EPA United States Environmental Protection Agency

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	11/27/2023 – 12/02/2023	
Media Program:	Air	
Regulatory Program(s)	RMP	
Company Name:	**Marathon Petroleum Corporation**	
Facility Name:	**Blanchard Refining Company LLC – Galveston Bay Refinery**	
Facility Physical Location:	2401 5th Avenue South	
(city, state, zip code)	Texas City, Texas 77590	
Mailing address:	539 South Main St.	
(city, state, zip code)	Findlay, OH 45840	
County/Parish:	Galveston	
Facility Phone Number	419-421-2121	
Facility Contact:	Alecia Cavender	PSM Coordinator
	ajcavender@marathonpetroleum.com	
FRS Number:	110059763536	
Identification/Permit Number:		
Media Identifier Number:	1000 0008 2985	
NAICS:		
SIC:		
Personnel participating in inspection:		
Sherronda Phelps	US EPA Region 6	RMP Inspector
Howard Cole	US EPA Region 6	RMP Inspector
Kaleb Brankamp	Marathon Petroleum Corp. (MPC)	Senior Counsel
Alecia Cavender	MPC	PSM Coordinator
Becky Pierce	MPC	Process Safety Professional
Josh Brand	MPC	E & P Supervisor
Thomas Garland	MPC – USW	Union Representative
Betty Lawson	MPC	Safety & IH Supervisor
David Leaver	MPC	Site Manager
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EPA Lead Inspector Signature/Date	SHERRONDA PHELPS Digitally signed by SHERRONDA PHELPS Date: 2024.02.06 08:43:46 -06'00'	2/6/2024
	Sherronda Phelps	Date
Supervisor Signature/Date	SAMUEL TATES Digitally signed by SAMUEL TATES Date: 2024.02.14 12:40:50 -06'00'	
	Samuel Tates	Date

6ENFORM-019-R8.2 (02/12/2020)

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors, Sherronda Phelps and Howard Cole, arrived at the Marathon Petroleum Corporation (MPC) – Blanchard Refining Company Galveston Bay Refinery (GBR) at 9:30 AM on November 27th for an announced inspection. We met with Alecia Cavender, Process Safety Supervisor, and other Marathon representatives at the Opening Conference (*see Appendix 1 for a full list from all days and participants*). I presented my credentials to Mrs. Cavender and MPC representatives at the Opening Conference. I informed them that this was an EPA inspection focused on the implementation of and compliance with the Clean Air Act (CAA) Section 112(r), Chemical Accident Prevention Provisions in 40 C.F.R. Part 68. The scope of the inspection focused on the May 15, 2023, incident where a hydrocarbon was released, and fire occurred. As a result of this incident three people were injured and one person was pronounced dead. Thomas Garland, a representative of United Steel Worker, served as an employee representative and was available pursuant to Section 112(r)(6)(L) of the CAA to participate in this inspection.

INCIDENT SUMMARY

On May 15, 2023 at approximately 9:33 am, a fire occurred at the Ultraformer Unit 3 (UU3) that resulted in the death of a Marathon machinist, burn injuries of two contractors and damage of equipment. As provided from the facility and their incident summary, a coupling failed while the motor continued operating. Given the nature of the coupling failure it created out of alignment conditions between the motor and pump leading to vibration. The vibration brought on a line crack where a flammable vapor cloud escaped. The vapor cloud was ignited from excessive heat generated from metal-to-metal conditions associated with the coupling failure. It was also discovered there was a crack in a bypass line from pump discharge check valve which contributed to the fire. One MPC machinist located on the 2nd floor fin fan deck in proximity to the pump experienced fatal injuries from this incident. It would appear MPC deferred vibration analyses without the proper evaluation and approval, failed to repair or replace the broken disk pack after coupling inspection identified broken disc pack and the overall failure of the coupling itself during operations.

FACILITY DESCRIPTION

Marathon Petroleum Company – Blanchard Refining Company Galveston Bay Refinery is located in Texas City, Texas. The facility processes 502,500 barrels per day of crude oil resulting in varied fuel products such as gasoline, jet fuel and diesel fuel. The facility is a combination of West, East and Bay Plants. The Bay Plant is the legacy Marathon facility, and East and West plant were purchased by Marathon in 2013. The site was designated as a single facility in 2018. Initial crude processing occurs at the East Plant and finishing, and co-generation operations occur at the West Plant. The Bay Plant has two crude units, along with a sulfur recovery unity that treats acid gas generated by the Bay Plant and the East Plant. There is an estimated 1,286 employees at Marathon and 2,430 full time contractors.

