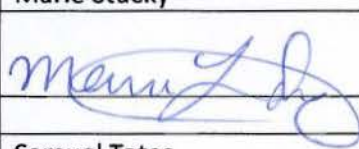
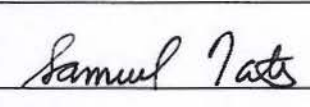


**Region 6 Compliance Assurance and Enforcement Division  
INSPECTION REPORT**

|                                               |                                                                                     |                        |
|-----------------------------------------------|-------------------------------------------------------------------------------------|------------------------|
| Inspection Date(s):                           | 08/06-10/2018                                                                       |                        |
| Media:                                        | Air                                                                                 |                        |
| Regulatory Program(s)                         | Risk Management Program, CAA 112(r)<br>Accident Prevention Provisions 40 CFR 68     |                        |
| Company Name:                                 | Valero Refining                                                                     |                        |
| Facility Name:                                | Valero Refining                                                                     |                        |
| Facility Physical Location:                   | 1201 Loop 197 South                                                                 |                        |
| (city, state, zip code)                       | Texas City, Texas 77590                                                             |                        |
| Mailing address:                              | 1 Valero Way                                                                        |                        |
| (city, state, zip code)                       | San Antonio, TX 78249                                                               |                        |
| County/Parish:                                | Galveston                                                                           |                        |
| Facility Contact:                             | Patrick Passantino                                                                  | Environmental Manager  |
|                                               | Patrick.passantino@valero.com                                                       |                        |
|                                               | 409-948-7238                                                                        |                        |
| FRS Number:                                   | 110032911669                                                                        |                        |
| Media Number:                                 | RMP: 1000 0010 7886                                                                 |                        |
| NAICS:                                        | 32411                                                                               |                        |
| <b>Personnel participating in inspection:</b> |                                                                                     |                        |
| Michael Navarra                               | Valero – TC                                                                         | Process Safety Manager |
| Patrick Passantino                            | Valero – TC                                                                         | Environmental Manager  |
| Chris Walsch                                  | Valero – TC                                                                         | Process Safety Supt.   |
| Grant Gutierrez                               | Valero – TC                                                                         | Environmental Engineer |
| Leslie Rucker                                 | Valero – TC                                                                         | Director – HSE         |
| Marie Stucky                                  | EPA Region 6 – 6EN-AS                                                               | Inspector              |
| EPA Inspector:                                | Marie Stucky                                                                        |                        |
| EPA Lead Inspector                            |                                                                                     |                        |
| Signature/Date                                |  | 10/3/18                |
|                                               |                                                                                     | Date                   |
| Supervisor                                    | Samuel Tates                                                                        |                        |
| Supervisor                                    |                                                                                     |                        |
| Signature/Date                                |  | 10/3/2018              |
|                                               |                                                                                     | Date                   |

## **Section I – INTRODUCTION**

### **PURPOSE OF THE INSPECTION**

I, EPA Region 6 inspector Marie Stucky, arrived at Valero – Texas City Refinery (Valero) at 2:00 PM on August 6, 2018, for an announced inspection. I met with Patrick Passantino and others listed on Page 1 of this report. I presented my credentials and informed them that this was an EPA inspection to determine compliance with the Clean Air Act (CAA) Section 112(r) and the Chemical Accident Prevention Provisions in 40 C.F.R. Part 68. The scope of the inspection is a partial compliance evaluation (PCE) and included an evaluation of the compliance of the facility with CAA Section 112(r) and the Chemical Accident Prevention Provisions 40 C.F.R. Part 68. On July 30, 2018, Valero received an inspection notice announcement email from me, which outlined the directions of conducting an inspection on August 6-10, 2018. The email also contained a list of documents for Valero to gather for review during the inspection. Valero is not a union facility.

