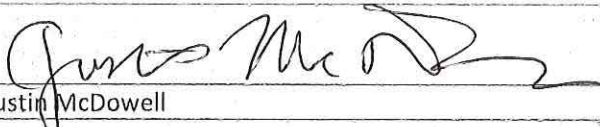


**Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT**

Inspection Date(s):	May 15-17, 2018		
Media:	Air		
Regulatory Program(s)	Clean Air Act Section 112(r) and 40 C.F.R. Part 68 Chemical Accident Prevention Provisions (Risk Management Program)		
Company Name:	Sekisui Specialty Chemicals America, LLC		
Facility Name:	Sekisui Pasadena Plant		
Facility Physical Location:	1423 Highway 225		
(city, state, zip code)	Pasadena, Texas 77506		
Mailing address:	1423 Highway 225		
(city, state, zip code)	Pasadena, Texas 77506		
County/Parish:	Harris		
Facility Contact:	Charlie O'Rear	Site Leader	
	Charlie.ORear@sekisui-sc.com		
FRS Number:	110061712687		
Identification/Permit Number:	Air Operating Permit ID: O-2308		
Media Number:	EPA Facility Identifier: 1000 0017 2369		
NAICS:	325211 (Plastics Material and Resin Manufacturing)		
Personnel participating in inspection:			
Justin McDowell	US EPA	Inspector	214-665-6557
Charlie O'Rear	Sekisui	Site Leader/ Director of Operations & EHS	713-456-1555
Jeff Thompson	Sekisui	Assistant Site Leader/ Operations Leader	713-456-1555
Jenna Timtiman	Sekisui	Environmental Engineer	713-456-1555
Mike Carr	Sekisui	Safety/ Emergency Response Coordinator	713-456-1555
Garnett Baecker	Sekisui	Mechanical Integrity	713-456-1555
Josh Jernigan	Sekisui	Operations Trainer	713-456-1555
Aaron Massey	Sekisui	Production Engineer	713-456-1555
EPA Lead Inspector Signature/Date			7/11/2018
	Justin McDowell		Date
Supervisor Signature/Date			7/11/2018
	Samuel Tates		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

The United States Environmental Protection Agency (EPA) Region 6 inspector, Justin McDowell, arrived at the Sekisui Pasadena Plant (Sekisui) in Pasadena Texas at 9:00 AM on Tuesday, May 15, 2018, for an announced inspection. I, Justin McDowell, met with Charlie O’Rear (Site Leader/ Director of Operations & EHS), Jeff Thompson (Assistant Site Leader/ Operations Leader), Jenna Timtiman (Environmental Engineer), Mike Carr (Safety/ Emergency Response Coordinator), and Garnett Baecker (Mechanical Integrity) for an opening meeting. I presented my credentials and informed Sekisui personnel that this was an EPA inspection to determine compliance with the facility’s 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) and the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68. Sekisui’s Risk Management Plan (RMP) is listed as a Program Level three (3) process(es) facility. I inquired if an employee representative(s) was available pursuant to section 112(r)(6)(L) of the CAA to participate in this inspection and was informed that the Sekisui Pasadena Plant is non-union.

Table 1: Opening Meeting Attendance, Tuesday May 15, 2018

NAME	POSITION
Justin McDowell	USEPA
Charlie O’Rear	Site Leader/ Director of Operations & EHS
Jeff Thompson	Assistant Site Leader/ Operations Leader
Jenna Timtiman	Environmental Engineer
Mike Carr	Safety/ Emergency Response Coordinator

FACILITY DESCRIPTION

“The Pasadena PVOH Plant produces polyvinyl alcohol (PVOH) from vinyl acetate with recovery of acetic acid as a byproduct. Vinyl acetate is delivered to the site via pipeline. The recovered acetic acid is delivered to a customer via railcar or truck and the PVOH is a solid that is delivered to customers via truck or rail transportation. The plant capacity is approximately 42 kt/year of PVOH. The site has approximately 52 employees and 13 resident contractors. The Sekisui Pasadena Plant operates 24 hours/ 7 days a week.” – Sekisui

Section II – OBSERVATIONS

On Wednesday, May 16, 2018, I conducted a drive-through of the facility accompanied by Sekisui personnel to observe all process areas, the control room, tank farms, and the rail yard. On May 15, 2018 and prior to the tour, I was provided with facility safety orientation.

