(d) Inspection and testing. (3) The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.”

The failed to conduct inspections and tests of process equipment at frequencies consistent with applicable manufacturers' recommendations and good engineering practices, as summarized on pages 6 and 7 of this report.

AOC 9 – 40 C.F.R §68.75 (a) Management of Change

“(a) The owner or operator shall establish and implement written procedures to manage changes (except for “replacements in kind”) to process chemicals, technology, **equipment**, and procedures; and, changes to stationary sources that affect a covered process.”

The facility failed to implement the MOC written procedure as designed for and MOC dated January 13, 2021 and titled “Temporary operated with replacement methyl chloride hose.” The hose was modified and replaced within several hours, and the MOC did not go through all the necessary steps for proper completion according to the MOC written procedure. Also, there was no MOC to return the permanent hose to its original operating status.

AOC 10 – 40 C.F.R §68.75 (c) Management of Change

“(c) Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.”

The facility failed to complete training and notification to employees prior to start up for MOCs titled “Temporary operated with replacement methyl chloride hose”, dated January 13, 2021, and “Add spectacle blind to methyl chloride and add procedure for unfreezing X-1218”, dated November 25, 2020.

AOC 11 – 40 C.F.R §68.79 (d) Compliance Audits

“(d) The owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.”

The facility failed to promptly determine and document appropriate responses to each of the findings of the 2018 and 2021 compliance audits, and to document those deficiencies had been corrected. There were instances in each audit report where the recommendations were blank, without describing what actions were recommended, and which actions have been completed or are overdue.

AOC 12 – 40 C.F.R §68.81 (e) Incident Investigations

“(e) The owner or operator shall establish a system to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions shall be documented.”

The facility failed to establish a system to promptly address and resolve incident report findings and recommendations. There was a repeat incident that occurred on March 7, 2022, which was related to incident R-1201 SIS activation on February 9, 2021.

Section IV – FOLLOW UP

The following information was received by EPA on June 2, 2022, after exiting the Facility on May 19, 2022: Confidential Business Information with additional supporting data related to the Areas of Concern documented in this report.

Section V – LIST OF APPENDICES

There are no photos, videos, or other appendices in this report.