### **FACILITY DESCRIPTION**

Valero is in Texas City, Texas. According to <https://www.valero.com/en-us/Pages/TexasCity.aspx>:

“The Valero Texas City Refinery is located on the Texas City Ship Channel, approximately 40 miles southeast of Houston. With several recent upgrading projects, the refinery provides significant feedstock flexibility and product diversity to Valero's Gulf Coast operations. The plant dates to 1908, originally built to process 1,500 barrels per day of Oklahoma crude oil. The refinery has gone through continuous upgrades and expansions since then, including major upgrades from 1955 to 1970 when the total throughput of the refinery was increased from 40,000 to 130,000 barrels per day. In 1996, gas oil hydrotreater and residual oil solvent extraction units were commissioned along with significant revamps to the fluid catalytic cracking unit and the No. 3 crude unit. Since acquiring the refinery in 1997, Valero has invested more than \$750 million in expansions and upgrades at Texas City. Most recently, the plant completed a major expansion consisting of a new delayed coker and a gasoline desulfurization unit. These expansions and upgrades give the facility a great deal of feedstock flexibility, resulting in a higher gross margin than a conventional refinery. The new units allow the crude units to run lower-value, heavier-gravity crude feedstocks to produce a large slate of low-sulfur, clean fuels.”

## **Section II – OBSERVATIONS**

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

#### **Subpart A – General**

**40 C.F.R. § 68.10 Applicability** – I observed that Valero is a stationary source that has an Air Operating Permit and more than a threshold quantity of a regulated substances in a process; therefore, these regulations are applicable. Valero submitted a Risk Management Plan (RMP) that describes the process containing flammable and toxic chemicals held at more than a threshold quantity. Some processes are

Program 3 because the facility is subject to OSHA's Process Safety Management Standard (29 C.F.R. § 1910.119) and is a petroleum refinery with a NAICS Code of 32411. Additionally, Valero references 9 Program level 1 processes. The map showing areas covered by Program level 1 processes only shows 7 of the 9 processes; therefore, it is unclear if the other 2 processes are close to a public receptor (Section 5 & Appendix D – Worst Case Release Scenarios). During the walkthrough, it was noted that the coke pile was not part of Valero's facility. Therefore, it could be considered a public receptor. [AOC 1]

Valero does not include the Flares as RMP Regulated Process; however, it is included as a PSM Regulated Process because it is "considered to be regulated because it is a significant safety system." (Regulated Processes PSM and RMP) [AOC 2]

**40 C.F.R. § 68.12 General requirements** – I reviewed the RMP submitted by Valero on October 13, 2016, that lists the flammable and toxic processes, as detailed below.

**Table 1: Risk Management Plan Chemical and Process**

| Process                | Program Level | Chemical Name                          | CAS Number            |
|------------------------|---------------|----------------------------------------|-----------------------|
| Treater                | Three         | Flammable Mixture                      | 00-11-11              |
| OMCC – Tank Farm       | Three         | Flammable Mixture                      | 00-11-11              |
| PPU/LPG Storage        | Three         | Flammable Mixture<br>Propylene         | 00-11-11<br>115-07-1  |
| Alky                   | Three         | Flammable Mixture<br>Hydrogen Fluoride | 00-11-11<br>7664-39-3 |
| Penex                  | Three         | Flammable Mixture                      | 00-11-11              |
| DHT, #2 Amine          | Three         | Flammable Mixture                      | 00-11-11              |
| FCCU, Gas Con          | Three         | Flammable Mixture                      | 00-11-11              |
| ROSE                   | Three         | Flammable Mixture                      | 00-11-11              |
| GDU                    | Three         | Flammable Mixture                      | 00-11-11              |
| GOHT                   | Three         | Flammable Mixture<br>Hydrogen          | 00-11-11<br>1333-74-0 |
| LEDHX                  | Three         | Flammable Mixture                      | 00-11-11              |
| #1 & #2 Toppers        | One           | Flammable Mixture                      | 00-11-11              |
| MDHT                   | One           | Flammable Mixture                      | 00-11-11              |
| Sat Gas                | One           | Flammable Mixture                      | 00-11-11              |
| #2 Reformer            | One           | Flammable Mixture                      | 00-11-11              |
| DCU                    | One           | Flammable Mixture                      | 00-11-11              |
| LRU                    | One           | Flammable Mixture<br>Butane            | 00-11-11<br>106-97-8  |
| #3 Crude, A82          | One           | Flammable Mixture                      | 00-11-11              |
| Resid Amine, Resid SWS | One           | Flammable Mixture                      | 00-11-11              |
| #1 Amine               | One           | Flammable Mixture                      | 00-11-11              |

**40 C.F.R. § 68.15 Management** – Valero has developed a management system to oversee the implementation of the Risk Management Program elements. This system assigned qualified persons or positions overall responsibility for the development, implementation, and integration of the Risk Management Program elements.

