EPA United States Environmental Protection Agency

Region 6 - Enforcement & Compliance Assurance Division

INSPECTION REPORT

Inspection Date(s):	03/08/2022 -03/10/2022	
Media Program:	Air	
Regulatory Program(s)	RMP	
Company Name:	**ChampionX Sugar Land Plant**	
Facility Name:	**ChampionX Corporation**	
Facility Physical Location:	7701 Highway 90A	
(city, state, zip code)	Sugar Land, Texas, 77478	
Mailing address:	2445 Technology Forest Blvd. Building 4 Suite 1200	
(city, state, zip code)	The Woodlands, Texas, 77381	
County/Parish:	Harris County	
Facility Phone Number	(713) 767 -5762	
Facility Contact:	David Bolding	Plant Manager
	David.Bolding@championx.com	
FRS Number:	110000463597	
Identification/Permit Number:	Air Operating Permit ID: O-01538	
Media Identifier Number:	RMP: 100000135481	
NAICS:	325199	
SIC:	2869	

Personnel participating in inspection:		
David Bolding	ChampionX Sugar Land	Plant Manager
Maria Verzbolovskis	ChampionX Sugar Land	Process Safety Management

EPA Lead Inspector Signature/Date	Kayla Buchanan	4/22/2022
	Kayla Buchanan	Date
Supervisor Signature/Date	SAMUEL TATES Digitally signed by SAMUEL TATES Date: 2022.04.22 12:19:23 -05'00'	
	Samuel Tates	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector Kayla Buchanan arrived at the ChampionX Sugar Land Plant at 9:00 AM on March 8, 2022, for an announced inspection. I met with David Bolding, Plant Manager and Maria Verzbolovskis, Process Safety Management at the Opening Conference. I presented my credentials to David and Maria and informed them that this was an EPA inspection to determine ChampionX Sugar Land's compliance with Section 112r(1) and (7) (the General Duty Clause and Risk Management Program requirements).

FACILITY DESCRIPTION

ChampionX Sugar Land is located at 7701 Highway 90A, Sugar Land, Texas, 77478. Approximately 170 full time employees and 30 contractors work at the facility. ChampionX Sugar Land conducts batch chemical operations and produces an estimated 100,000 metric tons of specialty chemicals for its customers annually. ChampionX Sugar Land uses the following six regulated substances above the threshold amounts in its processes: vinyl acetate, epichlorohydrin, ethylenediamine, cyclohexylamine, ammonia solution, and formaldehyde solution.

Section II - OBSERVATIONS

On March 10, 2022, I participated in a walking tour of ChampionX Sugar Land Plant. ChampionX employees Maria Verzbolovskis, Process Safety Management, John Smith, and Fidel Vargas, Production Team Leaders, accompanied me. I observed the covered processes, equipment, operations, control rooms, and emergency equipment. I interviewed operators and asked questions about their training, the Management of Change (MOC) and Process Hazard Analysis (PHA) processes, and the facility's regular operating and emergency procedures.

40 C.F.R. § 68.10 Applicability – ChampionX Sugar Land is a Title V stationary source that has an air operating permit and more than the threshold quantities of toxic regulated substances in its process streams; therefore, the RMP regulations are applicable. ChampionX re-submitted a RMP on September 4, 2020, which describes the processes containing regulated chemicals stored at more than threshold quantities. In addition, this facility is subject to the Occupational Safety and Health Administration's (OSHA) Process Safety Management (PSM) Standard (29 CFR § 1910.119), which categorizes ChampionX Sugar Land as a Program 3 facility.

40 C.F.R. § 68.12 General requirements – The owner or operator of a stationary source subject to this regulation shall submit a single Risk Management Plant (RMP), as provided in 40 CFR § 68.150 to 68.185. The RMP shall include a registration that reflects all covered processes. I reviewed the re-submission of ChampionX Sugar Land's RMP which was submitted on September 4, 2022. It listed the toxic regulated chemicals and the associated Program 3 processes.