Subpart A – General

40 C.F.R. § 68.10 Applicability – Sekisui is the owner or operator of a stationary source that has more than a threshold quantity of regulated toxic substances, listed in 40 C.F.R. § 68.130, in a process and is subject to the Chemical Accident Prevention Provisions. Sekisui has a CAA Title V permit and Air Operating Permit ID O-2308 for their Plastics Material and Resin Manufacturing process (NAICS code: 325211). Sekisui is subject to the Occupational Safety and Health Administration (OSHA) process safety management standard, 29 C.F.R. § 1910.119, and has one Program Level 3 process.

40 C.F.R. § 68.12 General requirements - Sekisui submitted a RMP five-year update on July 3, 2014. This submittal listed one covered process containing one regulated toxic chemical (Vinyl Acetate Monomer). This 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 - § 68.87, develop and implement an emergency response program, and submit the data element form 40 C.F.R. § 68.175 in their RMP.

40 C.F.R. § 68.15 Management - Sekisui developed a management system to oversee the implementation of the RMP elements. The current RMP re-submission lists Charlie O'Rear (Site Leader/Director of Operations & EHS), as being assigned the overall responsibility for the RMP elements.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – Sekisui is a Program 3 stationary source subject to this subpart. 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 - I requested and reviewed documentation on Sekisui's offsite consequence analysis and supporting documentation. I discussed these documents with Sekisui personnel to assure the data given was current and accurate. Sekisui's modeling scenarios were conducted using RMP*Comp™.

40 C.F.R. § 68.25 Worse-case Release Scenario Analysis – Sekisui identified and documented a worst-case release scenario analysis for their RMP covered toxic substance. The distance to endpoint for the worst-case scenario analysis was calculated using RMP*Comp™. Sekisui's documentation for their worst-case scenario was not correctly documented to illustrate the rationale and accuracy of the scenario. Sekisui updated and corrected this document prior to the completion of the inspection.

40 C.F.R. § 68.28 Alternative Release Scenario Analysis – Sekisui identified and analyzed at least one alternative release scenario for their regulated toxic substances. This scenario was documented and was based on a greater likelihood of occurrence. The distance to endpoint for the alternative case scenario analysis was calculated using RMP*Comp™.

40 C.F.R. § 68.30 Defining Offsite Impacts - Population – Sekisui's offsite consequence analysis documented the methodology for both worst-case and alternative-case release scenarios. The current census (2010) was used in the methodology. The estimated population that was identified in the distance to endpoint in the RMP was represented by a map with the release point at the center and a shaded radius of the potential impacted area.

40 C.F.R. § 68.33 Defining Offsite Impacts - Environment – Sekisui's offsite consequence analysis documented the methodology for both worst-case and alternative-case release scenarios regarding possible affected receptors by using RMP*Comp™. Sekisui identified environmental receptors that would be impacted in the distance to endpoint based on a circle with the release point in the center. Sekisui incorporated information provided by local U.S.G.S maps data to identify environmental receptors.

40 C.F.R. § 68.36 Review and Update – I reviewed Sekisui's documentation of reviews and updates of the offsite consequence documentation to ensure updates are occurring at least every five years.

40 C.F.R. § 68.39 Documentation – I reviewed all documentation for offsite consequence analysis presented onsite and subsequent to the inspection. For the 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 use of 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 rationale for the worst-case tank vessel did not correctly depict the corresponding data given. Sekisui's documentation for their worst-case scenario was not correctly documented to illustrate the rationale and accuracy of the scenario. Sekisui updated and corrected this document prior to the completion of the inspection.

