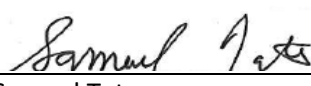


**Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT**

Inspection Date(s):	10/01/2018-10/05/2018		
Media:	Air		
Regulatory Program(s)	Title V, RMP		
Company Name:	Valero Refining - Texas, L.P.		
Facility Name:	Valero Houston Refining		
Facility Physical Location:	9701 Manchester Road		
(city, state, zip code)	Houston, Texas 77012		
Mailing address:	9701 Manchester Road		
(city, state, zip code)	Houston, Texas 77012		
County/Parish:	Harris County		
Facility Contact:	Robert E. Moore	Vice President and General Manager	
	Rob.Moore@valero.com		
FRS Number:	110000460885		
Identification/Permit Number:	Title V Air Operating Permit ID: 01381		
Media Number:	RMP #: 100000084605		
NAICS:	324110		
SIC:	2911		
Primary Personnel participating in inspection:			
Robert Staggs	Valero Houston	Superintendent Refinery Safety	(713) 924-1503
John Quigley	Valero Houston	Director Environmental/Safety Affairs	(713) 923-3313
Chris Hendrix	Valero Houston	Staff Environmental Engineer	(713) 923-3359
Matt Lindquist	Valero Houston	Manager, Environmental Engineering	(713) 923-3378
Adam Shulke	Valero Houston	Operations Reliability Coordinator	(713) 924-1505
John Corella	Valero Houston	Manager, Inspection	(949) 680-8569
Justin Linerode	Valero Houston	Sr. Process Safety Engineer	(713) 923-3456
Bruce King	Valero Houston	Superintendent Emergency Services	(713) 923-3589
Al Valdez	Valero Houston	Manager, Reliability	(713) 923-1030
Rod Rountree	Valero Houston	Superintendent, Process Safety	(713) 923-3515
Mark Wilkerson	Valero Houston	Supervisor, Technical Training	(713) 923-3301
EPA Lead Inspector Signature/Date	 Kayla Buchanan		11/9/2018 Date
Supervisor Signature/Date	 Samuel Tate		11/9/2018 Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

I, the Environmental Protection Agency (EPA) Region 6 inspector Kayla Buchanan, arrived at the Valero Houston Refining Plant (Valero Houston) at 9 a.m. on October 1, 2018, for an announced inspection. I convened an opening conference and met with several representatives from the facility (*see Appendix 1*). I presented my credentials to the opening conference attendees and informed them that this was an EPA inspection to determine Valero Houston's compliance with the Clean Air Act (CAA) Sections 112(r)(1) and 112(r)(7). The scope of the inspection was a partial compliance evaluation of the facility pursuant to 40 CFR Subpart 68 – Chemical Accident Prevention Provisions.

FACILITY DESCRIPTION

Valero Houston is a petroleum refinery which produces gasoline, ultra-low sulfur diesel, and streams for use as chemical feedstocks, using a variety of processing operations. Approximately 340 people are employed at Valero Houston.

Section II – OBSERVATIONS

On Wednesday, October 3, 2018, I conducted a drive-through of the facility accompanied by Valero Houston employees Adam Shulke, Justin Linerode, Matt Lindquist, and John Quigley to observe the covered processes, equipment, operations, and emergency equipment.

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

Subpart A – General

40 C.F.R. § 68.10 Applicability - Valero Houston is a Title V stationary source facility that has an air operating permit and more than a threshold quantity of regulated substances (flammable mixtures) in its process streams; therefore, these regulations are applicable. Valero Houston re-submitted a Risk Management Plan (RMP) on December 8, 2016, that described the processes containing regulated chemicals held at more than a threshold quantity. In addition, this facility is subject to the Occupational Safety and Health Administration's (OSHA) Process Safety Management (PSM) Standard (29 CFR 1910.119), categorizing them as a Program 3 facility.

40 C.F.R. § 68.12 General requirements - I reviewed the re-submission of Valero Houston's RMP which was submitted on December 8, 2016, that listed flammable chemicals for its Program 3 processes.

40 C.F.R. § 68.15 Management - I reviewed the management system implemented at Valero Houston that oversees the implementation of the Risk Management Program elements. The facility assigned a qualified person that has the overall responsibility for the development, implementation, and integration of the elements.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability - Valero Houston is a Program 3 stationary source subject to this subpart; therefore, it is required to prepare a worst-case release scenario analysis and complete the five-year accident history.