40 C.F.R. § 68.15 Management – ChampionX Sugar Land developed a management system to oversee the implementation of the risk management program elements. The plant manager has the overall responsibility for ensuring that the facility has an integrated, effective, and compliant prevention program as required by this regulation.

Subpart B – Hazard Assessment

40 C.F.R. § 68.20 Applicability – ChampionX Sugar Land 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 Off Site Consequence Analysis Parameters – ChampionX Sugar Land 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 – ChampionX Sugar Land identified and analyzed worst-case scenarios for each toxic 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 – ChampionX Sugar Land identified and analyzed at least one alternative release scenario for each toxic 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 Off Site impacts - Population – ChampionX Sugar Land used the most current (2010) Census Bureau population data and the distances to endpoints, as specified in the regulation, to calculate the population numbers reported in their RMP. ChampionX Sugar Land used the Circular Area Profiles application to define the population surrounding the facility. In addition, ChampionX Sugar Land provided a map documenting the nearest public receptor.

40 C.F.R. § 68.33 Defining Off Site impacts – Environment – ChampionX Sugar Land 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 – ChampionX Sugar Land's reviews and updates its offsite consequence analysis every 5 years.

40 C.F.R. § 68.39 Documentation – ChampionX Sugar Land maintained records of the offsite consequence analyses in accordance with this subpart. These records included:

- a description of the vessel or pipeline and substance selected as worst case and alternate release scenarios, assumptions and parameters used, and the rationale for selection of specific substances
- documentation of estimated quantity released, release rate, and duration of release
- methodology used to determine distance to endpoint
- data used to estimate population and environmental receptors

40 C.F.R. § 68.42 Five-year accident history – The regulation requires ChampionX Sugar Land to include in its five-year accident history all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. ChampionX Sugar Land has not had any

accidental releases in the past five years that met these criteria. I examined ChampionX Sugar Land's OSHA Form 300 logs from 2017 to present to ensure that additional releases from the facility, which could possibly be included in the facility's five-year accident history, were not omitted.

40 C.F.R. § 68.65 Process Safety Information (PSI) – I reviewed ChampionX Sugar Land's PSI. The compilation of written 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 standards employed at the facility to ensure ChampionX Sugar Land documents that its equipment complies with recognized and generally accepted good engineering practices (RAGAGEP).

40 C.F.R. § 68.67 Process Hazard Analysis (PHA) – I discussed ChampionX Sugar Land's PHA process with Maria Verzbolovskis. The facility uses the Hazard and Operability Study (HAZOP) methodology when conducting its PHAs.

I reviewed the facility's Utilities PHA and its B and C Units PHA. The PHAs I 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. The team included at least one employee who had experience and knowledge that was specific to the process being evaluated, and one employee who was knowledgeable in the specific PHA methodology used.

ChampionX Sugar Land established a system to promptly address the team's findings and recommendations, to assure the recommendations were implemented in a timely manner, and to ensure that the resolutions were documented.

40 C.F.R. § 68.69 Operating Procedures – I reviewed ChampionX Sugar Land's operating procedures for the operation of the covered process. The operating procedures I reviewed addressed: the steps for each of the operating phases; the consequences of deviation and mechanisms 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.

I also reviewed ChampionX Sugar Land's safe work procedures, including lock out/tag out procedures and safe confined space entry procedures. The safe work procedures apply to both employees and contractors.

ChampionX is required to annually certify that its operating procedures are current and accurate. ChampionX could only produce documentation of this certification for 2022 (February 7) and 2020 (November 30) ***(Appendix 1)***. There was no operating procedure certification documentation for 2018, 2019, or 2021 **[AOC #1 -40 C.F.R. § 68.69I].**

40 C.F.R. § 68.71 Training – ChampionX is required to train each employee involved in operating a process in an overview of the process and in the operating procedures. Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process must be trained. In addition to initial training, employees must undergo refresher training at least every three years.

