

Clean Air Act 112(r), Risk Management Program Inspection Report

Clifton C. Williams WWTP

Mobile, Alabama

March 14, 2023

1.0 Introduction

The U.S. Environmental Protection Agency's efforts to reduce the likelihood and severity of chemical accidents includes planning and legislative initiatives such as the National Contingency Plan, the Emergency Planning and Community Right-to-Know Act (EPCRA), and the Accidental Release Prevention requirements under Section 112(r) of the Clean Air Act (CAA), as amended in 1990. This report outlines an inspection of the Risk Management Program (RMP) as mandated by Section 112(r)(7) of the CAA.

The focus of this inspection was to assess the RMP for the covered process of chlorination and dechlorination at the Clifton C. Williams WWTP, Mobile, AL. The inspection consisted of an examination of program documentation as well as site review of the chlorination process operations. This report provides background information about the facility and a list of observations.

2.0 Background

Clifton C. William WWTP (Facility) is a municipal entity. The Facility has been owned and operated by Mobile Area Water and Sewer System and registered into RMP since June 1999. The Facility uses chlorine and sulfur dioxide, both toxic substances regulated by the RMP Rule, 40 CFR Part 68, in the chlorination/disinfection and dechlorination of wastewater effluent discharged by the Facility. The Facility operational capacity and inventory of chlorine and sulfur dioxide is above the regulatory threshold quantity of 2,500 pounds.

The Facility is subject to the RMP requirements of 40 CFR Part 68 process level 2 as it is a government entity, has public receptors within its toxic endpoint, and is not subject to federal Occupational Safety and Health Administration (OSHA)'s Process Safety Management (PSM) requirements. The background specifics are summarized in Table 1 presented below.

TABLE 1: Inspection Information Summary

Inspection Team

Inspector(s): Chetan Gala, US. EPA, Region 4; Justin Stark, US. EPA, Region 4; Mark Briggs (contract staff) and Brendan Scher (contract staff)

Date of Facility Visit: March 14, 2023

Facility Identification

Name: Clifton C. Williams WWTP

Street Address: 1600 Yend St.

City: Mobile County: Mobile State: Alabama Zip: 36603

EPA Facility ID No: 1000 0010 7467

Latitude: 30.660200

Longitude: -088.036900

Name of corporate parent company: Mobile Area Water and Sewer System (MAWSS)

Name, title, and email of the person responsible for 40 C.F.R. Part 68 implementation:

Name: David Tillman

Title: Chief Treatment Plant Operator

Email: dtillman@mawss.com

Name and title of emergency contact:

Name: Doug Cote, Water and Sewer Engineering Manager

Day phone: (251) 694-3187

24-hour Phone: (251) 689-4673

Email: dcote@mawss.com

Name and titles of stationary source personnel involved in site inspection (*accompanied site tours, provided documents and explanations*):

Name	Title	Phone	Email
Barry Smith		(251) 721-2850	basmith@mawss.com
David Tillman	Chief Treatment Plant Operator	(251) 300-7966	dtillman@mawss.com
Dustin Till	Consulting Engineer	(334) 303-2133	Dustin.till@gmcnetwork.com

Note: **NOT A UNION** facility

Date and Program Levels of Submitted Risk Management Plan

Date of initial submission: June 21, 1999

Date of recent submission: April 01, 2021

Process ID	Process Description	Process Chemical ID	Process Program Level	Chemical Name	Quantity (lbs)	NAICS code	Flammable / Toxic
1000115526	Sewage Treatment Facility	1000144446	Level 2	Chlorine 7782-50-5	24,000 lbs.	Process NAIC Code: 1000116976 NAIC Code: 22132 NAIC Description: Sewage Treatment Facilities	Toxic
1000115526	Sewage Treatment Facility	1000144447	Level 2	Sulfur dioxide (anhydrous) 7446-09-5	12,000	Process NAIC Code: 1000116976 NAIC Code: 22132 NAIC Description: Sewage Treatment Facilities	Toxic

3.0 Observations

The inspection of the facility evaluated compliance with various sections of the RMP regulations (40 C.F.R. Part 68, Program Level 2). The inspection involved discussions with the facility representatives of issues related to its chlorine and sulfur dioxide storage, handling and usage, the Facility's RMP, a review of paperwork associated with the facility's most recent Risk Management Plan (RMPlan), Process Safety Information (PSI), Process Hazard Review/Analysis (PHR/PHA), Compliance Audit (CA), Operating Procedures (OP), etc., and a walkthrough of the facility. Inspection in-brief and out-brief conferences were conducted. Additional information was requested. Observations from the RMP inspection and available information are presented below:

