United States Environmental Protection Agency

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	September 17-20, 2018		
Media:	Air		
Regulatory Program(s)	Clean Air Act Section 112(r) and 40 C.F.R. Part 68 Chemical Accident Prevention Provisions		
Company Name:	**Blue Cube Operations LLC**		
Facility Name:	**Blue Cube Operations Plaquemine**		
Facility Physical Location:	21255 Highway 1 S, Plaquemine, LA 70765		
(city, state, zip code)	Plaquemine, LA 70765		
Mailing address:	21255 Highway 1 S P.O. Box 424		
(city, state, zip code)	Plaquemine, LA 70765		
County/Parish:	Iberville		
Facility Contact:	Stephen Ledoux – (225)353-6778	Plant Manager	
FRS Number:	110067415871		
Identification/Permit Number:			
Media Number:	EPA Facility Identifier: 100000231536		
NAICS:	32518 Other Basic Inorganic Chemical Manufacturing		
NAICS:	32519 Other Basic Organic Chemical Manufacturing		
Personnel participating in inspection:			
Allyson Ledet	Blue Cube Operations	Environmental Manager	(225)353-1500
Sarah Babin	Blue Cube Operations	Environmental Specialist	(225)353-1500
Keith Schell	Blue Cube Operations	PSM Manager	(225)353-1500
David Martin	Blue Cube Operations	Process Safety Tech Leader	(225)353-1500
Blake Sieminski	US EPA	Inspector/ Enforcement Off.	(214)665-8062
EPA Lead Inspector Signature/Date			
EPA Lead Inspector Signature/Date	Blake Sieminski		Date
	[signature]		12/4/2018
Supervisor Signature/Date	Samuel Tates		12/4/2018
Supervisor Signature/Date	Samuel Tates		Date

6ENFORM-019-R7 (2/15/2017)

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

I, United States Environmental Protection Agency (EPA) Region 6 Inspector Blake Sieminski, arrived at the Blue Cube Operations facility at approximately 1:00 PM on Monday September 17, 2018 for an announced inspection. I met with Allyson Ledet, Sarah Babin, Keith Schell and David Martin. I presented my credentials and informed Blue Cube personnel that this was an EPA inspection to determine compliance with the facility's Chemical Accident Prevention Provisions Program. The scope of the inspection was a partial compliance evaluation (PCE) and included an evaluation of the compliance of the facility with the Clean Air Act (CAA) Section 112(r) and the Chemical Accident Prevention Provisions (40 C.F.R. Part 68). The Blue Cube Operations Plaquemine (BCO) is listed as a Risk Management Plan (RMP) Program three (3) facility. Blue Cube Operations Plaquemine is not a union facility. The Louisiana Department on Environmental Quality was notified of this PCE inspection and joined me on Tuesday September 18, 2018 during this inspection.

Table 1: Opening Meeting Attendance; Monday September 17, 2018

NAME	COMPANY	TITLE
Allyson Ledet	Blue Cube Operations	Environmental Manager
Sarah Babin	Blue Cube Operations	Environmental Specialist
Keith Schell	Blue Cube Operations	PSM Manager
David Martin	Blue Cube Operations	Process Safety Tech Leader
Blake Sieminski	U.S. EPA	Inspector

FACILITY DESCRIPTION

Blue Cube Operations Plaquemine operates a basic organic and inorganic chemical manufacturing facility. The facility is located in Plaquemine, Louisiana. BCO is a facility which receives and/or stores various regulated flammable chemicals by trucks and pipelines. The products onsite include chlorine, chloroform, hydrogen chloride, and methyl chloride. The facility employs approximately 205 employees and 150-200 contractors.

Section II – OBSERVATIONS

On Wednesday September 19, 2018, LDEQ and BCO personnel, and I conducted a site walk-through of the facility to observe the covered process, equipment, and operations. The facility lists two covered processes in the RMP as Chlorine plant and Solvents/ EDC. We toured both processes and their respective control rooms, and tank T-86A, which was chosen as the example for worst-case scenario release due its location inside the DOW facility.

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

Subpart A – General

40 C.F.R. § 68.10 Applicability – I observed that BCO is a stationary source with a Clean Air Act Title-V permit (2188-V9 and 2537-V9) that has more than a threshold quantity of regulated substances in their process. BCO re-submitted a Risk Management Plan (RMP) (5-year update for 40 CFR § 68.190(b)(1)) on September 13, 2018, which described the process containing chlorine, chloroform, hydrogen chloride, and methyl chloride held at more than a threshold quantity. BCO is a Risk Management Plan Program 3 facility. BCO 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- BCO's Risk Management Plan (RMP), which was resubmitted on September 13, 2018, lists chlorine, chloroform, hydrogen chloride, and methyl chloride over the threshold for Program Level 3 processes.