I reviewed training records for six randomly chosen employees. ChampionX Sugar Land trained employees after the employees began operating the process and did not provide operators with refresher training every three years **[AOC #2 – 40 C.F.R. § 68.71(a) and (b)].** ChampionX Sugar Land acknowledged this training gap and began to implement a training procedure that provides new operators with initial training and current operators with refresher training at least once every three years.

40 C.F.R. § 68.73 Mechanical Integrity – I reviewed ChampionX Sugar Land's mechanical integrity procedures. ChampionX Sugar Land is required to perform inspections and tests on its process equipment and the inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

ChampionX did not ensure its inspections and tests followed RAGAGEP. ChampionX hired a contract company to conduct its tank inspections, however, the contract employee was not certified by the American Petroleum Institute (API) and was unqualified to conduct the required inspections. This contract inspector was conducting mechanical integrity inspections at the facility since at least 2016 **[AOC #3 – 40 C.F.R. § 68.73(d)(2)].**

40 C.F.R. § 68.75 Management of Change (MOC) – ChampionX Sugar Land established and implemented written procedures to manage changes (except for ''replacements in kind'') to process chemicals, technology, equipment, and 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 period for the change, and authorization requirements for a proposed change.

Its employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process must be informed of, and trained in, the change prior to start-up of the process or affected part of the process; however, in some instances, employees were informed of, and trained in the change after the start up of the affected part of the process. ChampionX Sugar Land stated and demonstrated that this delay is due to its operator work schedule, and although some employees are trained post startup of the affected part of the process, each employee is trained prior to operating the process. If a change resulted in a change in the process safety information or in the operating procedures or practices, ChampionX Sugar Land updated the information accordingly.

40 C.F.R. § 68.79 Compliance audits – ChampionX Sugar Land must evaluate 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. ChampionX Sugar Land evaluated compliance with the OSHA Process Safety Management PSM Standard, but not the EPA Risk Management Program requirements **(*Appendix 2*) [AOC #4 – 40 C.F.R. § 68.79(a)].**

ChampionX Sugar Land's compliance audits are conducted by a corporate audit team that consists of at least one person knowledgeable in the RMP process. ChampionX Sugar land received a report of the audit findings and determined and documented an appropriate response to each of the findings of the compliance audits. They retained the two most recent audits.

40 C.F.R. § 68.81 Incident investigation – ChampionX Sugar Land is required to investigate each incident which resulted in or could reasonably have resulted in a catastrophic release of a regulated substance. I reviewed several incidents with accompanying investigations, but none resulted in, or had the potential to result in a catastrophic release. ChampionX Sugar Land has an incident categorization system that helps facility personnel to determine and properly investigate, if such an incident were to occur.

40 C.F.R. § 68.83- Employee Participation – I reviewed ChampionX Sugar Land's written plan of action regarding the implementation of the employee participation. This plan outlines how ChampionX Sugar Land consults with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management.

40 C.F.R. § 68.85 Hot work permit – I reviewed hot work permits issued by ChampionX Sugar Land. Each permit that I reviewed documented that fire prevention and protection requirements were implemented prior to beginning hot work operations. The permits indicated the dates authorized for hot work and identified the object on which the hot work was performed.

40 C.F.R. § 68.87 Contractors – When selecting a contractor, ChampionX Sugar Land uses the Avetta online system to obtain and evaluate information regarding the contract owner or operator's safety performance and programs. Prior to starting work, all contractors working onsite at ChampionX Sugar Land receive site specific and general safety (basic+) training during which the contractors are informed of known potential fire, explosion, or toxic release hazards related to the contractor's work and the process. Before each job, ChampionX Sugar Land requires contractors to complete a job safety analysis (JSA). Contractors are required to follow the same safe work practices required of ChampionX Sugar Land personnel. ChampionX Sugar Land is supposed to periodically evaluate the performance of the contract owner or operator in fulfilling their obligations, however, the facility did not start its evaluation process until 2020 **[AOC #5 – 40 C.F.R. § 68.87(b)(5)].** The 2021 periodic evaluation failed to capture the deficient contract employee conducting mechanical integrity inspections.

