2024 ANNUAL PROGRESS REPORT SWMU-1 OILY WATER SEWER

HF SINCLAIR PUGET SOUND REFINING LLC

March 2025

SUBMITTED BY:

M HF Sinclair

HF Sinclair Puget Sound Refining LLC

8505 South Texas Road Anacortes, WA 98221 SUBMITTED TO:



Washington State Department of Ecology

Industrial Section PO Box 47600 Olympia, WA 98504-7600

CERTIFICATION STATEMENT

All geologic and hydrogeologic work preformed pursuant to this report was conducted under the supervision of and direction of the geologist listed below:



Thomas Davis P.G.

Date

All engineering work performed pursuant to this report was conducted under the supervision and direction of the engineer listed below:



3/31/2025

Eric Libolt P.E.

Date

TABLE OF CONTENTS

1.	INTRODUCTION1-1										
	1.1	GENER	AL SITE INFORMATION	1-1							
	1.2	CONTA	CT INFORMATION	1-2							
2.	DEVIATIONS FROM THE INVESTIGATION AND RESPONSE PLAN2-1										
3.	OILY	WATER	SEWER ASSESSMENT	3-1							
	3.1	AREA C	F CONCERN-1 (D-STREET INVESTIGATION)	3-2							
	3.2	AREA C	F CONCERN-2 (B-STREET INVESTIGATION)	3-2							
		3.2.1	INVESTIGATION	3-3							
		3.2.2	LABORATORY ANALYSIS	3-3							
		3.2.3	SOIL SAMPLE COLLECTION	3-4							
	2.2	3.2.4		3-4							
	3.3	GROUN		3-4							
		3.3.1	GEOLOGY AND HYDROGEOLOGY	3-5							
4.	RELE/	ASES		4-1							
	4.1	AREA C	F CONCERN-1 RELEASE	4-1							
5.	CORF	RECTIVE	ACTIONS AND INTERIM MEASURES	5-1							
6.	RISK	OF CON [.]	TAMINATION MIGRATION	6-1							
	6.1	GEOLO	GY AND HYDROGEOLOGY	6-1							
7.	INAC	CESSIBL	E AREAS	7-1							
8.	RELE	ASE MIT	IGATION AND MONITORING	8-1							
9.	HISTO	ORICAL I	NACCESSIBLE AREA REVIEW	9-1							
10.	CONC		S	10-1							
11.	REFE	RENCES		11-1							

LIST OF APPENDICES

- Appendix A Figures
- Appendix B Tables
- Appendix C 2023 Process Sewer Inspections and Repair Recommendations
- Appendix D Sampling and Analysis Plan, SMWU 1 Area of Concern 2
- Appendix E Soil Boring Logs Area of Concern 2
- Appendix F Monitoring Well Construction Diagrams Area of Concern 2
- Appendix G Soil Original Laboratory Analytical Reports
- Appendix H MTCA TPH Soil Method C Worksheets
- Appendix I Groundwater Original Laboratory Analytical Report
- Appendix J Soil Borelog B-3-57
- Appendix K Sampling and Analysis Plan, SWMU 1 Area of Concern 1, Groundwater Investigation
- Appendix L Soil Borelog B1-02



1. INTRODUCTION

This annual progress report has been prepared in accordance with the requirements in Section VII.C. of Agreed Order No. DE 16298 (AO). The AO was entered into by the Washington State Department of Ecology (Ecology) and Shell Oil Products US Puget Sound Refinery, the predecessor to HF Sinclair Puget Sound Refining LLC (HFSPSR). The objective of the AO is to investigate and conduct remedial actions to the HFSPSR Oily Water Sewer (OWS) system, also referred to as Solid Waste Management Unit 1 (SWMU-1).

Per Section VII.A of the AO, an Investigation and Response Plan (IRP) was prepared to provide a framework to investigate the integrity of the OWS and respond to any releases or threatened releases from the OWS that are discovered during the investigation. Ecology approved the IRP by letter and email on June 24, 2022. The AO requires HFSPSR to submit an annual progress report to Ecology by April 1st of each year following the implementation of the IRP.

The IRP outlined four phases of OWS inspections to be completed by December 31, 2031. Per the IRP, sewer inspections were completed in 2023. This annual progress report has been prepared per the requirements in the AO and describes the 2023 sewer inspection findings, and the associated site characterization, corrective actions, and sewer repairs. All figures referenced in this report are included in Appendix A. All tables referenced in this report are included in Appendix B.

1.1 GENERAL SITE INFORMATION

HFSPSR is located two miles east of the city of Anacortes on the southern portion of March Point, a northsouth oriented peninsula approximately 1.3 miles wide and 2.6 miles long. HFSPSR owns approximately 828 acres of the southern portion of March Point. The HFSPSR petroleum refining facilities occupy approximately 550 acres in the central portion of the property. The site address is 8505 South Texas Road, Anacortes, Washington 98221. The property location is shown on Figure A-1.



1.2 CONTACT INFORMATION

Contact information for the project consultant and property owner/facility operator are included below.

- Ecology Site Manager: Lyddie Austin
 - o Address: P.O. Box 47600 Olympia, WA 98504-7600
 - o Phone: (564) 233-8039
 - Email: lyddie.austin@ecy.wa.gov
- Project Consultant: ALL4, LLC.
 - o Address: 228 E Champion St #101, Bellingham, WA 98225
 - Contact: Matt Roberts
 - o Phone: (360) 685-8334
 - o Email: mroberts@all4inc.com
- Property Owner/Facility Operator: HFSPSR
 - o Address: 8505 South Texas Road, Anacortes, WA 98221
 - Contact: Jim Schneider
 - o Phone: (360) 293-0868
 - o Email: Jim.Schneider@HFSinclair.com



2. DEVIATIONS FROM THE INVESTIGATION AND RESPONSE PLAN

In accordance with VII.C.1 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report any deviations from the Investigation and Response Plan.

There were no deviations from the IRP in 2024.



3. OILY WATER SEWER ASSESSMENT

In accordance with VII.C.2 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report the findings of the sewer assessment, including the general condition of the OWS system components, the location and description of any problems identified and their cause, and a description of actions taken or planned to repair or maintain system components based on the results of the testing.

As described in the 2023 Annual Progress Report, the 2023 OWS video inspections were completed by Vortex Companies, LLC (Vortex). The video inspections were completed in general accordance with the National Association of Sewer Service Compliance (NASSCO) Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP). A map showing the sewer segments inspected in 2023 is provided as Figure A-2. A list of all defects found during these inspections is included in Table B-1 and is shown on Figure A-3.

The OWS segments inspected in 2023 include:

- the main trunk line from manhole B-3 to manhole B-01 along "B" Street,
- from manhole 5-A to manhole B-02 along 5th Street,
- from manhole D-12 to manhole D-1.1 along "D" Street.

The 2023 sewer inspection videos were provided to TRC Environmental Corporation (TRC) to assess sewer defects (e.g., cracking, fractures, offset joints, etc.) using the NASSCO structural rating system as documented in the *2023 Process Sewer Inspections and Repair Recommendations* report prepared by TRC (Appendix C). A map showing the sewer segments inspected in 2023 is provided as Figure A-2. A list of all defects found during these inspections is included in Table B-1 and is shown on Figure A-3. Table B-1 lists the location of the defect, the severity of the defect (PR 1 through PR 4), a life expectancy of the sewer line where the defect is located, and corrective actions that have been performed and the date of those actions. Photos of sewer line defects are available in the TRC report included in Appendix C.