## **Subpart B – Hazard Assessment**

**40 C.F.R. § 68.20 Applicability** – Valero prepared a worst-case release scenario analysis and completed the five-year accident history. Since Valero has a Program 3 toxic process, they must comply with the toxic sections in this subpart.

**40 C.F.R. § 68.22 Offsite consequence analysis parameters** – I observed that Valero used parameters required in this part to calculate toxic worst-case and alternative release scenarios. Valero used parameters specified by EPA in this rule by using RMP\*Comp™.

**40 C.F.R. § 68.25 Worst-case release scenario analysis** – During the inspection, I reviewed documentation from Valero regarding the worst-case release scenario analysis. It showed that Valero analyzed and reported a worst-case toxic release and flammable releases in its RMP. This analysis was done using RMP\*Comp™.

**40 C.F.R. § 68.28 Alternative release scenario analysis** – Valero identified and documented an alternative release scenario for the RMP covered flammable substances and an alternate release scenario for the toxic substance in their RMP.

**40 C.F.R. § 68.30 Defining offsite impacts – Population** – Valero used the most current (2010) Census Bureau population data and the distance to endpoints, as specified in the regulations, to calculate the population numbers reported in their RMP. Valero used MARPLOT to define population surrounding the facility.

**40 C.F.R. § 68.33 Defining offsite impacts – Environment** – U.S. Geological Survey Data was used to determine the environmental receptors and the distance to endpoints.

**40 C.F.R. § 68.36 Review and update** – I reviewed the documentation that illustrated reviews and updates regarding the offsite consequences are completed at least every five years.

**40 C.F.R. § 68.39 Documentation** – I was provided documentation of the offsite consequence analyses. Included in the documentation of the worst-case scenarios, was a description of the vessel or pipeline, assumptions and parameters used, and the rationale for the selection with the assumptions including use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released. The documentation showing the rationale for the selection of the alternative release scenarios selected was not included (Section 6 & Appendix E – Alternative Release Scenarios). **[AOC 3]**

**40 C.F.R. § 68.42 Five-year accident history** – Valero had no reported accidental releases in their RMP as of October 13, 2016. I reviewed the National Response Center (NRC) and Incident Investigations on site for additional incidents that may have required addition to Valero's five-year accident history. According to Valero, new incidents have occurred in the last 6 months, which will be added to the five-Year accident history within appropriate timeframes.

**Subpart D – Program 3 Prevention Program**

**40 C.F.R. § 68.65 Process safety information** – I requested and reviewed a selection of process safety information for the RMP process. During the inspection, I reviewed process safety information provided by Valero, including process flow diagrams of the RMP process, safety data sheets, equipment files (including materials of construction and design basis), and maximum intended inventories.

**40 C.F.R. § 68.67 Process hazard analysis (PHA)** – I requested and reviewed the PHAs for the Sat Gas, LRU, OMCC – Tank Farm, PPU/LPG Storage, and the Alky RMP processes. The PHAs included the hazards of the process, engineering and administrative controls applicable to the hazards, and was conducted by a team including appropriate personnel. In reviewing the PHA checklists and nodes, it is noted often throughout a PHA that the “Team Declined to risk rank this business/operability consequence.” These consequences were then not risk ranked by the team. In some instances, some of these consequences may reference potential issues if not addressed (2016 HAZOP Study HF Alkylation Unit PHA Revalidation). [AOC 4]

**40 C.F.R. § 68.69 Operating procedures** – I reviewed several operating procedures during the inspection and reviewed annual certifications of the units. Annual certifications were provided for procedures in the RMP covered processes. While reviewing operating procedures in Policy Tech, Valero’s new operating procedure document management system, two links were noted broken in the electronic version of the operating procedure. In one instance, the Procedure linked back to the previous location on a shared drive (OM-SA-0401). In a second instance, the link for the Reference Documents was incorrectly listed and linked (ALKY-NP-0811). [AOC 5]

**40 C.F.R. § 68.71 Training** – I requested and was provided the training files for 6 individuals and 2 Emergency Response Team members. All documents showing initial training and refreshers were available as requested.

