

**CLEAN AIR ACT (CAA) § 112(r)(7)
&
EMERGENCY PLANNING, COMMUNITY RIGHT-TO-KNOW ACT (EPCRA) § 312
INSPECTION REPORT**

City of Billings Water Treatment Plant

Facility Name and Address: City of Billings Water Treatment Plant 2251 Belknap Avenue Billings, Montana 59101 Contact/Telephone: Brendan Binns (406) 657-8347 Mailing Address: 2251 Belknap Avenue P.O. Box 30958 Billings, Montana 59101	Date of Inspection: 9/18/2024 RMP EPA ID #: 1000 0005 5076 • Program Level: 3 • Covered Substances: ○ Chlorine TRIFID #: Facility does not TRI-report NAICS: 22131 # Employees at this location: 30
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INTRODUCTION

This report presents the observations of the CAA section 112(r)(7) and EPCRA section 312 inspection conducted by EPA Region 8. The purpose of this inspection was to determine compliance with the Risk Management Plan (RMP) requirements of CAA section 112(r)(7) and the Tier II reporting requirements of EPCRA section 312.

The City of Billings Water Treatment Plant (CBWTP) uses, handles, and/or stores more than the threshold quantity of Chlorine. Chlorine is regulated, as specified at 40 C.F.R. §§ 68.115 and 68.130.

CAA 112(r)(7) Program Elements Reviewed:

1. Applicability [68.10]
2. OCA/ACS [68.20 – 68.42]
3. Process safety information [68.65]
4. Process Hazard Analysis [68.67]
5. Operating procedures [68.69]
6. Training [68.71]
7. Mechanical integrity [68.73]
8. Management of Change [68.75]
9. Pre-startup safety review [68.77]
10. Compliance audits [68.79]

11. Incident investigation [68.81]
12. Employee participation [68.83]
13. Hot work permit [68.85]
14. Contractors [68.87]
15. Emergency Response [68.90 – 68.96]
16. Risk Management Plan [68.150 – 68.195]

Nature of Business:

CDWTP uses both Chlorine and UV radiation to disinfect water for the City of Billings in Montana.

OBSERVATIONS

CAA § 112(r)(7) (RMP):

The EPA noted 12 possible findings regarding CBWTP's implementation of their Risk Management Program. The findings, along with their associated requirements, are listed below:

- 1. Requirement found at Subpart A – Management [40 CFR 68.15(c)]:** The owner or operator shall document other persons responsible for implementing individual requirements of the risk management program and define the lines of authority through an organization chart or similar document.
 - *CBWTP has not documented other persons responsible for implementing individual requirements of the risk management program and has not defined the lines of authority through an organization chart or similar document.*
- 2. Requirement found at Subpart D - Prevention Program – Process Safety Information [40 CFR 68.65(d)(1)(v)]:** The Process Safety Information shall include ventilation system design pertaining to the equipment in the process.
 - *CBWTP did not provide ventilation system design for the Chlorine Storage Rooms.*
- 3. Requirement found at Subpart D - Prevention Program – Process Safety Information [40 CFR 68.65(d)(1)(vii)]:** The Process Safety Information shall include material and energy balances for processes built after June 21, 1999.
 - *CBWTP did not provide material and energy balances for processes built after June 21, 1999.*
- 4. Requirement found at Subpart D - Prevention Program – Process Safety Information [40 CFR 68.65(d)(2)]:** The owner or operator shall document that equipment complies with recognized

and generally accepted good engineering practices (RAGAGEP).

- *The North Chlorine Storage Room contains one exit door (which opens outward), and one garage door (which opens upward)*
- *Section 9.1 of the **Chlorine Institute's Pamphlet 1, Chlorine Basics** requires 2 exit doors, which open outward, in rooms where Chlorine is stored*
- *However, Section 7.7 of the **Chlorine Institute's Pamphlet 155, Water and Wastewater Operators Chlorine Handbook** does not require 2 exit doors.*
- *Nevertheless, the EPA recommends that CBWTP install a 2nd exit door, which opens outward, in the North Chlorine Storage Room.*
- *Also, if the outdoor Chlorine Storage Area (which is covered by a roof and is walled with chain-link fencing) contains only one exit gate, the EPA recommends that CBWTP add another exit gate. This gate should open outward.*

5. Requirement found at Subpart D - Prevention Program – Process Safety Information [40 CFR 68.65(d)(2)]: The owner or operator shall document that equipment complies with recognized and generally accepted good engineering practices (RAGAGEP).