1. 40 CFR § 68.48(b) requires the owner or operator to ensure that the process is designed in compliance with recognized and generally accepted good engineering practices (RAGAGEP). Compliance with Federal or state regulations that address industry-specific safe design or with industry-specific design codes and standards may be used to demonstrate compliance with this paragraph. EPA inspectors observed the following:
 - During the facility walk-through, the inspection team observed that neither the entrance to the chlorine building nor the sulfur dioxide building had signage indicating that access was to be restricted to authorized personnel only. This inadequate signage to restrict access is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 4.4 states, "The chlorine storage area must be posted properly with signs in accordance with local codes and state and federal laws and regulations. Access to storage areas by unauthorized personnel should be restricted."
 - During the facility walk-through, the inspection team noted the lack of NFPA diamonds on the primary entrances to both the sulfur dioxide and chlorine buildings. This is inconsistent with the following RAGAGEP:
 - NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response (2012), Section 9.1 states, "Symbol Arrangement. One of the systems delineated in Figure 9.1(a), Figure 9.1(b), or Figure 9.1(c) shall be used for the implementation of this standard."
 - During the facility walk-through, the inspection team noted the lack of windsocks on the chlorine and sulfur dioxide buildings. While windsocks were present elsewhere on the property, it is important in an emergency response situation that responders and facility personnel are aware of the wind direction near the source of the leak. The lack of windsocks on these buildings is inconsistent with the following RAGAGEPs:
 - Chlorine Institute Pamphlet 64, Emergency Response Plans for Chlor-Alkali (2014), Sodium Hypochlorite, and Hydrogen Chloride Facilities, Section 3.4.4 states, "Wind direction indicators mounted in strategic locations throughout the facility and visible at all times are highly beneficial in helping personnel respond to the emergency."

- Appendix C to 29 CFR § 1910.119 states, “For outdoor processes where wind direction is important for selecting the safe route to a refuge area, the employer should place a wind direction indicator such as a windsock or pennant at the highest point that can be seen throughout the process area.”
- During the facility walk-through, the inspection team noted the lack of an eyewash station and safety shower outside of the chlorine building. An eyewash station and safety shower is present outside of the sulfur dioxide building. However, access to this eyewash and safety shower from the chlorine building is impeded by an exhaust gas scrubber. The lack of an eyewash station and safety shower for the chlorine building is inconsistent with the following RAGAGEPs:
 - ANSI/ISEA Z358.1, American National Standard for Emergency Eyewash and Shower Equipment (2014), Appendix B5 states, “Emergency eyewash and shower equipment should be available for immediate use, but in no instance should it take an individual longer than 10 seconds to reach the nearest facility.”
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 9.3 states, “An emergency eyewash and a deluge shower should be located near the potential exposure site but not so close as to be unusable in an emergency. The path to the unit must remain clear of all obstructions.”
- During the facility walk-through, the inspection team noted the windows on the chlorine building do not provide a sightline to the chlorine injection area of the building. This is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 7.7 states that, “Each room should contain at least one window so the interior can be viewed without entering the building.”
- During the facility walk-through, the inspection team noted plywood was used as a portion of the chlorine building construction. Use of plywood in construction of the chlorine building structure is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 7.1 states that, “Buildings in which chlorine is stored should be made of noncombustible materials and should be free of flammable materials. Any building housing chlorine equipment or containers should be designed and constructed to protect all elements of the chlorine system from fire hazards.”
- During the facility walk-through, the inspection team noted that 1-ton chlorine and sulfur dioxide containers in storage are not provided with proper restraints to prevent them from rolling. The lack of proper restraints and/or securing mechanisms to prevent the 1-ton chemical storage containers from rolling is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 4.2.2 states that, “Whether full or empty, ton containers must always be secured to prevent them from rolling.”