No additional segments of sewer were inspected in 2024. A re-inspection of segments B-01 to B-03 was performed following the installation of a cured-in-place-pipe (CIPP) lining.



3.1 AREA OF CONCERN-1 (D-STREET INVESTIGATION)

OWS inspections were voluntarily conducted by Shell from 2017-2019. Inspection videos were provided to Whatcom Environmental Services in 2022 for assessment using the National Association of Sewer Service Companies (NASSCO) rating system. The videos were reviewed for quality and completeness. Defects (e.g., cracking, fractures, offset joints, etc.) were classified using NASSCO's Pipeline Assessment Certification Program (PACP). Following the assignment of a NASSCO rating, each defect was assigned an environmental evaluation ranking (EER) based on the potential for a release.

Voluntary inspections conducted by Shell from 2017-2019 identified four defects, three EER 3s and one EER 4, in the sewer line segments between manhole D-20 and manhole D-21 along "D" Street, equating to a moderate to high potential for process sewer exfiltration. In 2023, additional sewer video line investigations were performed, oily sewer design drawings were reviewed, and the sewer infrastructure was field verified. Through these additional activities, it was determined that the EER 4 was a breakout located within manhole D-20 and the EER 3s identified at AOC-1 in the 2022 report were corroborated by the 2023 inspection findings (TRC, 2024; Figure A-3). The inspection and identification of AOC-1 along "D" Street is discussed in greater detail in the 2023 Annual Progress Report SWMU-1 Oily Water Sewer (HFSPSR, 2024).

Site characterization of the AOC-1 release location will continue in 2025. A monitoring well will be installed in the vicinity of the identified release location to characterize potential impacts to groundwater from the AOC-1 release. Results of this site characterization will be presented to Ecology in the 2025 Annual Progress Report. A release notification will be made to Ecology per the requirements of the IRP if appropriate.

3.2 AREA OF CONCERN-2 (B-STREET INVESTIGATION)

During the inspection of sewer segment B-01 to B-3, TRC identified one defect at the level of a PR 4. The PR 4 is located 206.8 ft south of manhole B-01 (Setup ID 2023-11 and 2023-31 of the TRC report). The PR 4 location has been identified as Area of Concern-2 (AOC-2). Per the IRP, an initial release investigation was conducted in December 2024, to characterize potential impacts to soil and groundwater from the PR 4 defect. A detailed site map of AOC-2 is provided as Figure A-3. The Sampling and Analysis Plan (SAP) SWMU-1 Oil Water Sewer Area of Concern 2 is included in Appendix D.



3.2.1 INVESTIGATION

In December 2024 the PR 4 sewer defect at AOC-2 was investigated per VII.A.(4, 7, 8) of the AO, for indications of a release from the oily water sewer to soil and groundwater. Two soil borings were drilled using a hollow stem auger near the PR 4 sewer defect. The soil borings were drilled five feet to the east and five feet to the west of the PR 4 sewer defect location just north of manhole B-3. A total of five soil samples were collected from the soil borings to characterize the soil conditions. Soil boring logs are included in Appendix E.

Monitoring wells were installed in each soil boring. The monitoring wells (W-130 and W-131) were installed to a depth of 20 feet. The wells were installed with a ten-foot screened interval, from 10 to 20 feet, and were constructed of machine-slotted 2-inch diameter polyvinyl chloride (PVC) pipe. Well-construction diagrams are provided in Appendix F.

3.2.2 LABORATORY ANALYSIS

Soil samples were collected from each soil boring location. The samples were identified by both the boring number from which they originated, the depth from which they were collected, and the date of collection (i.e., B-1 - 5.5-6 ft - 120224).

Groundwater samples were collected from each monitoring well following well development activities. Groundwater samples were collected using low-flow purging and sampling methods (U.S. EPA, 2017). Groundwater samples were identified by the well number from which they were collected. Per the IRP, the following laboratory methods were used to analyze both the soil and groundwater samples collected during this investigation:

- <u>NWTPH-EPH</u>: Extractable petroleum hydrocarbons
- <u>NWTPH-VPH</u>: Volatile petroleum hydrocarbons
- EPA Method 8260: Benzene, toluene, ethylbenzene, total xylenes (BTEX)
- <u>EPA Method 8270 SIM</u>: Naphthalenes and polycyclic aromatic hydrocarbons (PAHs)
- EPA Method 6020/200.8: Arsenic, cadmium, chromium, lead, nickel, and zinc
- <u>EPA Method 7196</u>: Chromium (VI)
- <u>EPA Method 7471</u>: Mercury



• <u>Chromium (III)</u>: lab calculated value generated by subtracting the chromium (VI) concentration from the total chromium concentration.

3.2.3 SOIL SAMPLE COLLECTION

Five soil samples were collected during the AOC-2 investigation on December 2 and 3, 2024. The samples were sent to ALS Laboratory Group in Everett, WA, an accredited laboratory by Ecology, for analysis. The soil sample descriptions, depths of collection, and field screening results are included in Table B-2 and as documented in the SWMU AOC-2 SAP included in Appendix D.

3.2.4 SOIL SAMPLE RESULTS

All soil samples collected during the AOC-2 investigation were below the Model Toxic Control Act (MTCA) Method C cleanup value for industrial properties for BTEX, metals, PAHs, and carcinogenic polycyclic aromatic hydrocarbons (cPAH). These samples were also below the protection of soil direct contact, human health cancer risk, and the hazard index thresholds calculated using the fixed-parameter three-phase partitioning model for vadose (unsaturated) zone as described in WAC 173-340-747(4). The AOC-2 soil sample locations and laboratory analytical results are shown on Figure A-4 and are summarized in Tables B-3 through B-7. The original laboratory analytical data reports are provided in Appendix G and the MTCA TPH worksheets are included in Appendix H.

3.3 GROUNDWATER SAMPLE RESULTS

The groundwater sample collected from W-131 in December 2024 had a concentration of Arsenic at 5.1 micrograms per liter (μ g/L) which exceeded the MTCA Method A cleanup level of 5.0 μ g/L for Arsenic. The analytical results for all other analytes were either not detected or below the MTCA method A cleanup levels for all other analytes of concern. Well W-131 was resampled in January 2025 and all analytes including arsenic were below the MTCA Method A cleanup levels indicating that the original arsenic exceedance may have been an artifact of well installation activities.



There were cPAH detections in the field blank sample from the December 2024 groundwater sampling event that resulted in a total cPAH Toxic Equivalency factor of Benzo(A)pyrene that exceeded the MTCA Method A value of Benzo(A)pyrene. All other cPAH detections from the December 2024 sampling event were non-detect. There were no cPAH detections above laboratory reporting limits in the January 2025 resampling event. The AOC-2 groundwater laboratory analytical results are shown on Figure A-5 and are summarized in Tables B-8 through B-12. The original laboratory analytical groundwater data reports are provided in Appendix I.

3.3.1 GEOLOGY AND HYDROGEOLOGY

The OWS at AOC-2 is underlain by diamicton. The diamicton (also known as Unit B) is an unstratified matrix of silt or clay supporting variable amounts of sand and gravel. The estimated range of permeability is 10⁻⁵ to 10⁻⁸ centimeters per second (cm/sec). The Unified Soil Classification System (USCS) classification is ML or CL and Unit B is approximately 50 feet thick beneath AOC-2 as identified in previous investigations (Texaco, 1991a; Texaco, 1991b).