Subpart E- Emergency Response

40 C.F.R. § 68.90 Applicability – ChampionX Sugar Land is a responding stationary source and must comply with the requirements of §68.93, 68.95, and 68.96

40 C.F.R. § 68.93 – Emergency response coordination activities – ChampionX Sugar Land affirmed that they coordinate response needs with local emergency planning and response organizations to determine how the stationary source is addressed in the community emergency response plan and to ensure that local response organizations are aware of the regulated substances at the stationary source, their quantities, the risks presented by covered processes, and the resources and capabilities at the stationary source to respond to an accidental release of a regulated substance.

40 C.F.R. § 68.95 Emergency response program – I reviewed ChampionX Sugar Land's emergency response plan. The plan included: procedures for informing the public and local emergency response agencies about accidental releases; documentation of proper first aid and emergency medical treatment necessary to treat accidental human exposures; and procedures and measures for emergency response after an accidental release of a regulated substance. The plan also included procedures for the use of emergency response equipment, and for its inspection, testing, and maintenance.

40 C.F.R. § 68.96 Emergency response exercises – As part of coordination with local emergency response officials required by §68.93, will be required to conduct an emergency response tabletop exercise before December 21, 2026, and at a minimum of at least once every three years thereafter.

Subpart G- Risk Management Plan

40 C.F.R. § 68.190 Updates – ChampionX Sugar Land resubmitted its RMP on September 4, 2020.

40 C.F.R. § 68.195 Required corrections – ChampionX Sugar Land next RMP re-submission is due by September 4, 2025, unless an update or correction is required by 40 CFR § 68.190 and 40 CFR § 68.195.

Section III – AREAS OF CONCERN

EPA Region 6 inspector Kayla Buchanan conducted a closing conference at ChampionX Sugar Land Plant at 4:00 PM on Thursday, March 10, 2021, for the inspection. During the closing conference, I reviewed the following Areas of Concern noted during the inspection.

AOC #1: Operating Procedures – 40 C.F.R. § 68.69 requires ChampionX Sugar Land to certify annually that its operating procedures are current and accurate.

ChampionX could only produce documentation of this certification for 2022 (February 7) and 2020 (November 30). There was no operating procedure certification documentation for 2018, 2019, or 2021.

AOC #2: Training - 40 C.F.R. § 68.71(a) and (b) requires ChampionX Sugar Land to train each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, in an overview of the process and in the operating procedures; ChampionX Sugarland must provide refresher training 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.

Champion X Sugar Land trained employees after the employees began operating the process and did not provide operators with refresher training every three years.

AOC #3: Mechanical Integrity – 40 C.F.R. § 68.73(d)(2) requires ChampionX Sugar Land to follow recognized and generally accepted good engineering practices when conducting inspections and tests on process equipment.

*ChampionX did not ensure its inspections and tests followed RAGAGEP. ChampionX hired a contract company to conduct its tank inspections, however, the contract employee was not certified by the American Petroleum Institute (API) and was unqualified to conduct the required inspection*s.

AOC #4: Compliance Audits – 40 C.F.R. § 68.79(a) requires ChampionX Sugar Land to certify that they have 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.

ChampionX Sugar Land evaluated compliance with the OSHA Process Safety Management PSM Standard, but not the EPA Risk Management Program requirements.

AOC #5 – Contractors – 40 C.F.R. § 68.87(b)(5) requires ChampionX Sugar Land periodically evaluate the performance of the contract owner or operator in fulfilling their obligations.

ChampionX Sugar Land did not start its evaluation process until 2020. The 2021 periodic evaluation failed to capture the deficient contract employee conducting mechanical integrity inspection

Section IV – FOLLOW UP

No additional information was received by EPA after exiting the Facility on March 10, 2022.

Section V – LIST OF APPENDICES (not included in online version of the report)

Appendices

Appendix 1 – Operating Procedure Certifications
Appendix 2 – ChampionX Sugarland Compliance Audits