United States Environmental Protection Agency

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	10/15-17/18		
Media:	Air		
Regulatory Program(s)	RMP		
Company Name:	**Flint Hills Resources Houston Chemical, LLC**		
Facility Name:	**Flint Hills Resources Houston Chemical Plant**		
Facility Physical Location:	9822 La Porte Freeway		
(city, state, zip code)	Houston, Texas 77017		
Mailing address:	9822 La Porte Freeway		
(city, state, zip code)	Houston, Texas 77017		
County/Parish:	Harris		
Facility Contact:	Richard Wood	HSS Manager	
	Richard.Wood@fhr.com		
FRS Number:	1000 0021 1825		
Identification/Permit Number:	O-1251		
Media Number:			
NAICS:	32511		
SIC:			
Personnel participating in inspection:			
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EPA Lead Inspector Signature/Date	Sherronda Phelps Sherronda Phelps	12/7/18 Date	
Supervisor Signature/Date	Samuel Tates Samuel Tates	12/6/2018 Date	

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

On October 15, 2018, I (Sherronda Phelps) arrived at the Flint Hills Resources Houston Chemical Plant for an announced Clean Air Act (CAA) inspection. A notification of my arrival was sent via email on August 31, 2018. I met with John Hutcherson, Site Manager. I presented my credentials to Mr. Hutcherson and informed him and other personnel that this was an U.S. Environmental Protection Agency (EPA) inspection to determine compliance with the CAA Section 112(r)(1) and 112(r)(7). The scope of the inspection was a partial compliance evaluation (PCE) and included evaluation of the compliance of the facility with 40 C.F.R. Subpart 68 – Chemical Accident Prevention Provisions. An employee representative was invited to participate in the inspection, however this site is a non-union facility.

FACILITY DESCRIPTION

The Flint Hills Resources Houston Chemical facility converts propane into propylene using propane dehydrogenation technology. The facility employs about 100 employees. The following units were the primary focus during the Risk Management Plan (RMP) inspection: Propane Dehydrogenation. The Flint Hills Houston Chemical facility is located at 9822 La Porte Freeway in Houston, Texas. The facility is also a CAA Title V facility.

Section II - OBSERVATIONS
40 C.F.R. Part 68 – Chemical Accident Prevention Provisions
Subpart A-General

40 C.F.R. § 68.10 Applicability – Flint Hills Resources Houston Chemical Plant, LLC. is an owner and operator of a stationary source that has more than a threshold quantity of regulated flammable and toxic substances, listed in 40 C.F.R. § 68.130, in a process, and as such is subject to these Chemical Accident Prevention Provisions. Flint Hills listed the NAICS code (32511) Petrochemical Manufacturing, as the process in its Risk Management Plan (RMP). The Flint Hills facility process is also subject to the Occupational Safety and Health Administration (OSHA) process safety management standard, 29 C.F.R. § 1910.119. These factors make the process at the Flint Hills facility a Program 3 subject to 40 C.F.R. § 68.10(d).

§ **68.12 General Requirements**

Flint Hills submitted a single RMP with covered processes that are subject to Program 3 requirements. Their last submission was completed on August 27, 2015. As a facility with Program 3 processes, Flint Hills Resources Houston must develop and implement a management system, conduct a hazard assessment, implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87, develop and implement an emergency response program, and submit the data elements from 40 C.F.R. § 68.175 in their RMP.

§ **68.15 Management System**

Flint Hills Resources provided a document titled, "RMP Element Responsibility Organization Chart" which notes the individuals responsible for implementing the RMP elements. From the information reviewed Flint Hills-Houston has adequately documented the lines of authority as required by 40 C.F.R. § 68.15(c).

Subpart B – Hazard Assessment

§ **68.20 Applicability**

Flint HIlls operates a 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 area of concern with information pertaining to sections 40 C.F.R. §§ 68.22 – 68.33 or any Offsite Consequence Analysis (OCA) data. The facility used the EPA Model RMP*Comp™.