Soil boring B-3-57 was reviewed during the preparation of the SAP to investigate a potential release to soil and/or groundwater at the suspected AOC-2 location. Soil boring B-3-57 was drilled approximately 110 feet southwest of AOC-2. The boring location is shown on Figure A-4. The borelog confirms the thickness of diamicton in that portion of the refinery. The borelog states that water was encountered approximately 24 feet below ground surface during drilling. The B-3-57 borelog is included in Appendix J.

4. RELEASES

In accordance with VII.C.3 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report information on the nature and extent of releases identified including the characteristics of the release, sampling results, how soil and groundwater quality was evaluated, and information on the extent of soil and groundwater impacts.

One release was identified in 2023 following the investigation of EER 3 sewer line defects located in the sewer line segments between manhole D-20 and manhole D-21 along "D" Street and was identified as AOC-1. The sewer line defects were identified during voluntary video inspections completed by Shell from 2017-2019 and during additional inspections performed in 2023 as discussed in the 2023 Annual Progress Report SWMU-1 Oily Water Sewer (HFSPSR, 2023). A 90-day letter was sent to Ecology documenting the release at the AOC-1 location on June 19, 2023.

4.1 AREA OF CONCERN-1 RELEASE

Subsurface conditions at the sewer line defects on "D" Street were investigated in April 2023 and four soil samples were collected. A release was confirmed following the review of laboratory analytical results of four soil samples and the area was classified as AOC-1. A 90-day letter was submitted to Shingo Yamazaki with Ecology on June 19, 2023 to notify Ecology of the release. The findings from this investigation were discussed in the 2023 Annual Progress Report submitted to Ecology in March 2024 (HFSPSR, 2024). The AOC-1 soil sample locations and results are shown on Figure A-6 and the soil laboratory analytical data is summarized in Tables B2-B7.

A Table that summarizes all data uploaded to the Ecology EIM database is included in Table B-13.

Further investigation of potential impacts from the AOC-1 release is anticipated for 2025, in response to concerns raised in the Ecology Dangerous Waste Permit and Agreed Order No. 16298 Corrective Action Compliance Evaluation on October 21, 2024, at HF Sinclair; RCRA Site ID: WAD009276197 document. A monitoring well will be installed in the vicinity of the confirmed release location at AOC-1 to assess potential impacts to site groundwater in the downgradient direction from the AOC-1 release location.



5. CORRECTIVE ACTIONS AND INTERIM MEASURES

In accordance with VII.C.4 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report a description of the corrective actions or interim measures taken or planned to remediate soil or groundwater, including the volume and disposition of contaminated soil removed, and measures taken to monitor or remediate groundwater.

Due to the location of critical infrastructure within the release area, additional remedial actions will not be conducted at the confirmed release site located in AOC-1 until access is available (e.g., at refinery closure or if other maintenance/demolition activities allow for access). Planning is underway to investigate potential impacts to groundwater through contaminant migration from the AOC-1 release location through the installation of a downgradient monitoring well.

No further investigation is required at the AOC-2 location on "D" street, as no release to site soil or groundwater was observed during the subsurface investigation as discussed in Section 3.2.



6. **RISK OF CONTAMINATION MIGRATION**

In accordance with VII.C.7 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report measures to assess and prevent the risk of migration of contamination until a final remedy is implemented, including the elements of a groundwater monitoring program (number and location of wells, parameters monitored, frequency of monitoring).

Due to the location of critical infrastructure within the release area, additional remedial actions will not be conducted at the confirmed release site located in AOC-1 until access is available (e.g., at refinery closure or if other maintenance/demolition activities allow for access). Planning is underway to continue site characterization in 2025 to investigate potential impacts to groundwater through contaminant migration from the AOC-1 release location through the installation of a downgradient monitoring well. The AOC-1 subsurface investigation SAP is included in Appendix K.

6.1 GEOLOGY AND HYDROGEOLOGY

The OWS at AOC-1 is underlain by diamicton. The diamicton (also known as Unit B) is unstratified with a matrix of silt or clay supporting variable amounts of sand and gravel. The estimated range of permeability is 10^{-5} to 10^{-8} cm/sec. The USCS classification is ML or CL and Unit B is approximately 50 feet thick beneath AOC-1 (HF Sinclair, 2023).

Soil boring B1-02 was reviewed in preparation for the AOC-1 soil investigation conducted in April 2023. The boring was drilled approximately 120 feet east of AOC-1. The boring location is shown on Figure A-6. The borelog for boring B1-02 shows that the diamicton is at least 50 feet thick in that portion of the refinery. The borelog states that water was encountered 24 feet below ground surface during drilling. The B1-02 borelog is included in Appendix L.



7. INACCESSIBLE AREAS

In accordance with VII.C.5 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report areas that were determined to be inaccessible and where contaminated soil or groundwater was left in place.

Due to the location of critical infrastructure, AOC-1 is inaccessible for further remedial action until access becomes available at a future time (e.g., at refinery closure or if other maintenance/demolition activities allow for access). Site characterization including an assessment of potential contaminant migration downgradient of the AOC-1 release location is being planned during 2025, as discussed in Section 6.



8. RELEASE MITIGATION AND MONITORING

Per the AO Section VII.A(12): "The Investigation and Response Plan shall include: Measures to assess and prevent the risk of migration of soil and groundwater contamination in inaccessible areas."

Site characterization activities of the AOC-1 release will continue in 2025. HFSPSR will investigate potential impacts to groundwater and assess contaminant migration from the AOC-1 release location. A monitoring well will be installed downgradient of the AOC-1 release location, and soil and groundwater samples will be collected during this investigation to determine the extent of impacts from the AOC-1 release. The site characterization activities are described in the SAP for AOC-1 groundwater investigation included in Appendix K.



9. HISTORICAL INACCESSIBLE AREA REVIEW

In accordance with VII.C.5 of Agreed Order No. DE 16298 HF Sinclair Puget Sound Refining is required to report areas that were determined to be inaccessible and where contaminated soil or groundwater was left in place.

Site characterization of the AOC-1 release will continue in 2025 as described in Section 6. Remedial actions in the vicinity of the AOC-1 release location will be re-evaluated once site characterization is completed.



10. CONCLUSIONS

The 2022 and 2023 OWS inspections resulted in the identification of AOC-1 and AOC-2. The location of AOC-1 and AOC-2 relative to each other is shown on Figure A-3.

The 2022 sewer inspection evaluation report concluded that there was a moderate to high potential for process sewer exfiltration within AOC-1. An initial soil investigation was completed in April 2023, which confirmed a release to soil at AOC-1. Due to the location of critical infrastructure within the release area, additional remediation action will not be conducted at the AOC-1 release location until access is available (e.g., at refinery closure or if other maintenance/demolition activities allow for access). Soil and groundwater downgradient of AOC-1 will be investigated for potential contaminant migration in 2025.

The 2023 OWS inspections identified one sewer pipe location along B-Street with a ranking of PR 4. This location has been identified as AOC-2. Per the IRP, the site characterization of AOC-2 was conducted in December 2024 to evaluate soil and groundwater conditions at the PR 4 location. Two groundwater monitoring wells were installed at the PR 4 location, one east and one west of the sewer line. Data from both soil and groundwater were below the MTCA Method A cleanup levels for all analytes in both soil and groundwater. The AOC-2 B street area is not considered a release location. Sewer line repairs have been conducted on the segment of sewer line between manholes B-01 and B-3, where the PR 4 was identified through the installation of a cured-in-place pipe liner.



11. REFERENCES

HF Sinclair Puget Sound Refining LLC. March 21, 2024. 2023 Annual Progress Report SWMU-1 Oily Water Sewer.

