



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 155
Seattle, WA 98101

ENFORCEMENT &
COMPLIANCE ASSURANCE
DIVISION

**Clean Air Act - Section 112(r)
Risk Management Program
and EPCRA 312 – Tier II
Facility Inspection Report**

FACILITY INFORMATION:

Name: Operations Center Brookside Yard
Physical Address: 2323 General Anderson Avenue, Vancouver, WA 98661
Phone Number: (360) 487-8275
Latitude/Longitude: 45.639444 / -122.618333
RMP Facility ID#: 1000 0003 9282
FRS ID#: 110000539775
EJ Concerns: Yes (Above 80%)

CONTACT INFORMATION (RMP Implementation):

Name: Brian E. Wilson
Phone Number: (360) 487-8275
E-mail: brian.e.wilson@cityofvancouver.us

EMERGENCY CONTACT INFORMATION:

Name: Rob Weber
Phone (24-hr): 360-487-8210
E-mail: rob.weber@cityofvancouver.us
Website: www.cityofvancouver.us

TRIP DETAILS:

Inspection Date: March 1, 2023
Inspection Time: 0900 hours through 1240 hours
Inspectors: Terry Garcia, EPA, Lead RMP Inspector
Edward Johannes, EPA, RMP Inspector
Erin Williams, EPA, EPCRA Coordinator
Mhara Coffman, EPA, RMP Inspector in Training
Lisa Graves, Weston Solutions, Inc., EPA START Contractor

DATE AND PROGRAM LEVELS OF SUBMITTED RMP:

Initial Submission Date: June 16, 1999
Date of Latest Update: August 15, 2018

Process (Program 1, 2, 3) as reported in RMP:

Process ID	Description	Process Chemical ID	NAICS Code	Program Level	Chemical Name CAS Number	Quantity (lbs)
100090185	Chlorine	1000112790	22131	3	Chlorine (7782-50-5)	11,250

PURPOSE:

The purpose of this inspection was to determine whether this facility is in compliance with Section 112(r) of the Clean Air Act (CAA) and Title 40 Code of Federal Regulations (CFR) Part 68, Chemical Accident Prevention Provisions.

- The facility has been previously inspected in the past 5 years: No ☒ Yes ☐
If Yes, Date of Last Inspection: 6/6/2017
- The facility is High Risk: No ☐ Yes ☒
- Joint EPCRA inspection: No ☐ Yes ☒

CAA Title V Air Permit:

Does the facility have a CAA Title V Permit? No ☒ Yes ☐
If Yes, Permit Number:

RELEASE/ACCIDENT HISTORY:

Did the facility have a reportable release in the past 5 years? No ☒ Yes ☐
If Yes, Date and Description of the Release:

EPCRA TIER II REPORTING:

Did the facility submit the Enter Year Tier II report to the SERC? No ☐ Yes ☒
If Yes, Date the Tier II was submitted: 1/26/2023
If No, calendar year of the most recent Tier II:

Did the facility submit a Tier II to the LEPC and local fire department? No ☐ Yes ☒
If Yes, Date the Tier II was submitted: 1/26/2023

INSPECTION ENTRY:

Terry Garcia led the inspection entry. The EPA Inspection Team (EPA) met with Brian Wilson and Rob Weber across the street from the Operations Center Brookside Yard facility in the Public Works/Water Operations & Maintenance office in Vancouver, Washington. The team arrived at the facility at 0900 hours and was joined by the following facility personnel:

Name	Title
Brian E. Wilson	Operations Superintendent
Rob Weber	Water Production Supervisor

Was a state/county/or local emergency representative present? No ☒ Yes ☐
If Yes, Name and Title of Representative:

The facility is a first responder:

No ☒

Yes ☐

If No, Responding Agency: Vancouver Fire Department, Fire Station #2

EPA was escorted to a conference room located in the facility's office building. Introductions were made by Terry Garcia, who provided a summary of the risk management program (RMP) and explained the purpose of the visit. Each team member presented his/her credentials.

EPA then requested an explanation of the facility's operations and any additional safety measures that should be taken during the site tour. Brian Wilson and Rob Weber gave a brief description of the facility, operations, and personal protective equipment required for the tour.

Prior to the inspection, EPA sent a certified notice of inspection letter to the facility informing them of the CAA Section 112(r)(6)(L) requirement that facility employees and employee representatives (such as a union representative) have the right to participate in the RMP inspection, and that a copy of the letter must be provided to the employee representative(s) and the letter posted in a manner accessible to employees in the facility.