40 C.F.R. § 68.42 Five-year accident history – Sekisui reported one accidental release under their Accident History. The event occurred on April 24, 2014 on the facility's VAM (Vinyl acetate monomer) pipeline and had a calculated release duration of approximately 322 hours and 30 minutes. The event resulted in six action items related to the VAM pipeline as follows: 1. Look at project for alternative VAM supply. 2. Add DCUG/ CIS survey preventative maintenance to SAP. 3. Register with 811 dig services. 4. Improve pipeline signage. 5. Develop pipeline resources. 6. Install new impressed current cathodic protection system.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process Safety Information – I reviewed Sekisui’s procedure for process safety information (PSI). I selected a group of the facility’s PSI related to their RMP units for review. I reviewed the piping and instrumentation diagrams (P&IDs) for regulated chemicals to verify the PSI contained in the hazard information for each substance. I was provided with process chemistry, flow diagrams, maximum intended inventory data, consequences of deviation, and safe upper and lower limits for temperatures, pressures, flows, and compositions. I requested materials of construction documentation specific to the facility’s worst-case and alternative case scenario vessels. Sekisui’s maintenance reliability program determines and documents that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner.

40 C.F.R. § 68.67 Process hazard analysis (PHA) – I reviewed Sekisui’s two PHAs for the PVOH unit and VAM pipeline. Sekisui stated that for their next PHA revalidation in 2020, the facility plans to have a single PHA for the entire site. Sekisui uses several technologies to conduct process PHAs including What-if?, Hazard and Operability Study (HAZOP), Fault Tree Analysis, and a Sekisui based technology. Sekisui had completed all action items that resulted from their 2015 PHA.

40 C.F.R. § 68.69 Operating Procedures – I requested and reviewed operating procedures for operations related to Sekisui’s RMP process unit. Operating procedures are kept on a computer inside the control room. In addition, the facility maintains hard copies of emergency operating procedures and consequences of deviation inside the control room. Any updates or changes made to operating procedures go through the Management of Change process. Sekisui certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary.

40 C.F.R. § 68.71 Training – I discussed with Sekisui their training program and procedures. For new employees, the first week goes over safety information. The following three weeks is on- the- job training but the employees are not yet certified. The employees then perform 3-4 months of unit specific training and are tested to become certified. While reviewing training records for randomly selected employees, two of the four employee files reviewed had not been provided refresher training at least every three years. An employee prepared record did not contain the date of the training. Sekisui failed to ensure that an operating training record prepared had the date of the training for an Aldehyde Tower Quiz and a Crude Acid Tower Quiz for an operator.

40 C.F.R. § 68.73 Mechanical Integrity (MI) – I discussed the MI program with Sekisui personnel. I reviewed Sekisui’s MI procedures. Sekisui currently has one procedure for fixed and rotating equipment and a second procedure for rotating equipment. Sekisui plans to integrate MI procedures to align with both its Kentucky facility, as well as, other global facilities. Sekisui has a draft MI procedure that represents their future MI procedure. Sekisui had not established a clearly implemented written procedure that is used to maintain the on-going integrity of the process equipment listed in 68.73(a). Sekisui is in the process of standardization of their Mechanical integrity procedure to have a consistent procedure company wide. There were three procedures: one for fixed and rotating equipment and a second procedure for only rotating equipment. The third procedure is a draft being used to become standardized with partner sites. Sekisui has not ensured that the frequency of inspections and test of process equipment is consistent with applicable manufacturers’ recommendations, good engineering practices, and prior operating experience. Sekisui has approximately 80 vessels and 18 critical for operation circuits that are overdue for inspection. While onsite, I spoke with Sekisui’s 3rd party

contractor team who are currently conducting critical inspections. Sekisui failed to conduct inspections and tests on process equipment at a frequency consistent with applicable manufactures' recommendations and good engineer practices which includes 18 piping circuits, 80 vessels (including 15 tanks) and other process equipment.