HF Sinclair Puget Sound Refining LLC. March 15, 2023. Sludge Disposal Facility, Closure and Post Closure Plan, HF Sinclair Puget Sound Refining LLC.

HollyFrontier Puget Sound Refinery. February 27, 2023. 2022 Annual Progress Report SWMU 1 – Oily Water Sewer.

HollyFrontier Puget Sound Refinery. June 15, 2022. Investigation and Response Plan SWMU 1 – Oily Water Sewer.

Texaco Refining and Marketing, Inc., Puget Sound Plant. 1991a. RCRA Facility Investigation Report SWMUs 10 and 11, Texaco Puget Sound Plant.

Texaco Refining and Marketing, Inc., Puget Sound Plant. 1991b. RCRA Facility Investigation Report SWMUs 40 and 46, Texaco Puget Sound Plant.

TRC. March 5, 2024. 2023 Process Sewer Inspections and Repair Recommendations.

U.S. Environmental Protection Agency, Region 1 (EPA). September 19, 2017. Low Stress (Low Flow)

Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.

Washington State Department of Ecology. Agreed Order for Interim Action – Oily Water Sewer (SWMU-1). No. DE 16298.

Washington State Department of Ecology. June 2016. Guidance for Remediation of Petroleum Contaminated Sites. Publication No. 10-09-057.

Whatcom Environmental Services. December 5, 2022. Evaluation and NASSCO Rating of Existing Sewer Videos.

APPENDIX A -	
FIGURES	





		Major Trunk Lines
PSR Base eral Sewer	HFS OWS Annual Rpt 2024	Oily Water Sewer Map
+ LV-1)	Prepared: 1/7/2025	Figure A-2