40 C.F.R. § 68.15 Management- BCO developed a management system to oversee the implementation of the risk management program elements. The organizational chart that was provided outlined the positions to implement the individual elements of the RMP as required by this subpart.

Subpart B – Hazard Assessment-

40 C.F.R. § 68.20 Applicability – BCO is a Program 3 stationary source subject to this part. The facility is required to prepare an offsite consequence analysis and complete the five-year accident history.

40 C.F.R. § 68.22 Offsite consequence analysis parameters- The offsite consequence analysis and supporting documentation was reviewed to assure the data was accurate and to confirm the parameters used by BCO to document this data.

40 C.F.R. § 68.25 Worst-case release scenario analysis- BCO identified and documented a worst-case release scenario analysis for the RMP covered regulated substances. The distance to endpoint for regulated substances was calculated using RMP*Comp™.

40 C.F.R. § 68.28 Alternative release scenario analysis – BCO identified and analyzed at least one alternative release scenario for each regulated substance, as well as, at least one alternative release scenario to represent all regulated substances held in covered processes. The distance to endpoint was calculated using RMP*Comp™.

40 C.F.R. § 68.30 Defining offsite impacts-population –BCO discussed the offsite consequence analysis. and used the 2010 Census Bureau population data to calculate population numbers reported in their September 13. 2018 RMP resubmission.

40 C.F.R. § 68.33 Defining offsite impacts-environment – BCO provided documentation that identified the potential offsite impacts and identified public receptors.

40 C.F.R. § 68.36 Review and update – BCO Plaquemine has only been operational since 2015 and has no five-year updates currently.

40 C.F.R. § 68.39 Documentation – BCO provided documents of the offsite consequence analysis data. For worst-case and alternative case scenarios, a description of the vessel or pipeline, the substance selected as worst-case, and the rationale for selection was included; likewise, assumptions included any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released, estimated quantity released, release rate, and duration of release. The methodology used to determine distance to endpoint was documented by the facility. The data used to estimate population was provided in the form of maps that had the distance to endpoint labeled with a circle from the emissions point.

40 C.F.R. § 68.42 Five-year accident history– BCO did not report any accidental release(s) in their RMP that resulted in deaths, injuries or property damage.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process safety information – Various sections of process safety information were reviewed for the RMP units at BCO.

40 C.F.R. § 68.67 Process Hazard (PHA) – The Process Hazard Analysis (PHA) for the RMP process was reviewed. The December 7, 2016 PHA was conducted using What-if, Checklist, and Layer of protection analysis (LOPA).

40 C.F.R. § 68.69 Operating procedures – The Operating Procedures that were requested from BCO were reviewed. BCO uses an electronic document management system to maintain its operating procedures. We reviewed and discussed with BCO personnel operating procedures, which included the SOP Certification Procedure, Confined Space Entry, and Lockout/ Tag out Procedures. It was found that BCO had not certified that the operating procedures were current, accurate, and that the procedures had been reviewed as often as necessary, as required by this subpart, and used a single certification document for operating procedures annually.

40 C.F.R. § 68.71 Training – I requested and was provided the training files for two employees at different experience levels. Of the employee files reviewed, refresher training had not been provided at least every three years. The recertification list was lost due to a file corruption, anything prior to 2017 is unavailable.

40 C.F.R. § 68.73 Mechanical integrity – Mechanical integrity records for randomly selected inspections of Risk Management Plan covered equipment and the written procedure for maintaining the integrity of the process. We reviewed various equipment inspection records for T86-A which is included in the covered process. We also reviewed documentation of overdue inspections and piping circuits.

40 C.F.R. § 68.75 Management of change (MOC) – BCO's written procedure for MOC and the documentation with site personnel was discussed. The MOCs were implemented using an electronic system.

40 C.F.R. § 68.77 Pre-startup safety review – BCO provided documentation regarding pre-startup safety review.

40 C.F.R. § 68.79 Compliance audits –The last two Risk Management Plan Compliance Audits were reviewed. The most recent audit was conducted on January 9-13, 2017 and certified January 13, 2017.

40 C.F.R. § 68.81 Incident investigation – A list of Incident Reports/Investigations for all incidents, which resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance for the last five years was reviewed. BCO did not have any incident reports/investigations that met these criteria.

40 C.F.R. § 68.83 Employee participation – BCO's Management Program met the requirements of this subpart.

40 C.F.R. § 68.85 Hot work permit – BCO discussed the process for conducting hot work onsite and several hot work permits were reviewed. Hot work permits reviewed looked satisfactory.

40 C.F.R. § 68.87 Contractors –BCO uses Turner a vetted contractor company approved by Olin Headquarters to conduct its contractor selection. BCO assures that all contractors that may work on site have been trained on the potential hazards related to both the process equipment and the work that the contractor may perform.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability – BCO employees are not first responders; DOW Chemical is contracted to respond to events at the Plaquemine site.