40 C.F.R. § 68.22 Offsite Consequence Analysis Parameters – Valero Houston used the parameters

specified by EPA in this rule by using RMP*Comp™ software. I reviewed the offsite consequence analysis and supporting documentation with Chris Hendrix and Justin Linerode to assure the data was accurate and correct. Valero Houston used a contractor, Tricord, to perform the analysis.

40 C.F.R. § 68.25 Worse-case release scenario analysis - Valero Houston identified and analyzed at least one worst-case scenario for each applicable flammable substance 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 - Valero Houston identified and analyzed at least one alternative release scenario for each applicable flammable substance 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 - Valero Houston used the most current (2010) Census Bureau population data and the distance to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP. Valero Houston used MARPLOT to define the population surrounding the facility. In addition, Valero Houston provided a Google Earth image documenting their nearest public receptor.

40 C.F.R. § 68.33 Defining offsite impacts- Environment - Valero Houston used US Geological Survey maps data to determine the environmental receptors and the distance to endpoints.

40 C.F.R. § 68.36 Review and Update – Valero Houston stated that the offsite consequence analyses were updated every five years, as required by this subpart.

40 C.F.R. § 68.39 Documentation- Valero Houston maintained records on the offsite consequence analyses in accordance with this subpart. These records included:

- documentation of vessels or pipelines and substances selected as worse case and alternative release scenarios,
- documentation of estimated quantity released, release rate, duration of release,
- methodology used to determine distance to endpoint, and
- data used to estimate population and environmental receptors.

40 C.F.R. § 68.42 Five-year accident history- I reviewed Valero Houston's five-year accident history and I did not observe any accidental releases from covered processes that resulted in deaths, injuries, significant property damage onsite, known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. I examined Valero Houston's OSHA Form 300 logs from 2012 to present and queried the National Response Center (NRC) database to ensure additional releases from the facility that could possibly be included in the facility's five-year accident history were not omitted. There were no accidental releases included in Valero Houston's five-year accident history; therefore, a report was not required.

Subpart D- Program 3 Prevention Program

40 C.F.R. § 68.65 Process safety information (PSI) - I reviewed Valero Houston's PSI with Justin Linerode and Rod Rountree. Valero, in accordance with this subpart, completed a compilation of written process safety information. Its process safety information included: information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment of the process. Valero Houston maintains an

electronic document that lists the specific process safety information required by this regulation, where the documentation for that information can be located, and a contact person that can provide additional information, if needed. This document was accessible to all employees via the company's intranet.

Valero Houston's PSI can be found in PolicyTech, which is an online system found on the facility's intranet that controls the authorship, approval, and distribution of the facility's documents. I specifically reviewed PSI for the Alkylation unit and the FCCU unit, including process chemistry, as well as the safe upper and lower limits and consequences of deviation for these units. I reviewed some of the design codes and standards employed at the facility and documentation that its process equipment complies with recognized and generally accepted good engineering practices (RAGAGEP).

40 C.F.R. § 68.67 Process hazard analysis (PHA) – Valero Houston performed initial PHAs on processes covered by this part and maintained previously revalidated PHAs every five years after the initial completion dates. The facility utilizes both What-If Checklists and the HAZOP methodology to conduct PHAs.

The PHAs reviewed addressed: (1) the hazards of the process; (2) the identification of any previous incident, which had a likely potential for catastrophic consequences; (3) engineering and administrative controls applicable to the hazards and their interrelationships; and (4) consequences of failure of engineering and administrative controls.

The PHAs were performed by a team with expertise in engineering and process operations and the team included at least one employee who had experience and knowledge specific to the process being evaluated and a member knowledgeable in the specific PHA methodology used. Valero Houston established a system to promptly address the team's findings and recommendations and assured the recommendations were established in a timely manner and that the resolutions were documented. The facility developed a written schedule of when these actions were to be completed. They communicated the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations of actions.

40 C.F.R. § 68.69 Operating Procedures – I reviewed the following operating procedures with Adam Shulke: Initial Startup for the SRU Unit, Normal Operations for the ULSD Deisobutanizer OH Condenser, Emergency Shutdown for the Crude Unit, Emergency Operations for Tank 836, Normal Shutdown for the BHT Unit, Shutdown Operations for the Kellogg Unit, and Startup following a Turnaround for the ULSD Quickturn Reactor. I also reviewed the Safety and Health Guide which dictates the personal protective equipment (PPE) employees are required to wear when working within specific units. The operating procedures I reviewed addressed the steps for each of the operating phases, consequences of deviation and steps to correct and/or avoid deviation, safety and health considerations, the properties of and hazards presented by chemicals used in the process, the precautions necessary to prevent exposure, quality control for raw materials, and the safety systems and their functions.