§ **68.36 Review and Update**

Flint Hills Resources indicated they review their OCA at least once every five years as required. The facility made their last RMP submission on August 27, 2015 which was their 5-year re-submission at the time. There have been no process changes to date.

§ **68.39 Documentation**

Flint Hills Resources maintains documentation describing the vessel selected for review as a worst-case scenario and the assumptions and parameters used. A description of the scenarios identified, assumptions and parameters used, and the rationale for the selection of specific scenarios was documented as well.

§ **68.42 Five Year Accident History**

Flint Hills resources have no incidents or near misses to report in their RMP accident history.

Subpart D – Program 3 Prevention Program

§ **68.65 Process Safety Information**

Flint Hills Resources provided documentation of process safety information including information pertaining to the hazards of substances in the processes, pertaining to the technology of the process, and pertaining to the equipment in the process. Flint Hills-Houston also provided the maximum intended inventory for the RMP covered process units of interest.

§ **68.67 Process Hazard Analysis**

I reviewed the PHA Schedule for all covered units under the RMP. All appeared to be current, regarding the required revalidation dates. Flint Hills secures the services of Baker Risk Consultants to conduct the PHA of all covered units. A complete redo of the PHA's was conducted in the year 2015. The Layers of Protection Assessment (LOPA) and Hazard and Operability Study (HAZOP) methodologies were used to conduct the review. Upon further review, Flint Hills is addressing all action items and tracking them to completion. Flint Hills uploads all recommendations and action items into PHA Works database where they are assigned and tracked to completion. The facility PHA's can also be accessed via the facility's intranet network.

§ **68.69 Operating Procedures**

I met with Jay White, Operation Specialist, who shared how the facility is moving from an old database system called Mockingbird for reviewing operating procedures. They are working on implementing Vanguard Smart Procedures software. At the time of the inspection all of the procedure transfers from Mockingbird had been completed. I reviewed several operating procedures while on site. Flint Hills provided examples for each phase of operation identified in the rule. All Operating Limits along with Consequences of Deviation can be found within the procedures as well. Flint Hills has a procedure in place for the maintaining and handling of operating procedures. The procedures also address the annual certification or review of the operating procedures. EPA requested the last five years of certification. Flint Hills provided documentation for all covered processes. Flint Hills meets the annual certification requirement of 40 C.F.R. § 68.69(c).

§ **68.71 Training**

I reviewed training documentation for selected operators from the units of focus for the inspection. Operator qualification includes the following phases: process overview training, process and job specific training and operator initial qualification. Operator training is a combination of classroom, computer based and on-the-job training. From the information reviewed, refresher training occurs every three years as required by the regulation.

§ **68.73 Mechanical Integrity**

I met with Andrew Gowdy, Reliability Group Lead, to discuss the Mechanical Integrity program and its implementation at the facility. He also aided me with my requests for mechanical integrity information. Flint Hills has established and implemented a procedure to maintain the on-going integrity of process equipment. I reviewed inspection records of both fixed and rotating equipment within the last five years. Of the list provided there were two fire water tanks (HC-100-00-167F and HC-100-00-M1008) that were past due on their internal inspections per the API 650 standard. I also randomly chose pieces of equipment to review their historical data and determine if they are meeting the required inspection frequency. Flint Hills has failed to comply with 68.73(d)(3) and the frequency of inspections to be conducted as recommended. Flint Hills did note that the tanks are to be inspected during the next turnaround which is scheduled for 2020.

§ **68.75 Management of Change (MOC)**

The Flint Hills-Houston facility established and implemented a procedure to manage changes to process chemicals, technology, equipment, and procedures. I requested several MOC's for review and from the information provided it appears that Flint Hills is implementing their MOC procedure as required per the regulation. Maximo database software is used to track all MOC's. Monthly audits of MOC's are also conducted for another layer of protection in ensuring the policy is being implemented as written and required.

