

# Basin L Stormwater Treatment System Performance Verification Report

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**Kinder Morgan Port of Portland Terminal 4, Slip 3**

*Prepared for:*

**Kinder Morgan Bulk Terminals, Inc.**

11040 North Lombard Street

Portland, OR 97203

Multnomah County

October 2, 2023

Project No. M1017.01.016

*Prepared by:*

Maul Foster & Alongi, Inc.

3140 NE Broadway, Portland, OR 97232

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# Basin L Stormwater Treatment System Performance Verification Report

## Kinder Morgan Port of Portland Terminal 4, Slip 3

*The material and data in this report were prepared  
under the supervision and direction of the undersigned.*

*Maul Foster & Alongi, Inc.*



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Brooke Harmon, PE  
Project Engineer



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Krysta Krippaehne-Stein, EIT  
Staff Engineer

# Contents

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|     |                                           |   |
|-----|-------------------------------------------|---|
| 1   | Introduction.....                         | 1 |
| 1.1 | Purpose .....                             | 1 |
| 1.2 | Reporting Schedule .....                  | 1 |
| 1.3 | Site Background .....                     | 1 |
| 1.4 | Stormwater Treatment System .....         | 2 |
| 2   | Inspection and Maintenance Summary .....  | 2 |
| 3   | Quantitative Results .....                | 3 |
| 3.1 | Pollutant Reduction Rates .....           | 3 |
| 3.2 | Total Volume of Stormwater Treated.....   | 7 |
| 3.3 | Storm Events Exceeding Design Storm ..... | 8 |
| 4   | Summary and Recommendations .....         | 8 |

## Figures

### In the Text

- 3-1: Kinder Morgan Stormwater Treatment System Effluent PAH Concentrations Compared to DEQ's PAHs in Stormwater Curve
- 3-2: Kinder Morgan Stormwater Treatment System Effluent Total Copper Concentrations Compared to DEQ's Total Copper in Stormwater Curve
- 3-3: Kinder Morgan Stormwater Treatment System Effluent Total Zinc Concentrations Compared to DEQ's Total Zinc in Stormwater Curve
- 3-4: Kinder Morgan Stormwater Treatment System Effluent TSS Concentrations Compared to DEQ's Total Suspended Solids in Stormwater Curve

### Following the Report

- 1-1 Site Location

## Tables

### In the Text

- 3-2 Storm Events Exceeding 1.08-Inch Design Storm

### Following the Report

- 3-1 Basin L Stormwater Treatment System Performance Monitoring Summary

## Appendixes

### Appendix A

Inspection Records

### Appendix B

Photo Log

# 1 Introduction

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## 1.1 Purpose

Maul Foster & Alongi, Inc., has prepared this Basin L stormwater treatment system performance verification report on behalf of Kinder Morgan Bulk Terminals, Inc. (Kinder Morgan) consistent with the reporting requirements outlined in the June 8, 2022, *Source Control Measures Work Plan*.<sup>1</sup> The *Source Control Measures Work Plan* was approved by the Oregon Department of Environmental Quality (DEQ) on July 2, 2022. This performance verification report summarizes the performance monitoring of the Basin L stormwater treatment system for the 2022–2023 operating year (July 1, 2022, through June 30, 2023).

## 1.2 Reporting Schedule

The *Source Control Measures Work Plan* requires a performance verification report to be submitted to DEQ by October 1 following the end of the first year of the treatment system operations (the date of start-up through June 30 of the following year). The stormwater treatment system installation was completed in May 27, 2022, and this report discusses the operation of the system from start-up to June 30, 2023.

## 1.3 Site Background

The Kinder Morgan facility encompasses approximately 11.8 acres and is located at the Port of Portland Terminal 4 in section 02, township 1 north, range 1 west of the Willamette Meridian. Kinder Morgan is located at 11040 North Lombard Street in Portland, Oregon, and is bounded to the west by the Willamette River and to the east by North Terminal Road (see the figure) (the site). The site is owned by the Port of Portland (Port) and leased from the Port by Kinder Morgan.

The Kinder Morgan facility is a river-dependent active bulk storage and transfer site that primarily handles soda ash. Soda ash is delivered by rail from mines, then stored in the Soda Ash Building and loaded onto ships or railcars.

Basin L is within the Port's Slip 3 upland area with known historical soil and groundwater contamination. The Port entered into the DEQ's Voluntary Cleanup Program to address the historical contamination and implement source control measures to protect the Willamette River via an Agreement for Remedial Investigation, Source Control Measures, and Feasibility Study on December 4, 2003 (LQVC-NWR-03-18) (Environmental Cleanup Site Information No. 2356).

Stormwater runoff generated at Kinder Morgan's Basin L discharges to the Willamette River between river miles 4 and 5, consistent with the National Pollutant Discharge Elimination System Stormwater

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<sup>1</sup> MFA. 2022. *Source Control Measures Work Plan, Kinder Morgan Terminal 4, Basin L Stormwater Treatment System*. June 8.

Discharge Permit No. 1200-Z (1200-Z Permit) issued by the DEQ and administered by the City of Portland Bureau of Environmental Services.

The Basin L treatment system was designed to achieve source control goals and 1200-Z Permit benchmarks.

## 1.4 Stormwater Treatment System

The Basin L stormwater treatment system consists of a flow- and spill-control manhole, pump station, a pH adjustment system consisting of two aboveground reaction tanks, a carbon dioxide tank and a water quality skid that controls the carbon dioxide injection, a discharge and recirculation pump and valving, as well as two aboveground detention tanks, and a StormwaterRx Aquip Model 400SXE filtration system.

Stormwater from Basin L is collected via 18 catch basins and a network of gravity pipes that discharge into a pump station that conveys the runoff into the reaction tanks where carbon dioxide is injected to reduce pH levels. The pH adjustment system is equipped with a recirculation system that is activated when the effluent pH is outside of the specified range; when activated, stormwater from the reaction tanks is discharged back into the pump station and routed through the pH adjustment system again until the effluent pH level drops to within the specified range. Stormwater is pumped from the reaction tanks to the detention tanks and filtered by the Aquip media filter prior to discharge to Wheeler Bay of the Willamette River.

# 2 Inspection and Maintenance Summary

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Inspections of the Basin L stormwater treatment system are completed monthly to document site conditions and evaluate the need for system maintenance. Monthly inspection and maintenance reports are included in Appendix A. The following notable dates are associated with the first year of operation of the Basin L stormwater treatment system.

- **October 25, 2022:** Stormwater was observed to be ponding on top of the Aquip filter tarp cover. The tarp was installed to limit fugitive soda ash dust from entering the filter. The ponding did not affect the filter performance, but StormwaterRx, LLC (StormwaterRx) was notified.
- **November 9, 2022:** The tarp support bars were bent from the weight of stormwater ponding on the tarp.
- **November 15, 2022:** StormwaterRx replaced two tarp support bars and tightened the tarp straps to prevent future ponding.
- **December 21, 2022:** StormwaterRx added an additional support bar to prevent stormwater from ponding on the edges of the tarp cover.
- **December 8, 2022:** Black material accumulation was observed on the Aquip filter media surface. The surface of the media was scraped on December 16, 2022, and approximately 0.25 inches of accumulation was removed.