APPENDIX B -
TABLES

Table B-1 Complete Sewer Line Defects HF Sinclair Puget Sound Refining, LLC

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-1	D-1.1:D-2.1	0-253.4	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-1	D-1.1:D-2.1	176	5-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-1	D-1.1:D-2.1	221.5	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-1	D-1.1:D-2.1	221.5	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-1	D-1.1:D-2.1	250.8	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-1	D-1.1:D-2.1	250.8	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-2	D-2.1:D-3.1	0-255.4	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-2	D-2.1:D-3.1	93.3	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-2	D-2 1·D-3 1	105 29	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-2	D-2 1·D-3 1	201.8	6-7	1	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3 1·D-4 1	0-412.3	12-12	1	Surface Aggregate Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3 1·D-4 1	122.7	5	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	D-3.1.D-4.1	171.1	3	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	D-3.1:D-4.1	1/1.1		1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	D-3.1:D-4.1	237.5	5	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	υ-з.1:D-4.1	246.1	4-5	2		Normal degradation of pipe	No Remedial Action Taken	-	Satisfactory Condition remains
2023-3	D-3.1:D-4.1	261.9	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	268.5	2	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	292	5	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-3	D-3.1:D-4.1	327.9	7	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-3	D-3.1:D-4.1	334.6	3-5	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-3	D-3.1:D-4.1	337.6	5-6	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	337.6	6-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	341	4-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	341	5-6	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-3	D-3.1:D-4.1	343.8	6-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	347.3	4-5	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	347.3	7-8	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	354.8	5-10	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	359.1	4-8	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	371	7-8	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	379.1	8-10	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-3	D-3.1:D-4.1	379.3	4-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	388.6	1	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	395.1	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	395.1	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	404.4	3-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	406.4	6-11	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	0-82.9	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	7.8	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	49.6	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	55.4	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	73.7	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	79.8	12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-4	D-4.1:D.20	79.8	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	0-227.7	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	9.2	10-3	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactorv
2023-5	D-20:D-6.1	15.5	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactorv
2023-5	D-20:D-6 1	21.5	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6 1	21.5	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20.D-6 1	21.5		1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20.D-6 1	21.5	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20-D 6 1	21.5	17_17	1	Crack Circumforontial	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	D-20.0-0.1	23.3	0	1	Crack Longitudioal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D 20.D C 1	27.4	10			Normal degradation of pipe	No Remodial Action Taken	-	Condition remains
2023-5	D 20.D C 1	45.2	12	2		Normal degradation of pipe		-	Condition remains
2023-5	D-20.D-0.1	45.3 45.3	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023		1	1	r	1			
2023-5	D-20:D-6.1	54.7	11	1	Tap Break-In Intruding	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	54.7	10-3	2	Fracture Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	54.7	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20 [.] D-6 1	64.4	9	2	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023 5	D 20:D 0.1	64.4	2	1	Creek Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D-20:D-6.1	64.4	3	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D-20:D-6.1	69.7	3-6	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	75.4	12-12	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	80.4	12-2	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	81.7	10	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	81.7	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	87.7	3-9	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	93.4	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	99.5	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	103.7	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20 [.] D-6 1	105.8	8-4	2	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022 5	D 20:D C 1	105.0	57		Eractura Circumforantial	Normal degradation of pipe	AOC-1 Investigation: Site	Anril 2022	Continue montioring
2023-5	D-20:D-6.1	105.8	5-7	3		Normal degradation of pipe		- April-2023	Condition remains
2023-5	D-20:D-6.1	107.7	12-12	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	110.1	6-9	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	111.8	8-4	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	115.9	6-9	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	117.9	8-10	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	117.9	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	124.1	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	129.8	9	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20 [.] D-6 1	129.8	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D 20.D C 4	125.0		1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D-20:D-6.1	135.8	11	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D-20:D-6.1	141.9	12-12	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	148.2	2	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-5	D-20:D-6.1	148.2	11	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	154.1	9	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	154.1	4	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	154.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	160.2	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	160.2	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	166.6	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 5	D 20:D C 1	100.0		1	Creek Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-3	D-20.D-0.1	100.0	5	1		Normal degradation of pipe		-	Condition remains
2023-5	D-20:D-6.1	172.3	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		Satisfactory Condition remains
2023-5	D-20:D-6.1	172.3	10	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	172.3	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	172.3	1	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	172.3	8	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	178.2	6-11	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	184.5	8-9	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	190.4	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	190.4	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 5	D 20 D 6 1	196.4	1	1	Crack Longitudinal	Normal degradation of pipe	No Romodial Action Takon	-	Condition remains
2023-5	D-20.D-0.1	100.4		-		Normal degradation of pipe		-	Condition remains
2023-5	ע-∠U:D-6.1	196.4	8-10	1	Crack Multiple	Normal degradation of pipe	NO REMEDIAL ACTION Taken	-	Condition remains
2023-5	D-20:D-6.1	196.4	3	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-5	D-20:D-6.1	202.4	1-2	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	208.2	1	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-5	D-20:D-6.1	214.3	11	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-5	D-20:D-6.1	220.4	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-6	D-6.1:D-6	0-10.5	12-12	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-6	D-6.1:D-6	0.5	8-9	2	Fracture Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-6	D-6 1·D 6	л	11	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Takon	-	Condition remains satisfactory
2023-0	D C D 10	4	11			Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-7	19-0:U-19	U-82	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe	NO REFLECTED ACTION Taken	-	Condition remains
2023-7	D-6:D-19	4.8	7-8	2	Fracture Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-7	D-6:D-19	4.8	9-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ns 2023		-						
2023-7	D-6:D-19	13	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory Condition remains
2023-7	D-6:D-19	45.5	1	1	Crack Longitudinal	over lifetime	No Remedial Action Taken AOC-1 Investigation: Site	-	satisfactory Continue monitoring
2023-7 2023-7	D-6:D-19 D-6:D-19	61.9 62.3	12	3	Point Repair Patch Crack Circumferential	Likely due to trench pipe work Normal degradation of pipe over lifetime	characterization, soil sampling AOC-1 Investigation: Site characterization, soil sampling	April-2023 April-2023	condition Continue monitoring condition
2023-7	D-6:D-19	66.1-75.1	12-3	3	Point Repair Patch	Likely due to trench pipe work	AOC-1 Investigation: Site characterization, soil sampling	April-2023	Continue monitoring condition
2023-7	D-6:D-19	82	6	3	Fracture Longitudinal	Normal degradation of pipe over lifetime	AOC-1 Investigation: Site characterization, soil sampling	April-2023	Continue montioring condition
2023-8	D-19:D-20	0-64.3	12-12	1	Surface Damage Surface Spalling	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-8	D-19:D-20	20.2	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-8	D-19:D-20	40.4	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-8	D-19:D-20	0-332	3-9	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	10	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	47.7	9	2	Surface Damage Roughness Increase	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	49.8	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory Condition remains
2023-9	D-22:D-23	55-61.3	11-1	1	Surface Damage Roughness Increased	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-9	D-22:D-23	110.8-127.2	3	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-9	D-22:D-23	129.2-147	1	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-9	D-22:D-23	162	12	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-9	D-22:D-23	189.2-208.9	9-3	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-9	D-22:D-23	237-247	11	1	Surface Damage Roughness Increased	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-5	D-23:D-24	0-8	4-8	3	Surface Damage Corrosion	Normal degradation of pipe from operational flows	AOC-1 Investigation: Site	April-2023	Continue montioring condition
2023-10	D-23:D-24	8-17	4-8	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	17	4-8	3	Surface Damage Corrosion	Normal degradation of pipe from operational flows	AOC-1 Investigation: Site characterization, soil sampling	April-2023	Continue monitoring condition
2023-10	D-23:D-24	19-75	4-8	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	75-88	4-8	3	Surface Damage Corrosion	Normal degradation of pipe from operational flows	AOC-1 Investigation: Site characterization, soil sampling	April-2023	Continue monitoring condition
2023-10	D-23:D-24	88-120	4-8	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	117-125.4	9-1	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	120-150	4-8	3	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Continue monitoring condition
2023-10	D-23:D-24	135	11-1	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-10	D-23:D-24	146-158	10-2	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-10	D-23:D-24	150-176.1	4-8	2	Surface Damage Corrosion	from operational flows Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-10	D-23:D-24	165-171.4	10-2	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-10	D-23:D-24	187.6	12-12	1	Surface Damage Spalling	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	0-253.1	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	10.2	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	16.7	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	46.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	52	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	64.7	7	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-23	D-1.1:D-2.1	64.7	5-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-23	D-1.1:D-2.1	70.3	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-23	D-1.1:D-2.1	77.6	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-23	D-1.1:D-2.1	78.8	5-6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-23	D-1.1:D-2.1	96.6	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-23	D-1.1:D-2.1	102.4	6-7	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-23	D-1 1·D-2 1	113.1 171 Q	5_7	1	Crack Circumferential	Normal degradation of pipe	No Remedial Action Takon	-	Condition remains
2023-23	D-1.1:D-2.1	134.4	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	134.7	5-6	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	136.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	136.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	137.3	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	150.7	5-8	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	55.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	166.8	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-23	D-1.1:D-2.1	179	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023		T	1	r				