40 C.F.R. § 68.75 Management of Change (MOC) – I reviewed Sekisui's written procedure for MOCs and discussed with staff. I reviewed selected MOC forms to ensure that all considerations were addressed prior to any change including: the technical basis for the proposed change, the impact of change on safety and health, modifications to operating procedures, necessary time period for changes, and the authorization requirements for the proposed change. I reviewed MOCs to assure that if a change occurred, process safety information and operating procedures were updated accordingly. I also looked at when the procedures became applicable to employees, those involved operating a process and maintenance, and the contract employees, whose job tasks would be affected by a change in the process, were informed and trained prior to start-up.

40 C.F.R. § 68.77 Pre-startup Safety Review – I reviewed Sekisui's procedures and documentation for pre-startup safety review prior to the introduction of newly regulated substances.

40 C.F.R. § 68.79 Compliance Audits – I reviewed Sekisui's two most recent compliance audits from December 2-5, 2013 and December 2, 2016. Sekisui compiles the action items resulting from each audit and inputs into a spreadsheet. Sekisui has a weekly meeting regarding the open action items. It was noted that over half of the action items listed on Sekisui's spreadsheet titled "May 3, 2018" were overdue of the target deadline set by the facility. Sekisui has weekly updates on the status of compliance audit findings and corrective actions but has failed to meet deadlines set forth for the completion of audit findings.

40 C.F.R. § 68.81 Incident Investigation – I requested 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 of the last five years pertaining to this subpart. Sekisui has a procedure for identifying and classifying incidents. Sekisui performs cause map analysis to produce corrective actions and solutions. Sekisui holds a facility wide monthly meeting to review relevant incidents. Sekisui listed an investigation titled "Bleech Spill" that occurred on October 10, 2017 but the investigation did not begin until October 13, 2017, approximately 3 days later. This October 10, 2017 incident investigation did not involve a regulated substance. Sekisui has weekly updates on the status of findings and recommendations from incident investigations but has failed to meet deadlines set forth by management.

40 C.F.R. § 68.83 Employee Participation – I reviewed Sekisui's developed, written plan of action, which described the implementation of employee participation required by this section, which met the requirements of this subpart.

40 C.F.R. § 68.85 Hot Work Permit – I reviewed Sekisui's procedure for safe work (confined space and hot work) onsite. I discussed the types of hot work conducted at this facility. I requested and reviewed three hot work permits that occurred at the facility on or around the week of May 14-18, 2018.

40 C.F.R. § 68.87 Contractors – I discussed Sekisui’s selection process of contractors, which are granted authority to perform work onsite. Sekisui uses a procurement process in which they list a solicitation to obtain contractors, most frequently reusing previous contractors. The contractors go through a prequalification process and await the procurement team for final approval. All contractors selected through this process have requirements that are to be met prior to gaining entry and are trained via the Houston Area Safety Council. Once selected and onsite, Sekisui personnel monitors contractors and administers any additional site specific safety information.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability – Sekisui’s employees are first responders that respond to both structural and chemical fires and releases onsite. Each member receives fire, HAZMAT, and emergency rescue training from an accredited facility. Employee first responders are also required to maintain annual refresher training.

40 C.F.R. § 68.95 Emergency Response Program – I reviewed Sekisui’s Emergency Response Plan. Sekisui uses an e-notify incident reporter system to notify area Local Emergency Planning Committees (LEPCs), municipalities, Channel Industries Mutual Aid (CIMA), and neighboring facilities of emergencies. Sekisui performs four quarterly drills (patient CPR, fire drill/ SCBAs, confined space, and hazmat). Sekisui conducts annual inspections of fire extinguishers, self-contained breathing apparatuses, and other emergency response equipment. Sekisui is a member of the Southeast Regional Local Emergency Planning Committee (LEPC) and the Channel Industries Mutual Aid (CIMA).

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates – Sekisui’s RMP was re-submitted on July 3, 2014, as required by this subpart.

40 C.F.R. § 68.195 Required corrections – Sekisui’s next RMP re-submission is due by July 3, 2019, unless an update or correction is required by 40 C.F.R. § 68.190 and/or 40 C.F.R. § 68.195.