The facility is unionized:

No ☐

Yes ☒

If Yes, Name of Union: The Washington Federation of State Employees (AFSCME)

An employee representative present during the facility visit:

No ☐

Yes ☒

If Yes, Name/Title: Rob Weber, Water Production Supervisor

GENERAL INFORMATION:

The Operations Center Brookside Yard facility is regulated under the RMP as a Program Level 3 facility and is owned and operated by the City of Vancouver, Department of Public Works. The facility uses chlorine gas for the disinfection of drinking water. The facility receives and stores full and empty 150 pound chlorine cylinders in the Chlorine Storage Area Containment Room. Cylinders are distributed to groundwater pumping stations from Brookside Yard. The only regulated substance at the facility is chlorine. There are 13 full-time employees including 6 to 7 employees who are chlorine operators in the Water Production Department.

The facility is looking to phase out chlorine storage in the future.

ON-SITE OBSERVATIONS:

The facility tour was conducted from approximately 0940 hours to 1010 hours. EPA was escorted by Brian Wilson and Rob Weber, and observed the dedicated chlorine storage rooms and chlorine transfer workflow.

The facility has two dedicated rooms in Building 206 for chlorine gas storage and monitoring (photo 1). The space labeled Storage Room houses the emergency air chlorine scrubber (scrubber) system (photo 2). A chlorine sensor gauge is in the room (photo 3) and the scrubber will automatically activate if sensors detect chlorine >1 parts per million (ppm) from the chlorine storage room. The system has capacity to neutralize up to 150 pounds of chlorine. Emergency contact numbers are posted directly on the scrubber (photo 4), and the scrubber maintenance and testing log is located in the room (photo 5).

The chlorine gas storage is in the adjacent Chemical Room. There are two entrances into the room, with one designated for loading and receiving cylinders (photo 6). Cylinders are moved with a gas cylinder hand truck (photo 7). Once a cylinder has been securely fastened in the hand truck, the unit is hoisted up with a motorized crane and rolled to the transport vehicle on an I-beam track. The track extends outside

of the building (photo 8) where the cylinder can be placed into the bed of a transport truck. The transport vehicle is retrofitted with cylinder base holder and a metal bar strap to lock them into place during transport (photo 9).

The Chemical Room can store up to 75 full 150-pound chlorine cylinders (photo 10). Full and empty cylinders are grouped together with a metal chain (photo 11). The room has a chlorine sensor (photo 12) in addition to a decommissioned (unlabeled) chlorine sensor (photo 13).

The other safety features observed during the inspection were a visual alarm, universal placards, a windsock (photo 8), and bollard posts.

The Storage Room is equipped with a chlorine detection system that consists of an electrochemical sensor, an LED concentration display that is located next to the scrubber, and an audible and visual alarm system at the entrance to the chlorine storage room. The detection system is also automatically linked to the scrubber and blower system. Per the facility's PSI summary document below, the following table details the detection set points and associated functions for the chlorine detection system:

Chlorine Detection Set Points and Functions

Sensor Location	Set Point	Function
Chlorine Storage Room, SW corner	0.5 ppm	Warning light signal on the concentration output LED screen next to the scrubber system.
	1.0 ppm	Activation of visual and audible alarm at the entrance to the chlorine storage room. Activation of the scrubber and blower system.

Notes: ppm = parts per million.

Photographs were taken of the chlorine cylinder loading process. The photographs that were taken at the facility are included in Attachment A to this report.

After touring the RMP-covered process areas at the Brookside Yard, the inspection team returned to the conference room to review the RMP documentation. Upon completion of the document review, EPA provided a debriefing to Brian Wilson and Rob Weber.

INFORMATION COLLECTED FROM FACILITY:

1. Brookside Chlorine Storage Facility, Block Flow Diagram Figure
2. Brookside Chlorine Storage Facility, Site Floorplan Figure
3. 2017 Compliance Audit Certification
4. Mechanical Integrity (Section 9)
5. Standard Operating Procedure List
6. Mechanical Integrity Schedule for Brookside Chlorine Storage Facility
7. Email correspondence request for Contractor Packet
8. Audit Checklist spreadsheet
9. Facility Personnel Business Cards

AREAS OF CONCERNS ADDRESSED IN CLOSING CONFERENCE:

1. The facility does not document Process Hazard Analysis (PHA) recommendations, complete actions as soon as possible, develop a written schedule when actions need to be completed, communicate actions to employees who may be affected by the recommendations. [68.67(e)]. Reference 2020 Compliance Audit Finding Item C11 stating that 2018 PHA recommendations were addressed however there were no tracking of recommendations.
2. The facility has not certified annually that the operating procedures are current and accurate and that procedures have been reviewed as often as necessary to assure that they reflect current operating practice, including changes. [68.69(c)]. The SOP document provided at the time of inspection did not include revision dates, and the facility did not provide certification of the 2022 or 2023 SOPs.
3. The facility had not promptly determined and documented an appropriate response to each of the findings from the audits conducted in 2017, July 2022, and September 2020, and documented that deficiencies have been corrected. [68.79(d)].
4. The facility does not have an employee participation plan for the conduct and development of process hazard analyses, process safety, and accident prevention. [68.83]
5. The facility does not follow up with contractors on safety performance related topics. [68.87(b)]. Contractors such as JCI Jones of Tacoma, WA which provides chlorine bottles to the facility.
6. The facility did not perform the annual emergency response coordination activities. [68.90(b)(4)] The facility has not documented coordination with local emergency planning and response organizations. [68.93(c)]. The facility has not maintained a written record of each notification exercise conducted over the last five years. [68.96(a)].

DOCUMENTS REQUESTED NOT INCLUDED IN REPORT:

The following documents were requested during the inspection but are not included in this report. These documents will still be reviewed to determine compliance with Section 112(r) of the CAA.

1. Standard Operating Procedures Annual Certifications from 2020 through 2023
2. 2020 Compliance Audit Tracking of Findings/Recommendations
3. Date hoist and trolley was installed and Management of Change for process communicated.
4. Process Safety Information - safe upper and lower limits and evaluation of consequences of deviation.
5. Standard Operating Procedure - consequence deviation and steps to avoid or correct.

INSPECTION REPORT CERTIFICATION:

This is to certify that I, Terry Garcia, was the lead inspector at this facility and that I have verified the accuracy of the observations in this inspection report:

Terry Garcia Digitally signed by Terry Garcia
Date: 2023.05.11 11:25:14
-07'00'
Inspector Signature

JAVIER MORALES Digitally signed by JAVIER MORALES
Date: 2023.05.12 11:26:49 -07'00'

RMP Coordinator/Approval

ERIN WILLIAMS Digitally signed by ERIN WILLIAMS
Date: 2023.05.12 10:34:39 -07'00'

EPCRA Coordinator/Approval

MATTHEW QUARTERMAN Digitally signed by MATTHEW QUARTERMAN
Date: 2023.05.12 13:02:27 -07'00'

Land Enforcement Section Chief/Approval

Attachment A – Photo Log

Site Name: Operations Center Brookside Yard
City, State: Vancouver, Washington
Photographer: Lisa Graves

File	Photo Layout ID	Date	Time	Description
Photo 1.jpg	1	3/1/2023	9:47 AM	Building 206 Chlorine Rooms Entry/Exit
Photo 2.jpg	2	3/1/2023	9:51 AM	Emergency Air Chlorine Scrubber System and Motor Control System (MCS) Panel
Photo 3.jpg	3	3/1/2023	9:51 AM	Emergency Sensor Gauge
Photo 4.jpg	4	3/1/2023	9:52 AM	Emergency Air Chlorine Scrubber Emergency Contact List
Photo 5.jpg	5	3/1/2023	9:52 AM	Emergency Air Chlorine Scrubber Maintenance and Testing Log
Photo 6.jpg	6	3/1/2023	10:00 AM	Chlorine Cylinder Loading and Receiving Entrance
Photo 7.jpg	7	3/1/2023	10:00 AM	Chlorine Cylinder Crane Loading Setup
Photo 8.jpg	8	3/1/2023	10:04 AM	Crane Loading Track and Windsock
Photo 9.jpg	9	3/1/2023	10:13 AM	Cylinder Base Holder and Metal Bar Strap for Secure Transport
Photo 10.jpg	10	3/1/2023	9:57 AM	Full Chlorine Cylinder Storage Area
Photo 11.jpg	11	3/1/2023	9:57 AM	Empty Chlorine Cylinder Storage Area
Photo 12.jpg	12	3/1/2023	9:56 AM	Chlorine Sensor
Photo 13.jpg	13	3/1/2023	9:57 AM	Decommissioned Chlorine Sensor (Not Labeled)