- **March 13, 2023:** Sediment accumulation was observed on the Aquip filter media surface. The surface of the media was scraped and the sediment was removed on March 29, 2023.
- **May 16, 2023:** Pump floats were observed to be tangled up, causing the pump to run when no stormwater was present (i.e., running dry). The pumps were shut off and the float cords were untangled. The system was turned on the following day after the pump was inspected by an electrician to ensure the long pump run time did not damage the motor. Kinder Morgan began evaluating preventive measures to avoid this issue in the future. These measures were implemented in August 2023 and will be discussed in detail in the 2023–2024 treatment system performance evaluation report.
- **May 23, 2023:** StormwaterRx raised the overflow indicator pipe elevation to match the overflow pipe elevation inside the Aquip filter.

Relevant photographs of the stormwater treatment system are included in Appendix B.

## 3 Quantitative Results

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Pollutant reduction rates, total volume of stormwater treated, and 24-hour rainfall data were analyzed consistent with the methodology outlined in the *Source Control Measures Work Plan*. The results of these analyses are summarized in the following sections.

### 3.1 Pollutant Reduction Rates

Four sampling events were conducted between July 1, 2022, and June 30, 2023. During each sampling event, stormwater samples were collected from the pump station, upstream of the filter (i.e., pre-filter), and downstream of the filter (i.e., post-filter), and analyzed for polycyclic aromatic hydrocarbons (PAHs), total copper, total zinc, and total suspended solids (TSS). The pump station samples represented untreated stormwater. The pre-filter samples represented stormwater quality downstream of the pH adjustment system. The post-filter samples consisted of the treated filter effluent.

Analytical results are presented in the attached stormwater treatment system performance monitoring table (Table 3-1). Pollutant reduction rates were calculated by comparing the pump station (untreated) and post-filter (treated) concentrations. The average PAH reduction rates ranged between 71 and 81 percent. The average reduction rate was 63 percent for total copper, 51 percent for total zinc, and 80 percent for TSS.

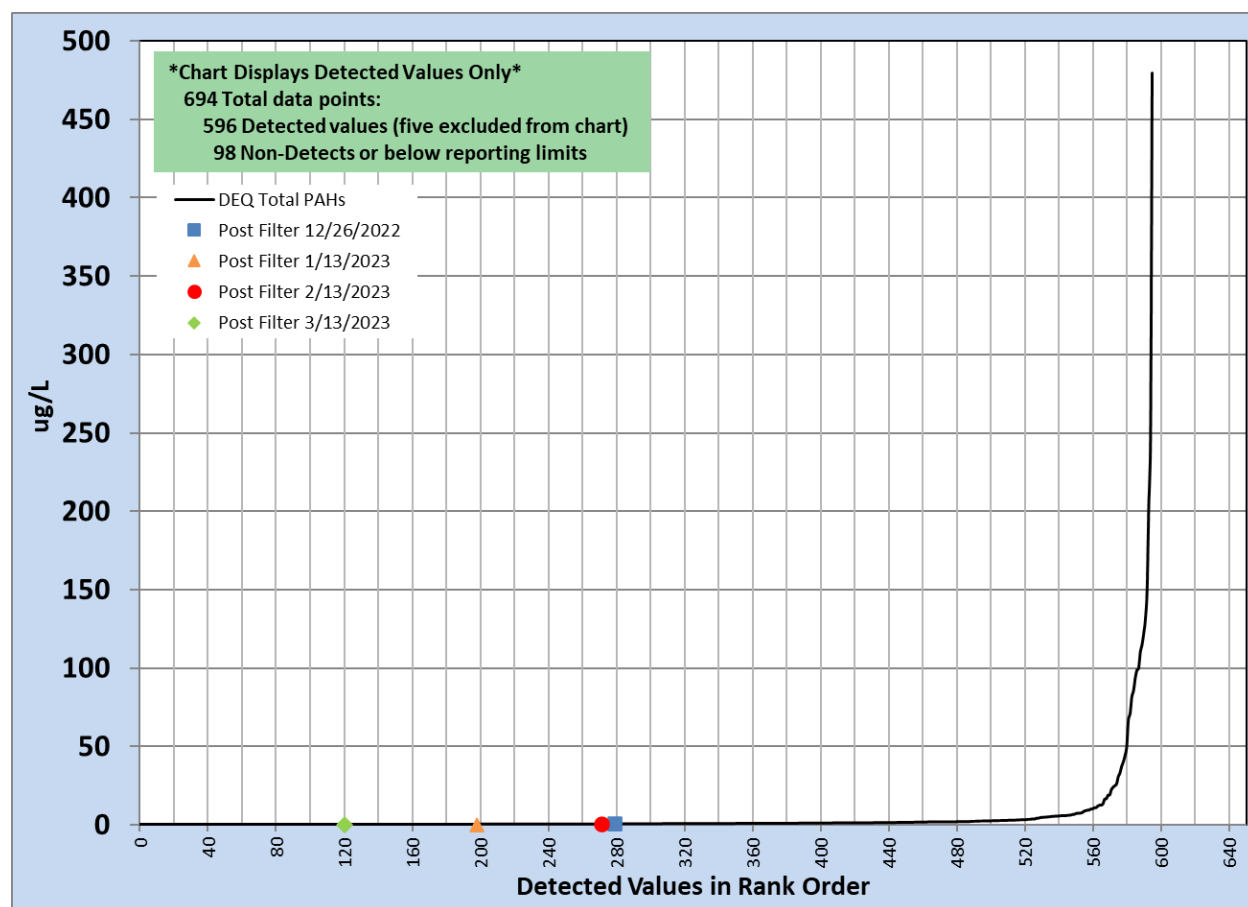
Consistent with the *Portland Harbor Joint Source Control Strategy* requirements,<sup>2</sup> concentrations should remain under the “knee of the curve” of the pollutant concentration charts published by DEQ and at concentrations less than 10 times the Portland Harbor screening level values (SLVs). Post-filter concentrations were over select PAH SLVs for the first three sampling evenings. However, aside from one non-detect copper result with a detection limit greater than the SLV, all post-filter concentrations were below 10 times the applicable SLVs for all sampling events. Additionally, the

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<sup>2</sup> United States Environmental Protection Agency and DEQ. 2005. *Portland Harbor Joint Source Control Strategy*. December.

post-filter concentrations from the fourth sampling event were under all SLVs. The post-filter sample concentrations for total PAHs, total copper, total zinc, and TSS were plotted on the respective *Portland Harbor Joint Source Control Strategy* chart shown in Figures 3-1, 3-2, 3-3, and 3-4 below. All post-filter sample concentrations were below the knee of the curve for each parameter plotted. Sampling results are further described below.