§ **68.77 Pre-Startup Review (PSSR)**

The Flint Hills-Houston facility established and implemented a procedure to perform a pre- startup safety review for new stationary sources and modifications of stationary sources on site when the change is significant enough to require a change in process safety information. This was evaluated alongside the MOC's requested for review from the facility. The procedures for PSSR's are being implemented as required. All necessary signatures and required safety checks were completed depending on the approved work to be completed.

§ **68.79 Compliance Audits**

I requested the two most recent compliance audits conducted from the facility. Flint Hills conducted a compliance audits in April of 2014 and November of 2016. They secured the services of contractors to conduct their compliance audits. Compliance audit certifications were included in the final report produced from these audits. I reviewed all elements for the last and most recent compliance audits. After reviewing such documentation, it appeared that the facility was reviewing all the elements of the RMP finding recommendations and assigning these details through staff. All action items created from the recommendations of these audits were assigned and tracked to completion via the Lync database. I reviewed several findings made and the associated actions items for completeness and proper close out.

§ **68.81 Incident Investigation**

Flint Hills-Houston investigated all incidents promptly and assigned personnel to the recommendations and findings. Completed investigation reports and findings are tracked using the Lync internal database system. The incidents, as required in the PHA, were also used to identify any mitigating factors that might have been overlooked or that still needed an opportunity for improvement. All reports are retained for a minimum of 5 years.

§ 68.83 Employee Participation

Flint Hills-Houston developed a written plan of action regarding the implementation of employee participation. I was provided a copy, and upon review, it met all conditions as required. I also reviewed other documentation such as sign-in logs from safety meetings conducted, and the attendance log from the last PHA performed.

§ 68.85 Hot Work Permit

Flint Hills-Houston implements a "Low & High Energy" procedure for the permitting of cold and hot work on site. I requested several hot works permits to review. It would be appearing that Flint Hills is implementing the procedure as written and required. All permits are kept on site one year after the work has been completed.

§ 68.87 Contractors

Flint Hills-Houston implements a procedure for the selection of contractors for the site along with contractor safety requirements. The process of bringing on contractors was explained, and the site safety procedure referenced for this element was shared. Flint Hills-Houston makes use of the ISNETWorld database software to perform audits along with selecting contractors for onsite work. Field performance evaluations are done during their work to satisfy the periodic checks required by the regulation. Flint Hills also conducts periodic audits of the contractor training records at least every three years at a minimum.

Subpart E – Emergency Response

§ 68.90 Applicability

Flint Hills-Houston is a stationary source with program 3 processes subject to this subpart and is thus required to comply with the requirements of 40 C.F.R. § 68.95. Flint Hills-Houston has an emergency response team that will respond to incidents on site.

§ 68.95 Emergency Response Program

Flint Hills provided me with their Emergency Response Plan and Procedures. This emergency plan includes procedures for informing the public and local emergency response agencies about accidental releases. Flint Hills-Houston employees participate, but participation is voluntary. The emergency plan includes procedures for informing the public and local emergency response agencies about accidental releases. I randomly selected members of the Emergency Response Team to review their training records. The training records reviewed confirmed that all participants are current.

The Emergency Response Plan is reviewed on an annual basis. It can be accessed via the facility's SharePoint site. I also reviewed inspection records for SCBA equipment which is inspected monthly.

Subpart G – Risk Management Plan

§ **68.150 Submission**

Flint Hills-Houston has submitted a single RMP which includes the information required in 40 C.F.R. §68.150.

Section III – AREAS OF CONCERN

On October 18, 2018, I conducted an exit briefing with all involved personnel during the inspection and others who were invited. I reviewed all elements covered and the areas of concern noted during the on-site inspection which are as follows:

1) 40 C.F.R. § 68.73(d)(3), "The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience." Flint Hills-Houston has failed to comply with 68.73(d)(3) and the frequency of inspections to be conducted as recommended. Specifically, two fire water tanks (HC-100-00-167F and HC-100-00-M1008) have not been internally inspected since the year 2002.

Section IV – FOLLOW UP

No information was received by EPA after exiting the Facility on October 18, 2018.