2023-23	D-1.1:D-2.1	185	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	216	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	227.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1 1·D-2 1	245.6	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022 23	D 1 1 D 2 1	245.0	5.6	2	Eracture Circumforential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	D-1.1:D-2.1	25.6	5-6	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	D-1.1:D-2.1	250.1	10-4	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	0-253.3	12-12	1	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	2.5	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-24	D-2.1:D-3.1	8.2	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	15.7	5-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	16.1	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	16.9	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	36.8-42.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	49	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2 1·D-3 1	5/ 9	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-24	0-2.1.0-5.1	54.5		-		Normal degradation of pipe		-	Condition remains
2023-24	D-2.1:D-3.1	61	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken		Condition remains
2023-24	D-2.1:D-3.1	73	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	73.8	5-6	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	79	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-24	D-2.1:D-3.1	87.9	6-8	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	91.1	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	127.4	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	134	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	139.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2 1·D-3 1	145 5	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-24	D-2.1.D-3.1	145.5	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-24	D-2.1:D-3.1	151.6	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-24	D-2.1:D-3.1	157.7	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	163.7	6	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-24	D-2.1:D-3.1	169.7	7	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-24	D-2.1:D-3.1	175.6	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	175.6	6-7	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-24	D-2.1:D-3.1	188	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	199.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	224	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	225.5	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022.24	D 2 1 D 2 1	220.0	6	1	Creek Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-24	D-2.1.D-3.1	229.9	0	1		Normal degradation of pipe		-	Condition remains
2023-24	D-2.1:D-3.1	237.5	5-6	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		Satisfactory Condition remains
2023-25	D-3.1:D-4.1	0-412	12-12	1	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-25	D-3.1:D-4.1	6.9	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	85.8	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	158.3	3	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	170.4	4	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	176.3	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	245.7	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	249.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3 1·D-4 1	255 1	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022.25	D 2 1 D 4 1	200.1	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-25	D-3.1.D-4.1	201.5	0	1		Normal degradation of pipe		-	Condition remains
2023-25	D-3.1:D-4.1	267.3	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	279.3	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-25	D-3.1:D-4.1	303.3	6	1	Crack Longitudinal	over lifetime Normal degradation of nine	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	323.8	7	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	323.8	4-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	327.8	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	329.7	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4 1	331 3	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 25	D_2 1.D 4 1	22/ 1	57	1	Crack Circumforontial	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	D 2 1 5 -	JJ+.1	<i>۱-</i> ر			Normal degradation of pipe		-	Condition remains
2023-25	J-3.1:D-4.1	330.5	6	1	Crack Longitudinal	Normal degradation of pipe	NO REFLECTED ACTION Taken	-	Condition remains
2023-25	D-3.1:D-4.1	339.8	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken		satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023							•	
2023-25	D-3.1:D-4.1	340.4	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	343.5	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3 1·D-4 1	346.6	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022.25	D 2 1 D 4 1	252.1	7	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-25	D-3.1.D-4.1	552.1	,			Normal degradation of pipe		-	Condition remains
2023-25	D-3.1:D-4.1	353.4	6-7	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-25	D-3.1:D-4.1	355.4	5-6	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-25	D-3.1:D-4.1	358	11	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	358	6	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	364.2	6	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	370.2	5-6	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	378.2	2-10	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	380.7	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3 1·D-4 1	382.3	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-25	D-3.1.D-4.1	362.3	57	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-25	D-3.1:D-4.1	383.7	5-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	Condition remains
2023-25	D-3.1:D-4.1	385.5	5-6	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-25	D-3.1:D-4.1	394.5	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-25	D-3.1:D-4.1	398	5-7	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	398.8	4-6	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-25	D-3.1:D-4.1	401.9	4-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	403.8	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	406.5	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3 1·D-4 1	406.5	6-7	2	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	0-3.1.0-4.1	400.5		2		Normal degradation of pipe		-	Condition remains
2023-25	D-3.1:D-4.1	410.6	10-2	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	Satisfactory Condition remains
2023-26	D-6:D-19	0-82.3	12-12	2	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-26	D-6:D-19	11.9	6	2	Fracture Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-26	D-6:D-19	11.9	3-5	1	Crack Spiral	over lifetime	No Remedial Action Taken	-	satisfactory
2023-26	D-6:D-19	24.3	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-26	D-6:D-19	44.5	5	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-26	D-6:D-19	48.5	6	2	Fracture Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	52.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	56.7	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022.26	D 6 D 19	60.7	12	2	Point Pongir Patch	Likely due to tranch nine work	AOC-1 Investigation: Site	April 2022	Continue monitoring
2023-20	D-0.D-13	64.70.4	12	3	Point Densis Pately Defective	Likely due to trench pipe work	AOC-1 Investigation: Site	April-2023	Continue monitoring
2023-26	D-6:D-19	64-73.4	12-1	3	Point Repair Patch Defective	Likely due to trench pipe work	AOC-1 Investigation: Site	April-2023	Condition Continue monitoring
2023-26	D-6:D-19	64.9	6	2	Crack Longitudinal	Likely due to trench pipe work Normal degradation of pipe	characterization, soil sampling AOC-1 Investigation: Site	April-2023	condition Continue monitoring
2023-26	D-6:D-19	81.2	6	3	Fracture Longitudinal	over lifetime Normal degradation of pipe	characterization, soil sampling	April-2023	condition Condition remains
2023-27	D-21:D-22	0-14.9	12-12	2	Surface Damage Corrosion	from operational flows	No Remedial Action Taken	-	satisfactory Condition remains
2023-32	D-21:D-22	0-21.5	12-12	2	Surface Damage Corrosion	from operational flows	No Remedial Action Taken	-	satisfactory
2023-33	D-20C:D-22	0-16.2	12-12	1	Surface Damage Surface Spalling	over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-1	D-1.1	4	3	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-1	D-1.1	8.4	5	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21-1	D-1 1	11 7	5	1	- Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 CT 1	D 1.1	12		1	Surface Damage Aggregate Visible	Normal degradation of	No Remedial Action Taken	-	Condition remains
2023-51-1	U-1.1	12	8	1	Surface Damage Aggregate Visible	Normal degradation of	NO REFLECTED ACTION Taken	-	Condition remains
2023-ST-1	D-1.1	12	7-9	1	Surface Damage Roughness Increased	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-2	D-2.1	3	3	1	Surface Damage Aggregate Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-2	D-2.1	4	12-5	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-2	D-2.1	6.2	6	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-2	D-2.1	12	2	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-3	D-3.1	1.8	12-12	1	Fracture Circumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-3	D-3.1	3	2-3	2	Fracture Circumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-2	D-3 1	25	5	2	Crack Longitudinal	Normal degradation of	No Remedial Action Taken	-	Condition remains
2023-51-5	D 3.1	5.5	12.00		Surface Damage Dama	Normal degradation of		-	Condition remains
2023-ST-3	D-3.1	6.7	12-12	1	Surface Damage Roughness Increased	mannole over lifetime Normal degradation of	NO Remedial Action Taken	_	satisfactory Condition remains
2023-ST-3	D-3.1	8	4-5	2	Crack Circumferential	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-3	D-3.1	11	11-03	2	Crack Clrcumferential	manhole over lifetime Normal degradation of	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-4	D-4.1	0-1.1	12-12	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-4	D-4.1	2	9-10	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-4	D-4.1	3	6	2	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-4	D-4.1	3.5-5.2	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-4	D-4.1	5.5	2-3	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-ST-4	D-4.1	5.5	11	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 ST 4	D 4 1	6		1	Crack Longitudinal	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-4	D-4.1	1	12.12	1		Normal degradation of	No Remedial Action Taken	-	Condition remains
2023-51-5	D-20	1	12-12	1	Surface Damage Aggregate Visible	Normal degradation of	No Remedial Action Taken	-	Condition remains
2023-ST-5	D-20	2-4.4	9-2	1	Surface Damage Aggregate Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-6	D-6.1	1	1	1	Crack Longitudinal	manhole over lifetime Normal degradation of	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-6	D-6.1	1	3	1	Crack Longitudinal	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-6	D-6.1	1.3	2	1	Surface Damage Aggregate Missing	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-6	D-6.1	1.7	12	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-ST-6	D-6.1	2-3	4-7	2	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-6	D-6.1	2.5	9-10	2	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 67 7	D C	0.05	12.12	1	Surface Damage Aggregate Visible	Normal degradation of	No Demodial Action Taken	-	Condition remains
2023-31-7	D-6	0-9.5	12-12		Surface Damage Aggregate Visible	Normal degradation of		_	Condition remains
2023-ST-7	D-6	1-2	12-12	1	Surface Damage Roughness Increased	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-7	D-6	2.5	6-9	1	Crack Multiple	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-8	D-23	1	12-12	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-8	D-23	1.5	9	1	Crack Longitudinal	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-8	D-23	2	5-7	2	Crack Multiple	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-8	D-23	4	8	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-14	D-21	0.3	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-14	D-21	13	4	1	Crack Longitudinal	Normal degradation of	No Remedial Action Taken	-	Condition remains
2023 57 14	D 21	1.5	2	1	Creek Longitudinal	Normal degradation of	No Remedial Action Taken	-	Condition remains
2023-51-14	D-21	4.7	3	1		Normal degradation of	NO REMEDIALACION TAKEN	_	Condition remains
2023-ST-14	D-21	7.6	12-12	2	Surface Damage Aggregate Missing	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-25	D-19	0-8.2	12-12	1	Surface Damage Roughness Increased	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-25	D-19	2.5-4.1	6	2	Surface Damage Aggregate Missing	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-25	D-19	2.9	11	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-26	D-20C	0-10	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-26	D-20C	8.7-13	12	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-27	D-22	0-16.3	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-27	D-22	8 6-13	6	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains
2023-31-27	D-22	0.0-13		2		Normal degradation of		-	Condition remains
2023-51-27	D-22	13	12-2	2		Normal degradation of	No Remedial Action Taken	_	Condition remains
2023-ST-28	D-12	0-2	12-12	2	Surface Damage Reinforcement Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-28	D-12	2-7.5	12-12	2	Surface Damage Aggregate Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-28	D-12	8	12-2	2	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken	-	satisfactory
B-Street Inspectio	ons 2023		1		[Normal degradation of pipe			
2023-11	B-1:B-3	5.9	6-11	3	Fracture Multiple	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	7	12-1	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	7.1	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1·B-3	9.8	NA	2	loint Offset Medium	Normal degradation of pipe	Liner Installed	August-2024	-
2022 44	D 4 D 2	10	2		Conclution attudied	Normal degradation of pipe	Liner Installed	August 2024	