**40 C.F.R. § 68.73 Mechanical integrity** – I requested and was provided mechanical integrity records from Risk Management Program covered equipment and the written procedure for maintaining the integrity of the process. I spoke with representatives for fixed equipment, rotating equipment, and instrumentation. Records for fixed equipment are managed in PCMS which utilizes API 510, 653, 580, and 581 to determine inspection intervals. No overdue equipment inspection items were noted at the time of the inspection. Rotating equipment inspection records did not include who conducted the inspection on the reports for the vibration inspections. As noted in the compliance audit and updated in 2017, 2016 Equipment PM sheets did not include the technician that conducted the inspection (P959 Testing, 8/25/16 Equipment PM Sheet, P-2167 Equipment PM Sheets and Vibration Testing, P-1632 Equipment PM Sheets and Vibration Testing, and P-861 & P-862 Equipment PM Sheets, Vibration Testing, and Repair Report). [AOC 6]

**40 C.F.R. § 68.75 Management of Change** – I asked for and was shown over twenty management of changes (MOCs) done at the facility and the written procedure for MOC. I reviewed MOC documentation packages for changes occurring in covered processes.

**40 C.F.R. § 68.77 Pre-startup review** – Pre-startup review was included with the MOC documentation that I reviewed. This documentation did show completion dates prior to startup that safety, operating, maintenance, and emergency procedures were in place and adequate prior to introduction of a regulated substance to the process.

**40 C.F.R. § 68.79 Compliance audits** – I requested the last two Risk Management Program compliance audits. I was provided copies of audits that documented the review of all the elements of the Risk Management Program from audits dated February 5, 2016 and July 13, 2013.

**40 C.F.R. § 68.81 Incident investigation** – Prior to the inspection, I requested the incident investigations for the all incidents which resulted in, or could reasonably have resulted in, a catastrophic release of a regulated substance over the last three years. I reviewed a total of four additional incident investigations. In two incident investigation reports, the “Date & Time Investigated” field did not have a date and time, and instead was filled in with “Valero Texas City” (1/12/18 Incident & 12/4/17 Incident).  
[AOC 7]

**40 C.F.R. § 68.83 Employee participation** – I reviewed the employee participation plan during this inspection and found no issues.

**40 C.F.R. § 68.85 Hot work permit** – While onsite, I reviewed three hot work permits. The hot work permits included the date authorized for hot work and identified the object on which hot work was performed.

**40 C.F.R. § 68.87 Contractors** – I observed that contractors and visitors are required to have ID Badges and TWIC Cards prior to entering the facility. I reviewed contractor selection and training requirements in their procedure. Valero utilizes ISNetWorld as a contract selection system that provides initial screening of contractor safety records and the Houston Area or Texas City Contractor Safety Council provides training. Valero requires a process overview for training of all contractor, and job specific training to ensure that all contractors are trained on the potential hazards of the process. Additionally, I reviewed two periodic audits conducted by Valero of its contractors.

#### **Subpart E – Emergency Response –**

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

**40 C.F.R. § 68.95 Emergency response program** – I requested and was provided the Emergency Response Plan for Valero. I reviewed this plan onsite and observed that links to access to safety data sheets (SDSs), which includes first aid documentation, was provided in the emergency response plan (Emergency Action and Response Plan). At the time of the inspection, it appears that some inspections of safety equipment do not align with the inspection procedures (Periodic Inspection, Testing and Maintenance (IT&M) of Fire Protection Systems and Equipment). For fire truck pumpers and engines, inspections were completed in July 2018, while the previous inspection occurred in June 2017 (7/14 & 15/16 Trailer and Apparatus Testing). Additionally, 2017 pump flow tests were not performed (7/ 15/16 Fire Pump Test Reports). Hose testing did not occur during scheduled planned test in August 2017 due to hurricane issues (11/10/16 & 6/18/18 Hose Testing). The next testing did not occur until June 2018.  
[AOC 8]

**40 C.F.R. § 68.195 Required corrections** – The RMPs for this facility were submitted in 1999, 2003, 2004, 2008, 2013, and 2016. The re-submissions were all within the five-year timeframe. The most recent re-submission was October 13, 2016.

### Section III – AREAS OF CONCERN

#### AOC 1: 40 C.F.R. § 68.10 (b)(2) Applicability

40 C.F.R. § 68.10 (b)(2) states that “a covered process is eligible for Program 1 requirements as provided in Section 68.12(b) if it meets all of the following requirements: The Distance to a toxic or flammable endpoint for a worst-case release assessment conducted under subpart B and Section 68.25 is less than the distance to any public receptor...”