The facility RMP includes 19 covered processes which are all considered Program Level 3 for flammables. Additionally, there are three toxic substances used in the RMP covered processes.

Section II - OBSERVATIONS

The initial documentation review began on-site with MPC personnel as listed on the attached, Appendix A, sign in sheets.

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

Subpart A – General

40 C.F.R. § 68.10 Applicability – MPC is a stationary source that has more than a threshold quantity of regulated substances in their process. The last submittal was made October 7th, 2021, due to a change in Program Level. MPC is a RMP Program 3 facility. The facility 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 – MPC submitted their most recent RMP submission on October 7, 2021. The regulated substance(s) under the toxic and flammable tables are listed over the threshold quantity for the RMP Program Level 3 processes.

40 C.F.R. § 68.15 Management – MPC developed a management system to oversee the implementation of the risk management program elements. MPC provided a document titled, "GBR Leadership & PSM Element Champions" outlining 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 – MPC operates an RMP program level 3 process which is subject to this subpart and thus is required to prepare a worst-case release scenario analysis and complete the five-year accident history. I reviewed the documentation provided to make this analysis and identified no areas of concern with this subpart.

40 C.F.R. § 68.22 Offsite Consequence Analysis Parameters – MPC employed the parameters specified by EPA in this rule by using the RMP*Comp™ software. I reviewed the offsite consequence analysis and supporting documentation to assure the data was accurate and correct.

40 C.F.R. § 68.25 Worse-case release scenario analysis – MPC identified and analyzed at least one worst-case scenario 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 – MPC identified and analyzed at least one alternative release scenario 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 – MPC used the most current Census Bureau population data and the distances to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP.

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

40 C.F.R. § 68.36 Review and update - MPC understands documentation associated with the worst-case scenarios should be updated and reviewed at least every five years and are anticipating a review in 2025.

40 C.F.R. § 68.39 Documentation - MPC operates a RMP program level 3 process which is subject to this subpart and thus is required to prepare a worst-case release scenario analysis and complete the five-year accident history. I reviewed the documentation provided to make this analysis and identified no areas of concern with information pertaining to this subpart to include the Offsite Consequence Analysis (OCA) data. The facility used the EPA Model RMP*Comp™.

40 C.F.R. § 68.42 Five-year accident history – MPC included the May 15, 2023, incident given the nature of the event and that it resulted in injuries, loss of life and property damage.

Subpart D – Program 3 Prevention Program

40 C.F.R. § 68.65 Process safety information (PSI) – EPA reviewed various sections of the process safety information (PSI) for the RMP covered process at MPC. There were no areas of concern identified at this time.

40 C.F.R. § 68.67 Process Hazard Analysis (PHA) – MPC provided EPA with their PHA Schedule detailing completion dates and due dates. All revalidation dates were met per the regulation. EPA reviewed the PHA conducted for the covered process, Ultraformer 3 (UU3). The previous PHA was completed in September of 2017 and the revalidation was then completed in August of 2022. Recommendations made from the PHA are tracked via Intelex. EPA reviewed several of the findings noted for follow-up purposes. The PHA study was conducted using the Hazard and Operability Analysis (HAZOP) method along with What If Checklists. No areas of concern were observed from the information reviewed.

40 C.F.R. § 68.69 Operating procedures – EPA reviewed and discussed with MPC personnel operating procedures of several units, which included the Standard Operating Procedure (SOP) certification procedure, confined space entry, and lockout/tag out procedures. On the topic of annual certifications, EPA requested, the last 5 years of certifications for the Ultraformer 3 (UU3) and they were provided as requested. Operating procedures are available to the operators via the facility share point site. Upon review of the UU3 Operating Procedures it was noted, there were no details or reference on the Consequences of Deviations. MPC refers to them as Critical Process Variables (CPV), these can be located via the DCS Board, but the procedures should have some reference or list where they can be found. MPC failed to detail Consequences of Deviation within procedure as required per subpart 68.69(a)(2).

MPC has two methods of addressing the certification of their operating procedures, neither of which complies with the language or intent of the RMP standard. The review of each operating procedure is performed every five years. The RMP standard states that the owner or operator shall certify annually that the operating procedures are current and accurate; and not every five years. MPC's annual review consists of reviewing the list of operating procedures to ensure that none of the operating procedures has exceeded the MPC's five-year requirement for review. It is not a review to assure that they reflect current operating practices are current and accurate. MPC failed to properly certify their operating procedures as required per subpart 68.69(c). Marathon reviews all their operating procedures in five-year intervals.