- *The closest eyewash and deluge shower to the Chlorine Storage Rooms is located in the Main Room of the Chemical Building*
- *This eyewash and deluge shower does not comply with:*
 - *Section 9.3 of the **Chlorine Institute's Pamphlet 155, Water and Wastewater Operators Chlorine Handbook**, or*
 - ***ANSI/ISEA Z358.1-2014, Emergency Eyewash & Shower Standard***
- *To access the eyewash and deluge shower from a Chlorine Storage Room, personnel must exit westward from the storage room; walk northward on an exterior, concrete dock; unlock an exterior door to the Main Room in the Chemical Building, using a conventional steel key; walk eastward approximately 20-30 feet into the Chemical Building; turn a corner and walk southward approximately 20 additional feet*
- *Section 9.3 of **Pamphlet 155** states that the eyewash and shower should be located close, but not too close, to the possible chlorine-exposure site. The section also states that the path to the eyewash and shower should be free of obstructions.*
- *Section 4.5.2 of **ANSI Z358.1** specifies that emergency eyewash and shower should:*
 - *take no more than 10 seconds to access*
 - *be located on the same level as the hazard*
 - *be accessible by a path of travel that is free of obstructions that might inhibit immediate use*
- *Appendix B5 of **ANSI Z358.1** states that the average person can walk approximately 55 ft. in 10 seconds when walking at a normal pace. However, being physically, visually, or emotionally impaired can substantially reduce the distance walked. So can suffering from the pain of chemical exposure.*
- *Appendix B5 of **ANSI Z358.1** also states that, with certain exceptions, a door is*

considered to be an obstruction.

- 6. Requirement found at Subpart D - Prevention Program – Process Hazard Analysis [40 CFR 68.67(c)(7)]:** The Process Hazard Analysis (PHA) shall address a qualitative evaluation of a range of the possible safety and health effects of failure of controls.

- *CBWTP PHA's do not address a qualitative evaluation of a range of the possible safety and health effects of failure of controls.*

- 7. Requirement found at Subpart D - Prevention Program – Operating Procedures [40 CFR 68.69(a)(2)]:** The Operating Procedures shall address the following:

- ☐ Consequences of deviations [68.69(a)(2)(i)]
- ☐ Steps required to correct or avoid deviation? [68.69(a)(2)(ii)].

- *CBWTP's Operating Procedures do not address:*
 - *Consequences of deviations, or*
 - *Steps required to correct or avoid deviation.*

- 8. Requirement found at Subpart D - Prevention Program – Management of Change [40 CFR 68.75(a)]:** The owner or operator shall establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process.

- *CBWTP has not established written Management of Change (MOC) procedures which comply with 40 CFR 68.75(a)*
- *CBWTP does fill out MOC forms before implementing changes to the chlorine system*
- *However, the procedures for filling out the forms, and for complying with 40 CFR 68.75(a), are not written.*

- 9. Requirement found at Subpart D - Prevention Program – Management of Change [40 CFR 68.75(a)]:** The owner or operator shall establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures, and changes to stationary sources that affect a covered process.

- *According to CBWTP's records, CBWTP implemented 3 MOC procedures around 2015-2017*
- *These procedures were associated with improvements to the Chemical Building and to the disinfection process.*
- *The associated MOC forms were numbered 46, 47, and 48*
- *However, CBWTP was not able to provide MOC form #47.*

- 10. Requirement found at Subpart D - Prevention Program – Pre-startup Safety Review [40 CFR**

68.77]: The owner or operator shall perform a pre-startup safety review (PSSR) for new stationary sources and for modified stationary sources when the modification is significant enough to require a change in the process safety information.

- *CBWTP has not developed a PSSR program which complies with 40 CFR 68.77*
- *However, when CBWTP's contractors make changes to CBWTP's chlorine process, the contractors must complete a "proving/demonstration period", during which they must show that the changes are in accordance with construction documents, etc.*

11. Requirement found at Subpart D - Prevention Program – Incident Investigation [40 CFR

68.81(d)(2)]: The Incident Investigation reports shall include the date that the investigation began.

- *CBWTP's Incident Investigation reports do not include the date that the investigation began.*

12. Requirement found at Subpart D - Prevention Program – Employee Participation [40 CFR

68.83]: The owner or operator shall develop a written plan of action regarding the implementation of the employee participation required by this section.

- *CBWTP has not established a written Employee Participation plan which complies with 40 CFR 68.83.*

EPCRA § 312:

- 1. CBWTP lists one chemical/substance on their Tier II's: Chlorine. No other chemicals/substances are listed.**

However, CBWTP may also store/use additional chemicals/substances which are considered "hazardous" by the OSHA 1910.1200 standard.

CBWTP should ensure that all “hazardous” chemicals/substances are reported on future Tier II’s if the chemicals/substances are stored/used above the threshold quantity.

CRMID should also revise their most-current Tier II if chemicals/substances, besides Chlorine, are currently stored/used above the threshold quantity.

INSPECTION REPORT REVIEW RECORD		
		<i>Date:</i>
<i>Author:</i>	<i>Toxics and Pesticides Enforcement Section Inspector</i>	<i>10/5/2024</i>
<i>Final Reviewer:</i>	<i>Section Supervisor</i>	<i>10/16/24</i>