**Figure 3-1: Kinder Morgan Stormwater Treatment System Effluent Total PAH Concentrations Compared to DEQ's PAHs in Stormwater Curve**



#### Notes

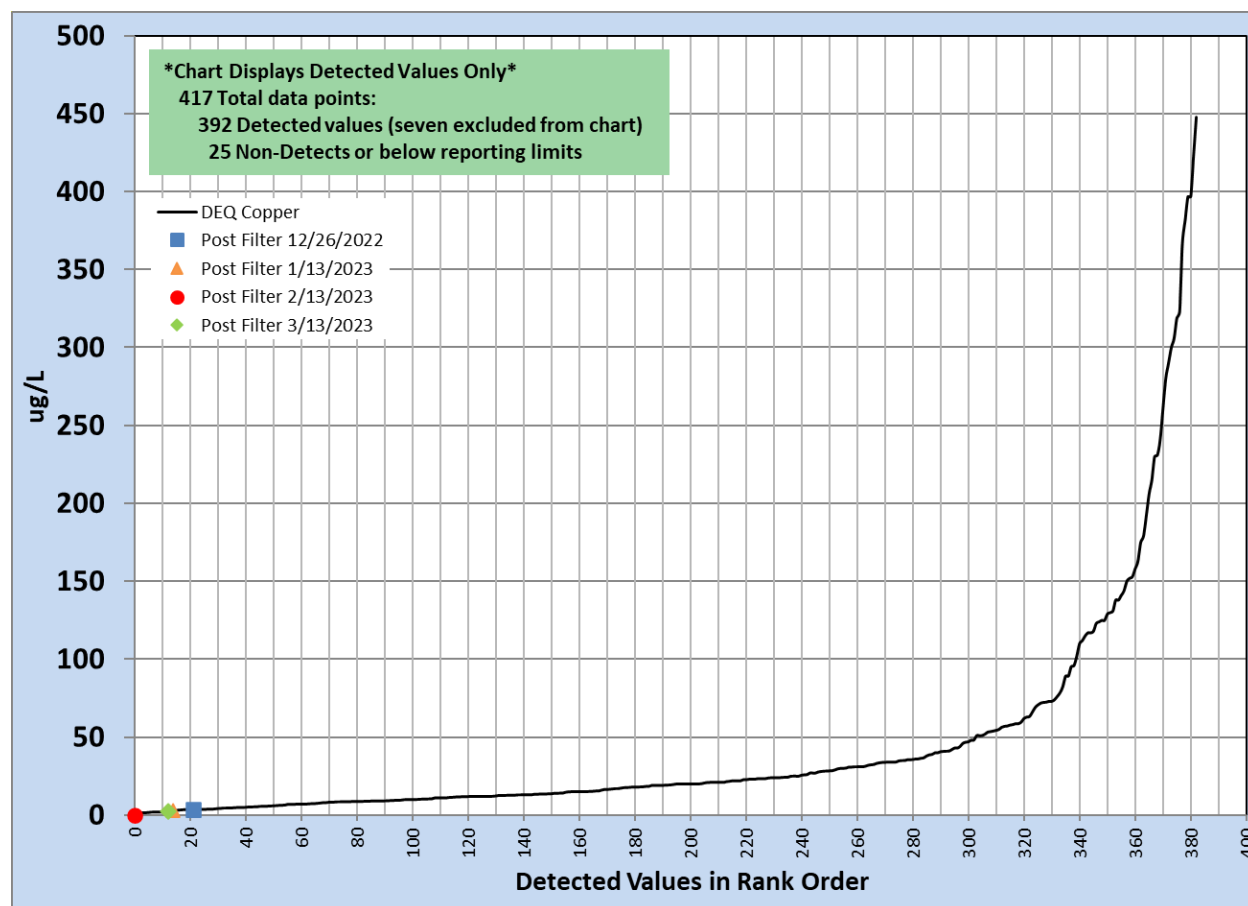
DEQ = Oregon Department of Environmental Quality.

PAH = polycyclic aromatic hydrocarbons.

ug/L = micrograms per liter.

The treatment system effluent total PAH concentrations fall below the knee of the curve, as shown in Figure 3-1, and are less than ten times the SLV, demonstrating that the Basin L stormwater treatment system is effective at reducing PAH concentrations in stormwater and achieving source control goals.

**Figure 3-2: Kinder Morgan Stormwater Treatment System Effluent Total Copper Concentrations Compared to DEQ's Total Copper in Stormwater Curve**