- During the facility walk-through, the inspection team noted that the aqua ammonia bottle intended for chlorine leak testing in the chlorine process building was not labeled indicating its contents. The lack of proper labeling on the aqua ammonia bottle is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 4.3.1 states that, “When a leak is suspected, it is recommended that ammonia vapors be used to find the source. Employees must be equipped with proper personal protective equipment when performing this task (CI Pamphlet 65 (13.1)).
 - 29 CFR 1910.1200(f)(6) states, “Workplace labeling. Except as provided in paragraphs (f)(7) and (f)(8) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:
 - (i) The information specified under paragraphs (f)(1)(i) through (v) of this section for labels on shipped containers; or,
 - (ii) Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.”
- During the facility walk-through, the inspection team noted that the emergency ventilation system for the chlorine and sulfur dioxide buildings was not operational due to a scrubber pump being out of service. Facility personnel informed the inspection team that the scrubber had been down for an extended period of time, and that the issue would not be resolved for at least multiple weeks after the inspection. The lack of a functional mechanical ventilation system while the facility is operating is inconsistent with the following RAGAGEPs:
 - NFPA 400, Hazardous Materials Code (2016), Section 21.2.16.2 states that, “Where mechanical exhaust ventilation is provided, the system shall be operational during the time the building or space is occupied.”
 - NFPA 400, Hazardous Materials Code (2016), Section 21.2.16.2.2 states that, “When operation of ventilation systems is required, systems shall operate continuously unless an alternative design is approved by the AHJ.”
- During the facility walk-through, the inspection team noted that the windows for the chlorine building are fixed in a closed position. This prevents adequate cross-ventilation from occurring in the chlorine building. A lack of adequate cross-ventilation in the chlorine building is inconsistent with the following RAGAGEP:
 - Chlorine Institute Pamphlet 155, Water and Wastewater Operators Chlorine Handbook, Edition 3 (2014), Section 7.3.2 states that, “Chlorine gas is heavier than air and will collect at floor level. The exhaust air intake should be located at or near floor level. The exhaust air

discharge should be at a safe location. An elevated fresh-air inlet must be provided and should be positioned for adequate cross ventilation.”

2. 40 CFR § 68.50(c) requires the owner or operator to document the results of the review and ensure that problems identified are resolved in a timely manner.
 - The Facility did not provide documentation showing implementation or tracking of the recommendations from the 2021 PHA. As such, the Facility has not documented the results of the 2021 PHA and ensured that problems identified during that PHA were resolved in a timely manner, as required.
3. 40 CFR § 68.52(a) requires the owner or operator to prepare written operating procedures that provide clear instructions or steps for safely conducting activities associated with each covered process consistent with the safety information for that process. Operating procedures or instructions provided by equipment manufacturers or developed by persons or organizations knowledgeable about the process and equipment may be used as a basis for a stationary source's operating procedures.
 - The standard operating procedures provided by the Facility were often vague and lacking the level of detail needed for replicable performance of the given task. For example, under the operating procedures for initial startup of the chlorine system the first step states, “Personal protective equipment should be utilized to prevent potential chlorine exposure¹.” Details are not provided as to which personal protective equipment should be used, where this equipment can be found, or how to properly use the necessary equipment. Another example is the normal shutdown procedures for the chlorine system. The second step reads, “Manually close the valve by following the manufacturer instructions listed on front of the actuator¹.” Once again, the normal shutdown procedure does not provide the needed context for which valve is being referred to in this situation. As such, the Facility has not prepared written operating procedures that provide clear instructions or steps for safely conducting activities associated with the chlorine system, as required.
4. 40 CFR § 68.58(a) requires the owner or operator to certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that the procedures and practices developed under this subpart are adequate and are being followed. 40 CFR § 68.58(e) requires the owner or operator to retain the two (2) most recent compliance audit reports. This requirement does not apply to any compliance audit report that is more than five years old.
 - The Facility did not provide documentation of prior compliance audits. As such, the inspection team was unable to verify that the Facility had historically conducted compliance audits at least every three years as required under 40 CFR § 68.58(a). If the Facility had historically conducted compliance audits, then the Facility has not retained copies of the two (2) most recent compliance audit reports as required under 40 CFR § 68.58(e).

¹ Operating procedures are provided in the document titled “Risk Management Plan and Prevention Program C.C. WILLIAMS WASTEWATER TREATMENT FACILITY”

5. 40 CFR § 68.93(a) requires the Facility to coordinate at least annually, and more frequently, if necessary, to address changes at the stationary source; in the stationary source's emergency response and/or emergency action plan; and/or in the community emergency response plan.
- The Facility was not able to provide documentation of annual efforts to coordinate emergency response with local emergency response entities for the years 2020 or 2021.

Inspection Report,

Prepared by:

Gala, Chetan

Digitally signed by Gala, Chetan
Date: 2023.05.18 17:47:34 -04'00'

Chetan Gala, Inspector
U.S. EPA Region 4
South Air Enforcement Section
Air Enforcement Branch

Date

Approved by:

Groendyke, Todd

Digitally signed by Groendyke, Todd
Date: 2023.05.18 16:32:26 -04'00'

Todd Groendyke, Chief
U.S. EPA Region 4
South Air Enforcement Section
Air Enforcement Branch

Date