2023-11	B-1:B-3	10	3	1	Crack Longitudinai	Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	14.2	12-12	3	Fracture Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	18.2	1-3	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	18.2	5-6	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	22.2	12-12	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	24.5	2-6	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	26.5	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	27.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	R-1·R-2	20 /	2	1	Crack Longitudinal	Normal degradation of pipe	liner Installed	August-2024	-
2023-11	D 4:5 0	30.4	-		Crack Longitudina	Normal degradation of pipe	Liner Installeu	August 2024	-
2023-11	в-1:В-З	34.4	1		Crack Longitudinal	Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	7	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	9	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	38.4	6-7	2	Fracture Circumferential	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	38.4	7-10	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	38.4	2-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	
2023-11	B-1:B-3	42.2	6-11	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023 11	R_1·P 2		с	2	Crack Longitudinal	Normal degradation of pipe	Liner Installed	August_2024	_
2023-11	0.10-2	+2.2		2		Normal degradation of pipe		August-2024	-
2023-11	в-1:В-З	46.3	12-12	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	50.4	12-12	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	54	12-5	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ns 2023							•	
2023-11	B-1:B-3	54.4	12-12	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	58.5	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	58.5	2-6	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	58.5	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	62.8	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	62.8	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	62.8	1-6	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	66.4	11-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	66.4	6-8	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1·B-3	70 3	NA	1	loint Offset Medium	Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1·B-3	70.5	10-11	2	Fracture Circumferential	Normal degradation of pipe	Liner Installed	Διισμετ-2024	
2023-11	D-1.D-3	70.5	7.0	2		Normal degradation of pipe		August 2024	
2023-11	D-1.D-3	70.5	2.5	2		Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	70.5	3-5	2		Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	74.3	12-12	2	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	78	12-8	2	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	82.4	2-5	2	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	82.4	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	86.3	5	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	86.3	9	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	90.7	12-12	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	94.6	12-12	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	98.7	5-1	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	102.5	6-1	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	102.7	5	2	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	106.7	5	2	Fracture Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	107.2-110.9	12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	111	12-9	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	114.7	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	118.5	12-9	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	122.8	5-6	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	122.8	7-11	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	122.8	NA	1	Joint Offset Medium	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	126.6	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	130.8	12-12	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1·B-3	13/	1-6	2	Crack Spiral	Normal degradation of pipe	Liner Installed	August-2024	
2023-11	D-1.D-3	124.7	6.0	2	Crack Hings 2	Normal degradation of pipe	Liner Installed	August 2024	
2023-11	D-1.D-3	134.7	7.10	2	Crack Frige 2	Normal degradation of pipe		August-2024	-
2023-11	B-1:B-3	135.5	7-10	2		Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	4	1	Crack Longitudinal	Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	12-2	2	Crack Circumferential	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	7-12	2	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	142.7	12-12	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	146.7	7-9	2	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	146.7	5	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	151	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-11	B-1:B-3	154.7	12-12	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	4-5	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	7	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	8	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	162.7	7	2	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	162.7	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	162.7	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	166.8	10-11	2	Fracture Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	166.8	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	170.8	3-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	170.8	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	174.8	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	174 8	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	178.8	3-4	2	Fracture Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
--------------------	-------------------------------	--------------------	-----------------------------------	----------------------------------	--------------------------------------	---	---------------------------------------	-------------------------	-----------------
D-Street Inspectio	ons 2023					•		•	
2023-11	B-1:B-3	178.8	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	178.8	6-9	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	182.9	12-9	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	190.8	3-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	190.8	6-10	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	195	1-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	198.8	6-7	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	198.8	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	198.8	NA	2	Joint Offset Medium	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1·B-3	203	10-5	2	Crack Multiple	Normal degradation of pipe	Liner Installed	August-2024	_
1015 11	01.05	205	10.5	L		Normal degradation of nine	Liner installed; AOC-2 Investigation:	Liner: August-2024	
2023-11	B-1:B-3	206.8	5-8	4	Broken	over lifetime	Installed	2024	-
2022 11	D 1.D 2	205.8		2	laint Officet Medium	Normal degradation of pipe	Soil Sampling, Monitoring Wells	Investigation: December	
2023-11	B-1:B-3	206.8		2		Normal degradation of pipe	linetaneo	2024	-
2023-31	B-1:B-3	2	-	2		Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	2	5	1	Crack Longitudinal	Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	5.7	6-10	3	Fracture Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	9.3	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	13.6	12-12	3	Fracture Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	5-6	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	10-1	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	6-7	2	Fracture Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	21.5-26	12-12	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	29.2	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	29.2	2	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5	7	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5-36.8	10	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	2-5	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	6	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	7-8	1	Fracture Circumferential	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	8-10	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	41.7	5-11	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	45.3	12-12	2	Fracture Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	49.5	12-12	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	53.4	12-12	3	Fracture Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	3-7	1	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	12	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	10-11	2	Fracture Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	10	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	3-5	2	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	7	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	65.5	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	65.5	2-3	2	Fracture Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	65.5	2-5	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	69.6	5-6	2	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	69.6	7-9	2	Fracture Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	69.6	10-11	2	Fracture Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	69.6	3-4	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	73.5	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	77.8	12-5	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	77.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	81.6	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	
2023-31	B-1:B-3	81.6	2-5	2	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	85.8	1	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	85.8	9	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	85.8	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	89.6	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023			[Normal degradation of pipe			
2023-31	B-1:B-3	93.4	12-12	2	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	98	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	98	7-11	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	101.7	6-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	106.2	5-7	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	109.8	12-12	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	113.8	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	118	12-6	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	118	6-8	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	121.8	NA	1	Joint Offset Medium	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1·B-3	121.0	12-12	2	Crack Multiple	Normal degradation of pipe	Liner Installed	August-2024	
2023-31	D-1.D-3	121.8	12-12	1	Crack Multiple	Normal degradation of pipe		August 2024	
2023-31	D-1.D-3	120	12-12	1		Normal degradation of pipe		August-2024	-
2023-31	B-1:B-3	130.4	12-12	2	Crack Multiple	Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	2-6	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	7	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	9	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	134.4	7-10	1	Crack Circumferential	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	137.8	4-9	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	142	12-12	1	Crack Multiple	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	145.9	5	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	145.9	6-9	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	149.7	3	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	149.7	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	153.9	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	157.7	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	157.7	4-5	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	157.7	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	161.9	12-5	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	161.9	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	161.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1·B-3	166	10-11	2	Fracture Circumferential	Normal degradation of pipe	Liner Installed	August-2024	_
2023-31	B-1·B-3	166	7-9	1	Crack Multiple	Normal degradation of pipe	Liner Installed	August-2024	
2023-31	D-1.D-3	100	25	1	Grack Multiple	Normal degradation of pipe		August 2024	
2023-31	D-1.D-3	100	3-3	1		Normal degradation of pipe		August-2024	-
2023-31	B-1:B-3	170	2-5	1		Normal degradation of pipe		August-2024	-
2023-31	B-1:B-3	170	7	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	173.8	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	177.9	6-9	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	177.9	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	181.9	1-6	1	Crack Spiral	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	181.9	7-8	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	August-2024	-
2023-31	B-1:B-3	186	7	1	Crack Longitudinal	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	190.1	6-10	2	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	190.1	4-5	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	194	2-5	1	Crack Spiral	over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	198.1	6-7	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	198.1	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	202	11-4	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	202	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
						Normal degradation of pipe	Liner Installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells	Liner: August-2024 Investigation: December	
2023-31	B-1:B-3	206	NA	2	Joint Offset Medium	over lifetime	Installed Liner Installed: AOC-2 Investigation:	2024 Liner: August-2024	-
2023-31	B-1·B-3	206	5-8	4	Broken	Normal degradation of pipe over lifetime	Soil Sampling, Monitoring Wells	Investigation: December- 2024	_
2929-31	5-1.0-3	200	J-0		Diokeit	Normal doggadation of size	Liner Installed; AOC-2 Investigation:	Liner: August-2024	
2023-31	B-1:B-3	206	1	1	Crack Longitudinal	over lifetime	Installed	2024	-
2023-ST-23	B-1	0.6-2.5	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	installed (in manhole)	-	satisfactory
2023-ST-23	B-1	2.6	12-12	2	Surface Damage Reinforcement Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-23	B-1	3.8	3-4	2	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-23	B-1	5	5-10	2	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-23	B-1	7.5	3	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023		T	T		1			