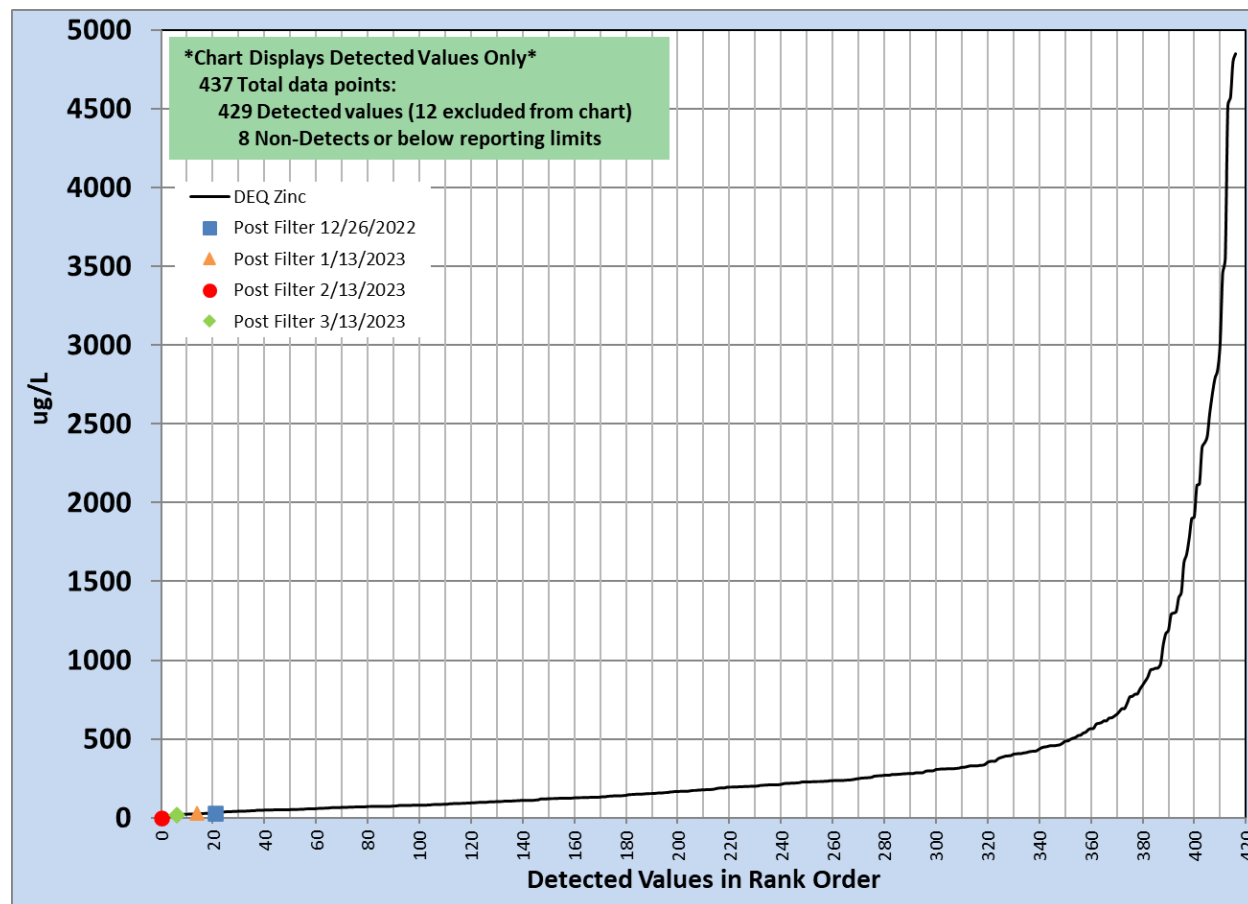


**Notes**

DEQ = Oregon Department of Environmental Quality.  
 ug/L = micrograms per liter.

The treatment system effluent total copper concentrations fall below the knee of the curve, as shown in Figure 3-2. Two of the four sample results were below the SLV and the copper concentration in all four samples was less than ten times the SLV. Copper concentrations were also below the 1200-Z Permit benchmark for total copper. This demonstrates that the Basin L stormwater treatment system is effective at reducing copper concentrations in stormwater and achieving source control goals.

**Figure 3-3: Kinder Morgan Stormwater Treatment System Effluent Total Zinc Concentrations Compared to DEQ's Total Zinc in Stormwater Curve**



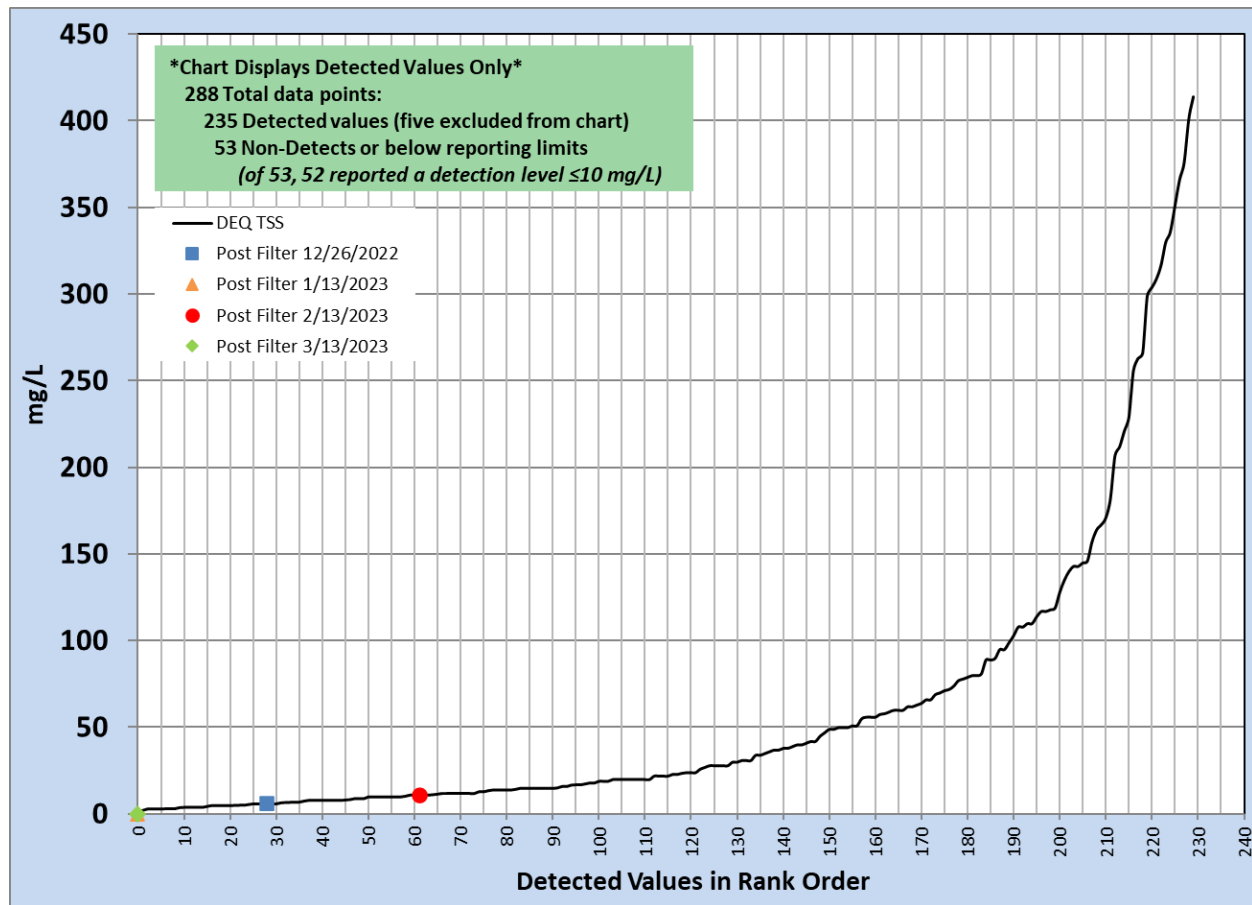
**Notes**

DEQ = Oregon Department of Environmental Quality.

ug/L = micrograms per liter.

The treatment system effluent total zinc concentrations fall below the knee of the curve, as shown in Figure 3-3. The total zinc concentrations in all effluent samples were below the SLV. Zinc concentrations were also below the 1200-Z Permit benchmark for total zinc. This demonstrates that the Basin L stormwater treatment system is effective at reducing zinc concentrations in stormwater and achieving source control goals.

**Figure 3-4: Kinder Morgan Stormwater Treatment System Effluent TSS Concentrations Compared to DEQ's Total Suspended Solids in Stormwater Curve**



#### Notes

DEQ = Oregon Department of Environmental Quality.

TSS = total suspended solids.

ug/L = micrograms per liter.

The treatment system effluent TSS concentrations fall below the knee of the curve, as shown on the above chart. The TSS concentration in all effluent samples was below the SLV. TSS concentrations were also below the 1200-Z Permit benchmark for TSS. This demonstrates that the Basin L stormwater treatment system is effective at reducing TSS concentrations in stormwater and achieving source control goals.