Table 1: Closing Meeting Attendance, Thursday May 17, 2018

NAME	POSITION
Justin McDowell	USEPA
Charlie O’Rear	Site Leader/ Director of Operations & EHS
Jeff Thompson	Assistant Site Leader/ Operations Leader
Jenna Timtiman	Environmental Engineer
Mike Carr	Safety/ Emergency Response Coordinator

Section III – AREAS OF CONCERN

AOC 1 - 40 C.F.R. § 68.39 (a) Hazard Assessment: Documentation

“The owner or operator shall maintain the following records on the offsite consequences analyses: (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 passive mitigation that were assumed to limit the quantity that could be released. Documentation shall include the anticipated effect of the controls and mitigation of the release quantity and rate.

Sekisui’s documentation for their worst-case scenario was not correctly documented to illustrate the rationale and accuracy of the scenario. The document was unclear as to which vessel containing vinyl acetate was worst-case. During the inspection, Sekisui personnel updated this documentation and submitted it to the inspector prior to the conclusion of the inspection as well as with the June 6, 2018 document request.

AOC 2 - 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.”

Sekisui failed to provide refresher training at least every three years to an employee operating in the Saponification and Polymerization units. Sekisui provided on the June 6, 2018 documentation that the operator files reviewed training overlapped within the three years since he was last trained and that the operator never lost certification.

AOC 3 - 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.”

Sekisui failed to ensure that an operating training record prepared had the date of the training for an Aldehyde Tower Quiz and a Crude Acid Tower Quiz for an operator. Sekisui provided on June 6, 2018 documentation that the operator files for quizzes that had missing dates were not considered official training records.

AOC 4 - 40 C.F.R. § 68.73 (b) Mechanical Integrity

“(b) Written procedures. The owner or operator shall establish and implement written procedures to maintain the ongoing integrity of process equipment.”

Sekisui is in the process of standardization of their Mechanical integrity procedure to have a consistent procedure company wide. There were three procedures: one for fixed and rotating equipment and a second procedure for only rotating equipment. The third procedure is a draft being used to become standardized with partner sites. I was provided with the Sekisui’s Final Mechanical Integrity Procedure in the June 6, 2018 document request.

AOC 5 - 40 C.F.R. § 68.73 (d)(2) & (3) Mechanical Integrity

“(d) Inspections and testing. (2) Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. (3) The frequency of inspections and tests of process equipment shall be consistent with applicable manufactures’ recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.”

Sekisui failed to conduct inspections and tests on process equipment at a frequency consistent with applicable manufacture’s recommendations and good engineering practices. The list of equipment that is overdue for inspection includes 18 piping circuits, 80 vessels (including 15 tanks) and other process equipment. While onsite, I observed Sekisui’s 3rd party contractor team who are currently conducting critical inspections.

AOC 6 - 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.”

Sekisui has weekly updates with a tracking spreadsheet on the status of compliance audit findings and corrective actions but has failed to meet deadlines set forth for the completion of audit findings.

AOC 7 - 40 C.F.R. § 68.81 (e) Incident investigation

“(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.”

Sekisui has a monthly incident review that updates the status of findings and recommendations from incident investigations but has failed to meet deadlines set forth by management for corrective action.

Section IV – FOLLOW UP

At the conclusion of the inspection, the inspector requested documents reviewed onsite and was provided such documents on May 17, 2018. Additional documents were requested which contained Confidential Business information (CBI) claimed by Sekisui. This set of documentation was received by EPA on June 6, 2018.

1. Attachment A – 2016 PSM Audit Corrective Action Tracking spreadsheet
2. Attachment B – Incident Investigation Corrective Action Tracking spreadsheet
3. Attachment C – Vinyl Acetate Worst-Case Analysis previous & revised
4. Attachment D – AAR Training Records
5. Attachment E – Final Mechanical Integrity Procedure
6. Attachment F – October 10, 2017 Incident Documentation

Section V – LIST OF APPENDICES

N/A