In review of the “Worst-Case Release Scenarios” 2016 revision, two processes listed as Program 1 are not included in the map showing the radii with the distance to endpoint. Additionally, at least one circle includes areas that are not owned by Valero and could be considered as a public receptor.

#### AOC 2: 40 C.F.R. § 68.10 (a) Applicability

40 C.F.R. § 68.10 (a) states that “An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under § 68.115, shall comply with the requirements of this part”

Valero does not include the Flares as RMP Regulated Process, although it is included as a PSM Regulated Process since it is “considered to be regulated because it is a significant safety system.” It is unclear if the Flare could at any point meet the threshold quantity criteria to require it to be listed as a covered process.

#### AOC 3: 40 C.F.R. § 68.39(b) Documentation

40 C.F.R. § 68.10 (b)(2) states that “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.”

In review of the documentation for the alternative release scenarios, information providing the rationale for the selection of the scenarios selected was not found.

#### AOC 4: 40 C.F.R. 68.67(c) (3) &(4) Process Hazard Analysis –

40 C.F.R. § 68.67(c) states that “The process hazard shall address: (3) Engineering and administrative controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies to provide early warning of releases. (4) Consequences of failure of engineering and administrative controls.”

In review of the process hazard analyses, in some instances, the statement “Team Declined to risk rank this business/operability consequence” is utilized and does not address the hazards of the process.

**AOC 5: 40 C.F.R. 68.69(b) Operating Procedures –**

40 C.F.R. § 68.69(b) states that “Operating procedures shall be readily accessible to employees who work in or maintain a process.”

In review of the operating procedures, two instances occurred where the links within an operating procedure did not work correctly.

**AOC 6: 40 C.F.R. 68.73 (d)(4) Mechanical Integrity –**

40 C.F.R. § 68.73(d)(4) states that “Inspection and Testing (4) The owner or operator shall document each inspection and test that has been performed on process equipment. The documentation shall identify 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 result of the inspection or test.”

In review mechanical integrity inspections, the inspector’s name was not listed on the inspection reports. Additionally, Equipment PM Sheets from 2016 did not include the name of the inspector.

**AOC 7: 40 C.F.R. 68.81 (d)(2) Incident Investigation –**

40 C.F.R. § 68.67(f) states that “A report shall be prepared at the conclusion of the investigation which includes at a minimum: (2) Date investigation began”

In review of the incident investigations, two instances did not include the date investigation began on the report.

**AOC 8: 40 C.F.R. 68.95(a)(2) Emergency Response Plan –**

40 C.F.R. § 68.95(a)(2) states that “(a) The owner or operator shall develop and implement an emergency response program for the purpose of protecting public health and the environment. Such program shall include the following elements: (2) Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance;

Inspection records of emergency equipment and testing do not conform to stated procedures in the emergency equipment inspection procedures.

**Section V – LIST OF APPENDICES**

Appendix 1 – Sign In Sheet

Appendix 2 – Section 5 & Appendix D – Worst Case Release Scenarios

Appendix 3 – Regulated Processes PSM and RMP

Appendix 4 – Section 6 & Appendix E - Alternative Release Scenarios

Appendix 5 – 2016 HAZOP Study HF Alkylation Unit PHA

Appendix 6 - OM-SA-0401 Safety and Environmental Information (CBI)

Appendix 7 – 7. ALKY-NP-0811 HF Acid Truck Unloading Procedure (CBI)

Appendix 8 – 6/21/2017 Pump P-960 Testing

Appendix 9 – P-959 Testing

Appendix 10 – 8/25/16 Equipment PM Sheet

Appendix 11 – P-2167 Equipment PM Sheets and Vibration Testing

Appendix 12 – P-1632 Equipment PM Sheets and Vibration Testing

Appendix 13 – P-861 & P-862 Equipment PM Sheets, Vibration Testing, and Repair Report

Appendix 14 – 7/14 & 15/16 Trailer and Apparatus Testing

Appendix 15 – 7/ 15/16 Fire Pump Test Reports

Appendix 16 – 11/10/16 & 6/18/18 Hose Testing