40 C.F.R. § 68.95 Emergency response program – The Emergency Response Plan at BCO was reviewed.

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates - BCO's Risk Management Plan was re-submitted on September 13, 2018 and there have been no updates since the resubmission.

40 C.F.R. § 68.195 Required corrections –The next RMP re-submission is due by September 13, 2023, unless an update or correction is required by 40 C.F.R. § 68.190 and § 68.195.

Table 2: Closing Meeting Attendance; Thursday August 10, 2017

NAME	COMPANY	TITLE
Allyson Ledet	Blue Cube Operations	Environmental Manager
Sarah Babin	Blue Cube Operations	Environmental Specialist
Keith Schell	Blue Cube Operations	PSM Manager
David Martin	Blue Cube Operations	Process Safety Tech Leader
Blake Sieminski	U.S. EPA	Inspector/ Enforcement Off.

Section III – AREAS OF CONCERN

AOC 1 - 40 C.F.R. § 68.30(b) - Defining offsite impacts—population.

(b) *Population to be defined.* Population shall include residential population. The presence of institutions (schools, hospitals, prisons), parks and recreational areas, and major commercial, office, and industrial buildings shall be noted in the RMP.

BCO failed to provide a list of public receptors.

AOC 2 - 40 C.F.R. § 68.39(e) - Documentation

(e) Data used to estimate population and environmental receptors potentially affected.

BCO updated the RMP to reflect 2010 census information after the inspection was announced, the previous version had no census data.

AOC 3 - 40 C.F.R. § 68.65(a) - Process safety information

(a) In accordance with the schedule set forth in § 68.67, the owner or operator shall complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. The compilation of written process safety information is to enable the owner or operator and the employees involved in operating the process to identify and understand the hazards posed by those processes involving regulated substances. This process safety information shall include 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.

BCO failed to compile process safety information prior to conducting any process hazard analysis. BCO was able to provide documentation prior to the close out meeting that included tank maximum inventories but not piping and related circuits, the maximum intended inventory was missing as well.

AOC 4 - 40 C.F.R. § 68.65(c)(iii) – Process safety information

(iii) Maximum intended inventory;

BCO failed to provide a maximum intended inventory and/or have one on site.

AOC 5 - 40 C.F.R. § 68.69(a)(1)(iv) – Operating Procedures

Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner.

BCO failed to assign shutdown responsibility to qualified operators.

AOC 6 - 40 C.F.R. § 68.69(3)(iii) – Operating Procedures

(3) Properties of, and hazards presented by, the chemicals used in the process; (iii) Control measures to be taken if physical contact or airborne exposure occurs.

BCO failed to implement operating procedures for control measures to be taken if physical contact or airborne exposure occurred.

AOC 7 - 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.

BCO failed to annually certify that operating procedure were current and accurate.

AOC 8 - 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.

BCO failed to provide documentation of refresher training every three years due to a corrupt electronic file and all training documentation prior to 2017 was lost.

AOC 9 - 40 C.F.R. § 68.71(c) – Training

(c) *Training documentation.* The owner or operator shall ascertain that each employee involved in operating a process has received and understood the training required by this paragraph. The owner or operator shall prepare a record which contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

BCO provided training records that were not signed or initialed to document that the employees had received and understood the training. Dates were missing or postdated after documents were signed with final approval.

AOC 10 - 40 C.F.R. § 68.73(d)(3) – Mechanical Integrity

(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.

BCO is using API 510 for T-86A; the standard for thickness is 10 years or ½ the remaining life, whichever is less. In the 2010 readings, Thickness measurement locations (TMLs) had retirement dates calculated for 2017. Half of the 7 year remaining life was 3.5 years, the next inspections were not conducted until 5 years later. Next inspections and retirement dates are past due as well.

AOC 11 - 40 C.F.R. § 68.73(e)– Mechanical Integrity

(e) *Equipment deficiencies.* The owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation

BCO has inspections past due on tanks that have either exceeded the half life inspection dates or the retirement dates.

AOC 12 - 40 C.F.R. § 68.190(a) – Updates

(3) No later than the date on which a new regulated substance is first present in an already covered process above a threshold quantity;

In March 2016 BCO submitted a letter to Louisiana Department of Environmental Quality stating they covered under DOW Chemical's RMP when they were in fact the owner/operator of the facility as of October 2015

AOC 13 - 40 C.F.R. § 68.195(a) – Required Corrections

(a) New accident history information—For any accidental release meeting the five-year accident history reporting criteria of § 68.42 and occurring after April 9, 2004, the owner or operator shall submit the data required under §§ 68.168, 68.170(j), and 68.175(l) with respect to that accident within six months of the release or by the time the RMP is updated under § 68.190, whichever is earlier.

BCO failed to report an OSHA recordable event and update their RMP within six months.

Section IV – FOLLOW UP

None

Section V – LIST OF APPENDICES

Sign in sheets for opening and closing meetings.