40 C.F.R. § 68.71 Training – MPC established operator training as required by this subpart and is detailed in the document titled "PSM/RMP Training Standard Practice" Document No. RSP-1305. Operator Training consists of both On the Job Training and Computer Based Training. Written Tests were used to evaluate operator competency. As a new hire, at least three to six months is allocated to initial job training. Refresher training is required every three years or sooner per the regulation. EPA requested training records for review and was provided the files for several employees at different experience levels. Of the employee files reviewed, it would appear training to operate in the unit is current and the refresher training was last administered in 2023 and should be on target for a refresher in the year 2026. There were no areas of concern noted from the information reviewed at this time.

40 C.F.R. § 68.73 Mechanical integrity –EPA reviewed the Mechanical Integrity (MI) procedure for MPC's Mechanical Integrity program. Inspections are managed through the Asset Performance Management system. EPA made several requests to review a sample of the inspection and maintenance records for equipment in the Ultraformer 3 (UU3) unit. EPA also requested a list of overdue/past due inspection items for the UU3. There were "No Overdue ITPM Tasks – UU3" listed in the query provided. EPA was provided several documents while on site, along with several follow up requests after the inspection These items are still under review at this time. The following Areas of Concern were noted while on site because of the incident occurring May 15, 2023, see below:

68.73(b) Written procedures. The owner or operator shall establish and implement written procedures to maintain the on-going integrity of process equipment.
Marathon failed to implement procedure RMP-ADM-000010-GB, the deferral process, to defer spectral vibration analysis of pumps 303-J and 303-JAJ to maintain the on-going integrity of process equipment.

68.73(d)(1): Inspection and testing. Inspections and tests shall be performed on process equipment.
Marathon failed to conduct three (3) spectral vibration analyses between October 2022 and May 2023 for pumps 303-J and 303-JAJ.

68.73(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.
Marathon failed to correct deficiencies in the Rexnord Thomas Series 71 coupling associated with the motor and pump 303-J. During a preventative maintenance inspection conducted on June 29, 2022, at least 2 of 7 pump side discs were found to be broken. The damage progressively increased over time resulting in complete failure and release of a flammable hydrocarbon.

40 C.F.R. § 68.75 Management of change (MOC) – EPA reviewed and discussed with site personnel its written procedures for MOCs and their implementation at the facility. The MOCs were implemented using their onsite share point site. EPA reviewed a list of MOCs created in the last 12 months in relation to the UU3 unit to review. Follow up information will be requested to further evaluate the implementation of the MOCs at the facility. EPA did not identify any areas of concern the time of inspection.

40 C.F.R. § 68.77 Pre-startup safety review – MPC provided documentation regarding pre-startup safety procedures and site plan. This element and its implementation will be further evaluated. EPA did not identify any areas of concern at the time of inspection.

40 C.F.R. § 68.79 Compliance audits – EPA requested the two most recent compliance audits for review. MPC provided compliance audit reports completed in February of 2020 and December of 2022, both conducted by 3rd Party Auditor Ethos. There were at least 23 recommendations made from the December 2022 audit, but at least 10 were still OPEN with a due date of November 30, 2023. Considering we were onsite and noted these recommendations were still in an OPEN status, we did request more insight on that. A virtual conversation with Mr. Grubbs and other personnel was had and we were advised there could have possibly been an issue with Intelex and the information entry. While this does not solidify why these recommendations were still in an OPEN status a year later, it would appear MPC failed to address these recommendations in a timely manner as required by 68.79(d).

40 C.F.R. § 68.81 Incident investigation – EPA reviewed a list of incident reports/investigations for all incidents, which resulted in, or could have reasonably resulted in, a catastrophic release of a regulated substance for the last five years. All incident investigations reported were conducted as required per the subpart.

40 C.F.R. § 68.83 Employee participation – MPC implemented the requirements of this subpart.

40 C.F.R. § 68.85 Hot work permit – MPC discussed the process for conducting hot work onsite and several hot work permits from April 1, 2023 to May 15, 2023 were reviewed. All hot work permits are retained for one year upon completion of work. However, after reviewing the Hot Work Permits provided several of the permits lacked details on the completion of work, whether work was ongoing and in some cases signatures for work in confined spaces were not applied. Permits numbers reviewed: 1525131, 1525120, 1525123, 1384784, 1525124, 0001724, 1373399 and 1502101. The Safe Work Permit procedure has not been implemented as required per subpart 68.85(b).

40 C.F.R. § 68.87 Contractors – MPC provided documents that establish the roles and requirements for both Marathon and the contractors on site. The facility selects contractors from the ISNetworld database. While they have nested contractors in place there are occasions when they may bring on additional contractors for a specific matter. Prior to selecting a contractor, a thorough evaluation of safety performance of the contractor is carried out. That contractor must be subscribed to ISNetworld as well. A Pre-Job Meeting is held with the contractors to discuss known potential hazards related the contractor's work and the processes. Contractors are required to complete an 8-hour basic training class on refinery safety prior to entering the site and complete a refresher every two years. Contractors are provided controlled key card entrance which is tied to the completion of the safety training and other metrics. EPA did not identify any areas of concern at the time of inspection.