## 3.2 Total Volume of Stormwater Treated

The total volume of stormwater treated between July 1, 2022, and June 30, 2023, was 9.77 acre-feet or 3,183,564 gallons.

### 3.3 Storm Events Exceeding Design Storm

Continuous hourly rain gage data were retrieved from the City of Portland's HYDRA rain gage network at the nearby Shipyard Rain Gage to estimate the frequency of potential bypasses. There were four storm events between July 1, 2022, and June 30, 2023, that exceeded the 1.08-inch design storm, as shown in Table 3-2. These storm events may have resulted in a portion of the runoff bypassing the stormwater treatment system. It should be noted that typically, pollutant concentrations are diluted (lower) during large storm events and the combined treated and bypassed effluent quality was likely similar to the concentrations presented in this report.

**Table 3-2: Storm Events Exceeding 1.08-Inch Design Storm**

| Date              | Rainfall (inches) |
|-------------------|-------------------|
| November 4, 2022  | 2.34              |
| December 26, 2022 | 2.90              |
| March 13, 2023    | 1.21              |
| April 10, 2023    | 1.19              |

## 4 Summary and Recommendations

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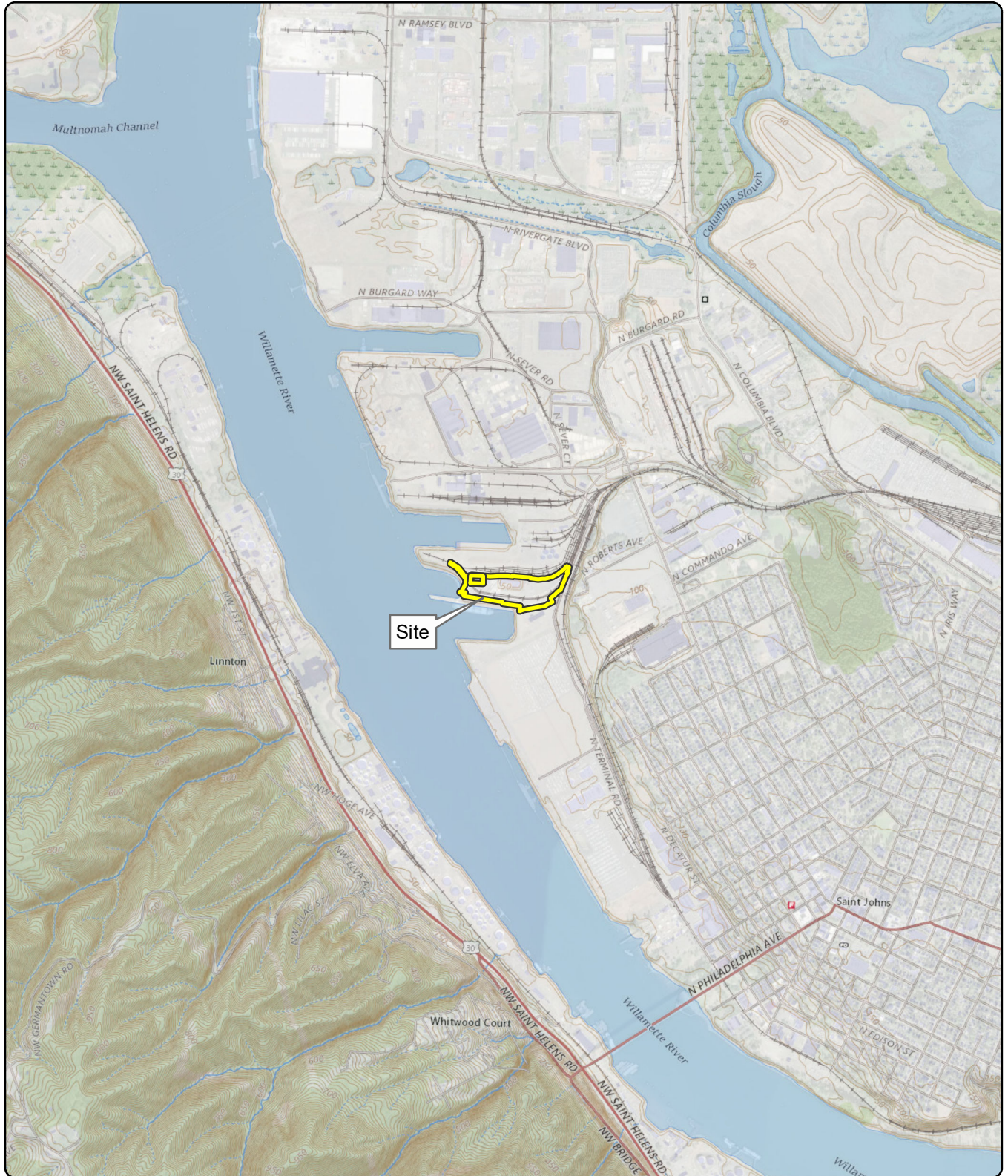
Based on the available data presented in this report, the Basin L stormwater treatment system is operating effectively and as designed. The treatment system effluent pollutant concentrations were below the knee of their respective curves and either less than the SLVs or ten times the SLVs. Kinder Morgan proposes to discontinue source control sampling and continue to monitor and maintain the Basin L stormwater treatment system consistent with the requirements of the 1200-Z Permit.

# Figure

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MAUL  
FOSTER  
ALONGI



Site Address: 11040 North Lombard Street,  
Portland, Oregon  
Source: Taxlot obtained from Metro RLIS,  
US Geological Survey (1990) 7.5-minute  
topographic quadrangle: Linnton  
Section 2, Township 1 North, Range 1 West

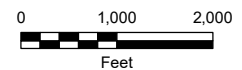


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This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

**Figure 1-1  
Site Location**

Kinder Morgan  
Portland, Oregon



# Table

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MAUL FOSTER ALONGSIDE

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M1017.01.016, 10/2/2023, Tf\_Performance Monitoring Summary.xlsx

# Appendix A

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## Inspection Records



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BASIN L  
STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT  
Kinder Morgan Terminal 4  
Portland, Oregon

| Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME: <u>7/29/22 10AM</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                 |                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------|
| Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |                                                                                                           |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (Yes/No)                        | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                              |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                              |                                                                                                           |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                              |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                              |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                              |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                              |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                              |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NA                              |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                              | ELECTRICAL CONNECTION NEEDS TO BE FINISHED, SCHEDULED FOR EARLY AUGUST                                    |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                 |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No                              |                                                                                                           |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                              |                                                                                                           |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                 |                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                 |                                                                                                           |
| Inspected By: <u>BROOKE HARMON</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Signature: <u>Brooke Harmon</u> |                                                                                                           |
| <small>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</small> |                                 |                                                                                                           |

# STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT

Kinder Morgan Terminal 4

Portland, Oregon

| Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME: <u>8/27/22</u> <u>1400</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                |                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------|
| Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                                                                                           |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (Yes/No)                       | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                             |                                                                                                           |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                             |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No                             |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No                             |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                             |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NA                             |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | YES                            | Ø                                                                                                         |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                             |                                                                                                           |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                             |                                                                                                           |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                                                                                                           |
| ELECTRICAL CONNECTION COMPLETED IN AUG 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                                                                                                           |
| Inspected By: <u>BLOOMER HARMON</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Signature: <u>Bruce Harmon</u> |                                                                                                           |
| I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. |                                |                                                                                                           |

# STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT

Kinder Morgan Terminal 4

Portland, Oregon

BASIN L

Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME: SEPT 9 2022 1140 AM

Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.

| Inspection Item                                                                                                                                                     | (Yes/No) | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------|
| <b>Aquip Filtration System</b>                                                                                                                                      |          |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                      | No       |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)? | No       |                                                                                                           |
| Does the media bed surface appear brittle/cracked?                                                                                                                  | No       |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                   | No       |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                    | No       |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                      | No       |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                        | No       |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                         | NA       |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (Influent to Aquip).                                                                          | Yes      | Ø MFT                                                                                                     |

## Detention Tanks

|                                                                                                             |    |  |
|-------------------------------------------------------------------------------------------------------------|----|--|
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                    | No |  |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings? | No |  |

## STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH

NEED TO CHANGE UNITS ON TOTALIZING FLOW METER

Inspected By: BROCKE HARMON

Signature: Brocke Harmon

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

**STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT**  
**Kinder Morgan Terminal 4**  
**Portland, Oregon**  
**Basin L**

**Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME:** OCTOBER 25, 2022 1:00

Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.

| Inspection Item                                                                                                                                                     | (Yes/No) | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------|
| <b>Aquap Filtration System</b>                                                                                                                                      |          |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                      | No       | SLIGHTLY MORE ACCUMULATION ON EAST SIDE, NOT SIGNIFICANT                                                  |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)? | No       | POSSIBLY MORE WATER FLOWING ON EAST PORTION OF FILTER - TALK TO STEVE                                     |
| Does the media bed surface appear brittle/cracked?                                                                                                                  | No       |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                   | No       |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                    | No       |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                      | No       |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                        | No       |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                         | No       |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquap).                                                                          | Yes      | 0.21 ACRE FT - CHANGE UNITS                                                                               |

**Detention Tanks**

|                                                                                                             |    |  |
|-------------------------------------------------------------------------------------------------------------|----|--|
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                    | No |  |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings? | No |  |

**STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH**

SOME WATER PONDING ON TRAP COVER OF AQUIP - LET STEVE KNOW + SEE IF THEY CAN FIX IT

Inspected By: BROOKE HARMON

Signature: Brooke Harmon

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

**STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT**  
**Kinder Morgan Terminal 4**  
**Portland, Oregon**  
Basin L

| <b>Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME:</b> November 9, 2022 10:30 AM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <i>Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                           |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (Yes/No)                                                                                       | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                                                                                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | --                                                                                             |                                                                                                           |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | --                                                                                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | --                                                                                             |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | --                                                                                             |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                                                                                             |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                             |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                                                                                             |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                                                                                            | 2.26 acre feet                                                                                            |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                             |                                                                                                           |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                                                                                             |                                                                                                           |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                |                                                                                                           |
| <p>StormwaterRx replaced two support bars for the filter cover from water ponding and bending the cover supports. They also tightened the straps on the polyethylene cover to prevent water from ponding on the cover again. They did not install the piece required to loosen the straps and I was unable to remove the cover to observe/inspect the Aquip filter media. I spoke with StormwaterRx to address the issue, they need to order a part and install it once it arrives.</p>                                                                                                                                                                                   |                                                                                                |                                                                                                           |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Signature:  |                                                                                                           |
| <p>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</p> |                                                                                                |                                                                                                           |

**STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT**  
**Kinder Morgan Terminal 4**  
**Portland, Oregon**  
Basin L

| <b>Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME:</b> December 8, 2022 14:30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                |                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                |                                                                                                                                                                                                        |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (Yes/No)                                                                                       | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date)                                                                                              |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                                                                                                                                                        |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NA                                                                                             |                                                                                                                                                                                                        |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                                                                            | Manifold appears to be sloped to the east, with more accumulation on the eastern side of the filter. B Harmon will reach out to vendor about adjusting manifold.                                       |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                                                                                             |                                                                                                                                                                                                        |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                                                                                            | Black accumulation on media surface occluded filter, minor scrape without removing material allowed filter to drain. Filter needs surface scraping. B Harmon will coordinate vendor/sub for this month |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                            | See comment above, scraping is warranted.                                                                                                                                                              |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                                                                             |                                                                                                                                                                                                        |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                             |                                                                                                                                                                                                        |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                             |                                                                                                                                                                                                        |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes                                                                                            | 3.7 acre feet                                                                                                                                                                                          |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                |                                                                                                                                                                                                        |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NA                                                                                             | Detention tanks are green poly tanks and unable to see through/in                                                                                                                                      |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                             |                                                                                                                                                                                                        |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                                                                                                                        |
| <p>Interim surface scrape without removing material allowed surface to drain on December 7, 2022, approximately 2 inches ponded.</p> <p>Surface scrape of Aquip conducted on December 16, 2022. Approximately 0.25" of accumulation and clogged media removed from the filter surface. Scraped material was placed in covered roll off adjacent to filter.</p>                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                                                                                                                                                        |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Signature:  |                                                                                                                                                                                                        |
| <p><small>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</small></p> |                                                                                                |                                                                                                                                                                                                        |

**STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT**  
**Kinder Morgan Terminal 4**  
**Portland, Oregon**  
Basin L

| <b>Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME:</b> January 10, 2023 11:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <i>Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                           |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (Yes/No)                                                                                       | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NA                                                                                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                                                                                             | Flow appears uniform across the distribution manifold                                                     |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                             |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                             |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No                                                                                             |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes                                                                                            | Approximately 1-2 inches                                                                                  |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                             |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes                                                                                            | 417 gpm                                                                                                   |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                                                                                            | 5.77 acre feet                                                                                            |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NA                                                                                             | Detention tanks are green poly tanks - unable to see through/in                                           |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                                                                                             |                                                                                                           |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                |                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                |                                                                                                           |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Signature:  |                                                                                                           |
| <i>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</i> |                                                                                                |                                                                                                           |