Valero's operating procedures were accessible to employees via hard copy, a company-wide electronic shared drive, as well as PolicyTech. While on the facility site tour, I requested randomly selected process operators to dictate, as well as demonstrate how to access the operating procedures. All selected process operators were knowledgeable about the various ways to access the procedures.

I observed documentation that verified Valero Houston certified annually that operating procedures

were current and accurate. Each unit supervisor certified the operations manual had been reviewed for their unit. Regular reminders are sent to unit supervisors when an annual certification is approaching to ensure the certification is done on time.

40 C.F.R. § 68.71 Training – I reviewed Valero Houston’s training program and employee training records with Mark Wilkerson and Donna Whetzel. The subpart requires that each employee operating a process or newly assigned to a covered process to be trained or tested to be competent in the operating procedures provided that pertain to their duties. The training shall include an emphasis on specific health and safety hazards, emergency operations, and safe work practices. In order to meet this requirement, Valero Houston established a technician progression process. New operators go through a Basic Operator Training Program. The trainee then undergoes several levels of progression. I reviewed training records for randomly selected employees to ensure that initial training was documented, and that each employee involved in operating processes received and understood the training. Valero Houston maintained paper copies and an electronic record of training for further documentation.

40 C.F.R. § 68.73 Mechanical Integrity - I reviewed the written procedures for Valero Houston’s mechanical integrity program. Their mechanical integrity program conformed to a corporate-wide policy referred to as Commitment to Excellent Management System (CTEMS). This policy ensured that Valero Houston’s mechanical integrity program incorporates recognized and generally accepted good engineering practices into their inspection and testing procedures. Each inspection and test performed on process equipment that I reviewed identified the date of inspection or test, the name of the person who performed the inspection, the equipment on which the test was performed, and the result of the inspection or test. Valero Houston also documented corrected deficiencies in equipment that were outside acceptable limits.

I spoke with John Corella about Valero Houston’s fixed equipment inspection. Valero Houston uses the Plant Condition Management Software (PCMS) to maintain inspection and test records for fixed equipment. Valero Houston is currently transitioning all inspection and testing to a schedule that follows the American Petroleum Institute’s (API) 580 Risk Based Inspection method. There were no inspections overdue, as of the date of this inspection. I reviewed mechanical integrity inspection documentation for piping, tanks, reactors, relief valves, and soil to air interface points for underground piping. The documentation identified the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

I spoke with Alfonso Valdez about preventative maintenance. Preventative maintenance was conducted on all rotating equipment. If an issue was discovered, then a work order was generated.

Valero Houston’s mechanical integrity staff was trained in an overview of that process, its hazards, and in the procedures applicable to the employee’s job tasks. At the time of the inspection, Valero Houston was unable to produce 2016 training records for its mechanical integrity staff; these records were subsequently provided by Matt Lindquist on October 12, 2018.

40 C.F.R. § 68.75 Management of Change (MOC) - I reviewed Valero Houston’s MOC Policy and various MOCs with Justin Linerode. The written MOC procedure assured the facility managed changes to process chemicals, technology, equipment, procedures, and changes to stationary sources that affect a covered process. The procedure assured that the following considerations were addressed prior to any change: technical basis for change, impact of change on safety and health, modifications to operating procedures, necessary time for the change, and authorization requirements for a proposed change.

The facility ensured employees involved in operating and maintaining the process and contract employees, whose job will be affected by the change, are informed of and trained in the change prior to startup of an affected part of the process by creating, at minimum, a computer-based awareness training that must be completed. For each MOC I reviewed, I also reviewed the training records for randomly selected employees associated with the training generated from that MOC.

If a change resulted in a change to process safety information, this subpart requires such information be updated accordingly. I reviewed several MOCs that required such a change, and the information was updated as required by the regulation.

40 C.F.R. § 68.77 Pre-startup review (PSSR) - I reviewed Valero Houston's written PSSR procedures as well as various PSSRs completed by the facility in the past five years. The PSSRs reviewed confirmed that prior to the introduction of regulated substance into the process, construction and equipment were in accordance with design specifications, safety, operating, maintenance, and emergency procedures were in place and adequate. The PSSRs also ensured that training of each employee involved in operating a process was complete.