Subpart E – Emergency Response

40 C.F.R. § 68.90 Applicability –MPC is a first responder stationary source in case of an accidental release of a regulated substance, therefore, the facility is subject to the requirements of part 68.95.

40 C.F.R. § 68.95 Emergency Response – MPC is a first responder facility. EPA reviewed the facility's Emergency Action Plan (RSW-000056-GB). MPC has an Emergency Response Team (ERT) of 80 plus employees from varied process units and participation is voluntarily. The Emergency Action Plan and The One Plan details the steps to take in the event of a release of the regulated substances. EPA reviewed training records for several ERT members, and no areas of concern were identified at the time of inspection.

40 C.F.R § 68.96 Emergency response exercises – As part of coordination with local emergency response officials required by §68.93, MPC participates in drills with mutual aid organization of local facilities that meets quarterly and are coordinated with the Galveston City LEPC.

Subpart G – Risk Management Plan

40 C.F.R. § 68.190 Updates – No updates.

40 C.F.R. § 68.195 Required corrections -The next RMP re-submission is due by October 9, 2024, unless an update or correction is required by 40 C.F.R. § 68.190 and § 68.195.

Section III – AREAS OF CONCERN (AOC)

1) **Operating Procedures, 40 CFR § 68.69(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. MPC failed to properly certify their operating procedures as required per subpart 68.69(c). Marathon reviews all their operating procedures in five-year intervals. MPC's annual review consists of reviewing the list of operating procedures to ensure that none of the operating procedures has exceeded the MPC's five-year requirement for review. It is not a review to assure that they reflect current operating practices are current and accurate.*

2) **Operating Procedures, 40 CFR § 68.69(a)(2)(i) -** *Upon review of the UU3 Operating Procedures it was noted, there were no details or reference on the Consequences of Deviations. MPC refers to them as Critical Process Variables (CPV), these can be located via the DCS Board, but the procedures should have some reference or list where they can be found.*

3) **Mechanical Integrity, 40 CFR § 68.73(b) -** *Written procedures. The owner or operator shall establish and implement written procedures to maintain the on-going integrity of process equipment. Marathon failed to implement procedure RMP-ADM-000010-GB, the deferral process, to defer spectral vibration analysis of pumps 303-J and 303-JAJ in order to maintain the on-going integrity of process equipment.*

4) **Mechanical Integrity, 40 CFR § 68.73(d)(1**) - Inspection *and testing. Inspections and tests shall be performed on process equipment. Marathon failed to conduct three (3) spectral vibration analyses between October 2022 and May 2023 for pumps 303-J and 303-JAJ.*

5) **Mechanical Integrity, 40 CFR § 68.73(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. Marathon failed to correct deficiencies in the Rexnord Thomas Series 71 coupling associated with the motor and pump 303-J. During a preventative maintenance inspection conducted on June 29, 2022, 2 or more of 7 pump side discs were found to be broken. The damage progressively increased over time resulting in complete failure and release of a flammable hydrocarbon.*

6) **Compliance Audits, 40 CFR § 68.79(d)** - *There were at least 23 recommendations made from the December 2022 audit, but at least 10 were still OPEN with a due date of November 30, 2023. MPC failed to address these recommendations in a timely manner as required by 68.79(d).*

7) **Hot Work Permit, 40 CFR § 68.85(b) -** *the Hot Work Permits provided several of the permits lacked details on the completion of work, whether work was ongoing and in some cases*

signatures for work in confined spaces were not applied. Permits numbers reviewed: 1525131, 1525120, 1525123, 1384784, 1525124, 0001724, 1373399 and 1502101. The Safe Work Permit procedure has not been implemented as required per subpart 68.85(b).

EPA Region 6 inspectors, Sherronda Phelps and Howard Cole, conducted a closing conference Closeout/Exit Briefing on December 1, 2023, for the inspection. During the closing conference, EPA reviewed the Areas of Concern noted and any comments or questions while on site.

Section IV – FOLLOW UP

EPA made several documentation requests while on site. There were also several documentation requests fulfilled after the exit briefing with the last submission provided on December 15th, 2023 to the shared One Drive link created via EPA. This information will be reviewed and evaluated.

Section V – LIST OF APPENDICES

Appendix A – Sign-In Sheets
No photos, videos, or other appendices are included with the report.