**STORMWATER TREATMENT SYSTEM INSPECTION AND MAINTENANCE REPORT**  
**Kinder Morgan Terminal 4**  
**Portland, Oregon**  
Basin L

| <b>Stormwater TREATMENT SYSTEM INSPECTION DATE AND TIME:</b> February 1, 2023 14:00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------|
| <i>Treatment system must be inspected monthly to confirm proper functioning and evaluate the need for maintenance.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                                                                           |
| Inspection Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (Yes/No) | Additional Information<br>(e.g., Detailed Description, Source, Corrective Action and Implementation Date) |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |                                                                                                           |
| Is there evidence of significant solids and debris accumulation on top of the buffering media?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | NA       |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the inlet distributor perforations (is water flow is uniform across the entire length of pipe)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No       |                                                                                                           |
| Does the media bed surface appear brittle/cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No       |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation on the surface of the media bed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No       |                                                                                                           |
| Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No       |                                                                                                           |
| Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | No       |                                                                                                           |
| Are there leaks, cracks, breaks, or other evidence of damage in the influent and effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No       |                                                                                                           |
| If system is currently operating, is the flow rate exceeding 400 gpm? Record the flow rate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No       |                                                                                                           |
| Is the flow totalizer functional? Record the volume on flow totalizer (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes      | 6.05 acre feet                                                                                            |
| <b>Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                                                                           |
| Is there evidence of significant sediment or debris accumulation in the detention tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NA       | Detention tanks are green poly tanks - unable to see through/in                                           |
| Are there any visible leaks, cracks, breaks, or other evidence of damage in the tanks or bulkhead fittings?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No       |                                                                                                           |
| <b>STORMWATER TREATMENT SYSTEM MAINTENANCE TASKS AND/OR CORRECTIVE ACTIONS IMPLEMENTED THIS MONTH</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |                                                                                                           |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          | Signature:             |
| <i>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</i> |          |                                                                                                           |

**Basin L**  
**Stormwater Treatment System Inspection Record**  
**Kinder Morgan Bulk Terminals, Inc.**  
**Portland, Oregon**

Inspection Date and Time: March 13, 2023 2:30 pm

| Checklist Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (Yes/No)                                                                                        | Additional Information<br>(e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pump Station Wet Well and Valve Vault</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well or valve vault?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No                                                                                              |                                                                                                                                                 |
| <b>Dry season.</b> Inspect for sediment accumulation, drain pump station if needed. If more than three inches of solids are observed in the wet well, pressure wash or vacuum the wet well and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                          | NA                                                                                              |                                                                                                                                                 |
| <b>pH Adjustment System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Clean and calibrate process and effluent pH probes. Collect samples from each sampling port and measure pH using handheld meter. Compare system pH probe (programmable logic controller display) and handheld meter data (postcalibration). Download and review electronic pH data.                                                                                                                                                                                                                                                                                                                                                                       | —                                                                                               | Conducted by MeasureTech                                                                                                                        |
| <b>Monthly.</b> Inspect recirculation pump and auto-actuated valves and verify proper operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes                                                                                             |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground piping? Is the pipe insulation intact?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive debris accumulated on the inlet distributor perforations? Is water flow uniform across the entire length of pipe?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the media bed surface appear brittle or cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive accumulation of solids on the surface of the media bed? Is the accumulation evenly distributed and is there more sand visible than solids?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes                                                                                             | media should be scrapped based on ponded water                                                                                                  |
| <b>Monthly.</b> Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes                                                                                             | approx. 8 inches                                                                                                                                |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the influent or effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the system currently operating, is the flowrate exceeding 400 gpm? Record the flowrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                                                                                             | 397 gpm                                                                                                                                         |
| <b>Monthly.</b> Is the flow totalizer functional? Record the total volume (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes                                                                                             | 7.1 acre feet                                                                                                                                   |
| <b>Reaction/Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Do the inlets/outlets appear to be functioning as intended (i.e., is there any visible damage to the inlet/outlet pipes/structures)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                                                                             |                                                                                                                                                 |
| <b>Dry season.</b> Inspect tanks for sediment accumulation, drain the tanks if needed. If more than three inches of solids are observed in either tank, pressure wash the tank and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                                      | NA                                                                                              |                                                                                                                                                 |
| <b>Stormwater System Maintenance: Note stormwater treatment system maintenance activities and/or corrective actions implemented this month.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                 |                                                                                                                                                 |
| KM will procure drums to facilitate scraping of the top surface of the Aquip media. MFA will conduct surface scraping once drums are on site.<br>- completed on 3/29/23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                 |                                                                                                                                                 |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Signature:  |                                                                                                                                                 |
| <i>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</i> |                                                                                                 |                                                                                                                                                 |

**Basin L**  
**Stormwater Treatment System Inspection Record**  
**Kinder Morgan Bulk Terminals, Inc.**  
**Portland, Oregon**

Inspection Date and Time: April 13, 2023 4 pm

| Checklist Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (Yes/No)                                                                                        | Additional Information<br>(e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pump Station Wet Well and Valve Vault</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well or valve vault?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                              |                                                                                                                                                 |
| <b>Dry season.</b> Inspect for sediment accumulation, drain pump station if needed. If more than three inches of solids are observed in the wet well, pressure wash or vacuum the wet well and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                                  | NA                                                                                              |                                                                                                                                                 |
| <b>pH Adjustment System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Clean and calibrate process and effluent pH probes. Collect samples from each sampling port and measure pH using handheld meter. Compare system pH probe (programmable logic controller display) and handheld meter data (postcalibration). Download and review electronic pH data.                                                                                                                                                                                                                                                                                                                                                                               | —                                                                                               | Conducted by MeasureTech                                                                                                                        |
| <b>Monthly.</b> Inspect recirculation pump and auto-actuated valves and verify proper operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                                             |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground piping? Is the pipe insulation intact?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive debris accumulated on the inlet distributor perforations? Is water flow uniform across the entire length of pipe?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the media bed surface appear brittle or cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive accumulation of solids on the surface of the media bed? Is the accumulation evenly distributed and is there more sand visible than solids?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the influent or effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the system currently operating, is the flowrate exceeding 400 gpm? Record the flowrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the flow totalizer functional? Record the total volume (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes                                                                                             | 7.7 acre feet                                                                                                                                   |
| <b>Reaction/Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Do the inlets/outlets appear to be functioning as intended (i.e., is there any visible damage to the inlet/outlet pipes/structures)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                                                                                             |                                                                                                                                                 |
| <b>Dry season.</b> Inspect tanks for sediment accumulation, drain the tanks if needed. If more than three inches of solids are observed in either tank, pressure wash the tank and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                                              | NA                                                                                              |                                                                                                                                                 |
| <b>Stormwater System Maintenance: Note stormwater treatment system maintenance activities and/or corrective actions implemented this month.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                 |                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                 |                                                                                                                                                 |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Signature:  |                                                                                                                                                 |
| <small>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</small> |                                                                                                 |                                                                                                                                                 |

**Basin L**  
**Stormwater Treatment System Inspection Record**  
**Kinder Morgan Bulk Terminals, Inc.**  
**Portland, Oregon**