40 C.F.R. § 68.79 Compliance audits - I reviewed Valero Houston's two most recent compliance audits. The audits were conducted internally by a corporate audit group. The first audit report reviewed was conducted on June 25-29, 2012. The second audit report I reviewed was conducted on March 23-27, 2015. A third audit was conducted February 26-March 8, 2018, however, the report for this audit was still being finalized at the time of the inspection. There was one outstanding action item for the 2012 audit. A facility siting issue was noted, and a new warehouse was being constructed. Valero Houston provided justification for this outstanding item.

Valero Houston 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. Valero Houston's compliance audits were conducted by at least one person knowledgeable in the process and they developed a report of the audit findings. The facility determined and documented an appropriate response to each of the findings of the compliance audit and documented that deficiencies were corrected.

40 C.F.R. § 68.81 Incident investigation - Valero Houston provided me a list of all incident investigations that occurred within the past five years and I reviewed them with Justin Linerode. Of those reviewed, the incident investigation teams consisted of at least one person knowledgeable in the process involved. Valero Houston inputs its incident investigations into its IMPACT/ORM System. Each incident investigation that I reviewed was initiated no later than 48 hours following the incident. After the investigation, Valero Houston prepared a report which included the date of incident, the date the investigation began, a description of the incident, the factors that contributed to the incident, and any recommendations resulting from the investigation.

40 C.F.R. § 68.83- Employee Participation - I reviewed Valero Houston's written plan of action regarding the implementation of employee participation at its facility. Valero Houston's written plan describes how they consult its employees and their representatives on the conduct and development of process hazard analyses and on the development of the other elements of process safety management regarding this rule and provides them access to process hazard analyses and to all other information required to be developed under this rule.

40 C.F.R. § 68.85 Hot work permit- I reviewed hot work permits issued by Valero Houston with Robert

Staggs. Each permit that I observed documented that the fire prevention and protection requirements had been implemented prior to beginning hot work operations. The permits indicated the dates authorized for hot work and the identity of the object on which the hot work was performed. Valero utilizes an electronic permitting system to issue hot work and other safe work permits.

40 C.F.R. § 68.87 Contractors- I reviewed Valero Houston's contractor procedure with Robert Staggs. Valero Houston utilizes the ISNetworld online system as an initial screening tool for contractors. Valero Houston performs quarterly audits on its contractors to ensure they are maintaining all its requirements. Contractors receive training through the Houston Area Safety Council, as well as from Valero Houston.

Subpart E- Emergency Response

40 C.F.R. § 68.90 Applicability- Valero Houston employees are first responders that respond to fires and releases onsite.

40 C.F.R. § 68.95 Emergency response program- I reviewed Valero Houston's emergency response plan with Bruce King. The emergency response plan was accessible to all employees through Valero Houston's PolicyTech system. The plan contained procedures for informing the public and local emergency response agencies about accidental releases, documentation of proper first-aid and emergency medical response after an accidental release, procedures for the use of emergency response equipment and for its testing and maintenance, training for all employees in relevant procedures, and procedures to update and review the plan as necessary. Valero Houston meets regularly with the Local Emergency Planning Committee (LEPC) for the Greater Houston Area and Galena Park and has shared its emergency response plan with these groups. Bruce King provided me with testing and inspection records for the emergency response equipment stored onsite, which included fire extinguishers, pumps, and deluge systems.

Valero Houston emergency response team (ERT) is comprised of Valero Houston employees. I reviewed the training records for four randomly selected employees (one from each shift) on the ERT and each had documentation reflecting the required initial and refresher training. Valero Houston utilizes the ERT Online Support System, which provides real time data about which ERT members are onsite as ERT members badge in for work each day.

Subpart G- Risk Management Plan(RMP)

40 C.F.R. § 68.190 Updates- Valero Houston resubmitted its RMP on December 8, 2016.

40 C.F.R. § 68.195 Required corrections- Valero Houston's next RMP re-submission is due by December 8, 2021, unless an update or correction is required by 40 CFR § 68.190 and 40 CFR § 68.195.

Section III – AREA OF CONCERN

40 C.F.R. § 68.73 (c) requires the owner or operator to train each employee involved in maintaining the on-going integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner. At the time of the inspection, 2016 training records for mechanical integrity workers were missing, and this area of concern was noted. I have since received the 2016 training records, therefore, this is no longer an area of concern.

Section IV – FOLLOW UP

Valero Houston Mechanical Integrity Staff 2016 Training Records were received by EPA after exiting the Facility on October 5, 2018.

Section V – LIST OF APPENDICES

Appendix 1 – Opening Conference Sign-in Sheet