Inspection Date and Time: May 16, 2023 8:30 am

| Checklist Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (Yes/No)                                                                                        | Additional Information<br>(e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pump Station Wet Well and Valve Vault</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well or valve vault?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No                                                                                              | pump floats were tangled/stuck and the pump was running dry; untangled cords and the pumps shut off.                                            |
| <b>Dry season.</b> Inspect for sediment accumulation, drain pump station if needed. If more than three inches of solids are observed in the wet well, pressure wash or vacuum the wet well and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                   | NA                                                                                              |                                                                                                                                                 |
| <b>pH Adjustment System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Clean and calibrate process and effluent pH probes. Collect samples from each sampling port and measure pH using handheld meter. Compare system pH probe (programmable logic controller display) and handheld meter data (postcalibration). Download and review electronic pH data.                                                                                                                                                                                                                                                                                                                                                                | —                                                                                               | Conducted by MeasureTech                                                                                                                        |
| <b>Monthly.</b> Inspect recirculation pump and auto-actuated valves and verify proper operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Yes                                                                                             |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground piping? Is the pipe insulation intact?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive debris accumulated on the inlet distributor perforations? Is water flow uniform across the entire length of pipe?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the media bed surface appear brittle or cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive accumulation of solids on the surface of the media bed? Is the accumulation evenly distributed and is there more sand visible than solids?                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the influent or effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the system currently operating, is the flowrate exceeding 400 gpm? Record the flowrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the flow totalizer functional? Record the total volume (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                             | 9.7 acre feet                                                                                                                                   |
| <b>Reaction/Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Do the inlets/outlets appear to be functioning as intended (i.e., is there any visible damage to the inlet/outlet pipes/structures)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Yes                                                                                             |                                                                                                                                                 |
| <b>Dry season.</b> Inspect tanks for sediment accumulation, drain the tanks if needed. If more than three inches of solids are observed in either tank, pressure wash the tank and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                               | NA                                                                                              |                                                                                                                                                 |
| <b>Stormwater System Maintenance: Note stormwater treatment system maintenance activities and/or corrective actions implemented this month.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                 |                                                                                                                                                 |
| On May 23 StormwaterRx raised overflow indicator pipe elevation to match the overflow pipe elevation inside the Aquip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                 |                                                                                                                                                 |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Signature:  |                                                                                                                                                 |
| I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. |                                                                                                 |                                                                                                                                                 |

**Basin L**  
**Stormwater Treatment System Inspection Record**  
**Kinder Morgan Bulk Terminals, Inc.**  
**Portland, Oregon**

Inspection Date and Time: June 19, 2023 14:30

| Checklist Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (Yes/No)                                                                                        | Additional Information<br>(e.g., Location, Source, Detailed Description, Corrective Action Implemented [if applicable] and Implementation Date) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pump Station Wet Well and Valve Vault</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the piping, fittings and appurtenances within the wet well or valve vault?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                              |                                                                                                                                                 |
| <b>Dry season.</b> Inspect for sediment accumulation, drain pump station if needed. If more than three inches of solids are observed in the wet well, pressure wash or vacuum the wet well and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                                         | NA                                                                                              |                                                                                                                                                 |
| <b>pH Adjustment System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Clean and calibrate process and effluent pH probes. Collect samples from each sampling port and measure pH using handheld meter. Compare system pH probe (programmable logic controller display) and handheld meter data (postcalibration). Download and review electronic pH data.                                                                                                                                                                                                                                                                                                                                                                                      | –                                                                                               | Conducted by MeasureTech                                                                                                                        |
| <b>Monthly.</b> Inspect recirculation pump and auto-actuated valves and verify proper operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                             |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground piping? Is the pipe insulation intact?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Aquip Filtration System</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive debris accumulated on the inlet distributor perforations? Is water flow uniform across the entire length of pipe?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No<br>NA                                                                                        |                                                                                                                                                 |
| <b>Monthly.</b> Does the media bed surface appear brittle or cracked?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there evidence of excessive accumulation of solids on the surface of the media bed? Is the accumulation evenly distributed and is there more sand visible than solids?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No<br>Yes                                                                                       |                                                                                                                                                 |
| <b>Monthly.</b> Does the top layer of the media require removal?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is there ponded water above the media? If so, how many inches?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Are there any leaks, breaks, or evidence of damage in the influent or effluent piping and valves?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the system currently operating, is the flowrate exceeding 400 gpm? Record the flowrate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Is the flow totalizer functional? Record the total volume (influent to Aquip).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                                                                             | 9.77 acre feet                                                                                                                                  |
| <b>Reaction/Detention Tanks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                 |                                                                                                                                                 |
| <b>Monthly.</b> Are there any visible cracks or leaks in the aboveground tanks?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | No                                                                                              |                                                                                                                                                 |
| <b>Monthly.</b> Do the inlets/outlets appear to be functioning as intended (i.e., is there any visible damage to the inlet/outlet pipes/structures)?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                             |                                                                                                                                                 |
| <b>Dry season.</b> Inspect tanks for sediment accumulation, drain the tanks if needed. If more than three inches of solids are observed in either tank, pressure wash the tank and manage the wash water and solids consistent with applicable disposal regulations.                                                                                                                                                                                                                                                                                                                                                                                                                     | NA                                                                                              |                                                                                                                                                 |
| <b>Stormwater System Maintenance: Note stormwater treatment system maintenance activities and/or corrective actions implemented this month.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                 |                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                 |                                                                                                                                                 |
| Inspected By: Brooke Harmon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Signature:  |                                                                                                                                                 |
| <p><small>I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.</small></p> |                                                                                                 |                                                                                                                                                 |

## Appendix B

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### Photo Log



MAUL  
FOSTER  
ALONGI

# Photographs

**Project Name:** Kinder Morgan Port of Portland Terminal 4, Slip 3, Basin L  
**Project Number:** M1017.01.016  
**Location:** Portland, Oregon

## Photo No. 1.

### Description

Stormwater detention tanks



## Photo No. 2.

### Description

Aquip filter, green detention tanks and white pH adjustment system reaction tanks in the background



# Photographs

Project Name: Kinder Morgan Port of Portland Terminal 4, Slip 3,  
Basin L  
Project Number: M1017.01.016  
Location: Portland, Oregon

## Photo No. 3.

### Description

Aquip filter media bed  
after filter installation



## Photo No. 4.

### Description

Stormwater ponding on  
the filter tarp cover



# Photographs

Project Name: Kinder Morgan Port of Portland Terminal 4, Slip 3,  
Basin L  
Project Number: M1017.01.016  
Location: Portland, Oregon

## Photo No. 5.

### Description

Aquip filter in operation



## Photo No. 6.

### Description

Black material  
accumulated on the  
filter media surface prior  
to removal





# Photographs

**Project Name:** Kinder Morgan Port of Portland Terminal 4, Slip 3, Basin L  
**Project Number:** M1017.01.016  
**Location:** Portland, Oregon

## Photo No. 7.

### Description

Filter media surface  
after black material was  
scraped and removed