2023-ST-24	B-3	0.5-3.7	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-24	B-3	4.8	12	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-24	B-3	4.9	6	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-24	B-3	10.5	6	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-24	B-3	10.5	12-3	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
2023-ST-24	B-3	13	3	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken; No liner installed (in manhole)	-	Condition remains satisfactory
5th Street Inspect	ions 2023		•	•					· · · · ·
2023-12	B-02·5-P	0-55 7	12-12	1	Surface Damage Roughness Increased	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-12	B 02:5 P	25.7	0	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-12	B-02.5-P	23.7	9	1		Normal degradation of pipe		-	Condition remains
2023-12	B-02:5-P	41.5	8-9	2	Surface Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	Satisfactory Condition remains
2023-12	B-02:5-P	44-47.1	5-10	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-12	B-02:5-P	48.2	3-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-12	B-02:5-P	49.3	7-9	2	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-12	B-02:5-P	53.5	12-12	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-13	5-B:5-C	0-82	12-12	2	Surface Damage Aggregate Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	5	8	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	5	12	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	9.5	5-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	10.2	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	14.5	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	18.3	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B·5-C	18.3	8	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-0.5-C	21.5	11	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-13	5-B.5-C	21.5	11	1		Normal degradation of pipe		-	Condition remains
2023-13	5-B:5-C	25.9	12	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u> </u>	Satisfactory Condition remains
2023-13	5-B:5-C	35.3	6-7	2	Crack Spiral	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-13	5-B:5-C	35.4	10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-13	5-B:5-C	41.8	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-13	5-B:5-C	41.8	12-1	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-13	5-B:5-C	45.2	4	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	48.4	2	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	48.4	1	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	52.6	3	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-13	5-B:5-C	52.6	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	52.6	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	60.7	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	60.7	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	64.9	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B·5-C	68.7	12	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2022 12	5 B-5 C	72.9	11	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-13	5-8.5-0	72.8		1		Normal degradation of pipe		-	Continue monitoring
2023-13	5-B:5-C	80.9	5-8	3	Fracture Spiral	Normal degradation of pipe	No Remedial Action Taken	_	Condition Condition remains
2023-14	5-C:5-D	0-265.3	12-12	2	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	2	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	2	6	1	Deposits Settled Gravel	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	2	6	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	39.5	6-8	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	40.9	8	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	41.9	5-6	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	44.9	4	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	52.7	11	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	52.7	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	52.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C·5-D	55 1	6-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 14		EC 0	<u>л</u> г	2	Crack Circumforantial	Normal degradation of pipe	No Remedial Action Tales	-	Condition remains
2022-14	5 C.5-D	50.0				Normal degradation of pipe		-	Condition remains
2023-14	5-C:5-D	65	3	1	Crack Longitudinal	Normal degradation of pipe	NO REFILECTED ACTION TAKEN	-	Condition remains
2023-14	5-C:5-D	65	5	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u>-</u>	satisfactory Condition remains
2023-14	5-C:5-D	69.2	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	73.1	10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	77.3	5-6	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-14	5-C:5-D	77.3	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	81.3	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	85.5	4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	89.5	3-4	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	97.4	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	97.4	4-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	101.7	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	101.7	4-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	105.7	3-4	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C·5-D	113 7	5-7	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C·5-D	122.1	5-7	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	122.1	7 10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C.5-D	120	5.7	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C:5-D	130.1	5-7	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C:5-D	134.2	1-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C:5-D	138.3	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C:5-D	146.4	2	2	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-14	5-C:5-D	146.4	8-9	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u>-</u>	satisfactory Condition remains
2023-14	5-C:5-D	150.5	50-10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	158.5	5-10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	162.4	3	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	166.7	8-1	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	166.7	6	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-14	5-C:5-D	166.7	9-10	2	Crack Spiral	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	170.8	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	174.6	3-5	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	178.8	7-10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	182.9	4-5	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	187	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	187	3-4	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	191	7-10	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	191	3-5	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-14	5-C:5-D	195.2	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	195.2	3-5	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	195.2	5-9	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	203	7	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	207	5-6	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	215.3	5-10	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	219.4	1-4	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	223.5	6-10	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	223.5	3	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	227.4	6-10	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-14	5-C:5-D	231.4	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-14	5-C:5-D	239.5	7-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	243.5	12-12	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	247.8	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	251.8	6-8	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	251.8	10-11	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	251.8	10-11	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	255.6	7-10'	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	259.8	6-10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	264.1	NA	3	Joint Offset	Inconsistent loading and settling adjacent to manhole	No Remedial Action Taken	-	Continue monitoring condition
2023-15	5-D:5-E	0-89.5	9-4	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	3.2	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	3.2	3-4	1	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
<u>2</u> 023-15	5-D:5-E	3.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	7.3	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	7.3	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	7.3	5-6	1	Surface Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023			•					
2023-15	5-D:5-E	11.2	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	11.2	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	15.6	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	15.6	2	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	15.6	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	19.4	6-7	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	23.6	12-12	2	Surface Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	23.6	2-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	23.6	10-11	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D'5-F	26.2	4	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-F	26.2	2-3	2	Eracture Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5 D-5 E	20.2	0	2	Surface Damage Beinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-15	5 D.5 E	42.2	6	2	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-15	5-D.5-E	43.2	0	2	Surface Damage Beinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-15	5-D:5-E	48.2	4	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-15	5-D:5-E	51.3	3-5	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-15	5-D:5-E	55.9	1	2		Normal degradation of pipe	No Remedial Action Taken	_	Condition remains
2023-15	5-D:5-E	59.5	6-9	2	Crack Spiral	Normal degradation of pipe	No Remedial Action Taken	_	Condition remains
2023-15	5-D:5-E	62.3	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-15	5-D:5-E	97.3	2-4	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-15	5-D:5-E	71.8	6-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-15	5-D:5-E	71.8	4-5	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-15	5-D:5-E	71.8	3	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-15	5-D:5-E	79.5	2-4	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-15	5-D:5-E	87.9	10	2	Surface Damage Reinforcement Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-16	B-02:5-P	0-55.2	12-12	1	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-16	B-02:5-P	3.4	5-7	2	Crack Spiral	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-16	B-02:5-P	4.8	6-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-16	B-02:5-P	11.1	6-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	12.3	6-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	15.3	5-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	20.1	3-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	21.5	5-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	22.8	8-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	29.3	5-6	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	37.6	2-6	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	41.2	6	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	43-47.3	5-7	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	48.7	12-12	2	Surface Damage Aggregate Missing	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	49.3	6-8	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-16	B-02:5-P	53.2	8-5	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	0-133.2	12-12	1	Surface Aggregate Visible	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	3.9	9	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	3.9	6	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	3.9	7	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	7.9	3	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	7.9	11	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	11.8	5-6	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	11.8	6	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	15.5	5	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	21.1	6-7	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-17	23-4:5-B	24.4	3	2	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-17	23-4:5-B	28.1	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	40.2	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	44.3	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	44.3	11	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	48.3	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	56.4	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	56.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-17	23-4:5-B	56.4	7-8	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	60.6	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	60.6	2-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	60.6	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	60.6	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4·5-B	64.7	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2022 17	22 4.5 P	64.7	1	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23-4.5-0	69.7	12.1	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23-4:5-B	58.7	12-1	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23-4:5-B	72.6	8-9	2	Fracture Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		Satisfactory Condition remains
2023-17	23-4:5-B	72.6	12	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-17	23-4:5-B	72.6	2	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-17	23-4:5-B	73	3-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-17	23-4:5-B	76.7	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	76.7	6-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	80.7	4-5	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	80.7	1-2	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	84.2	7-9	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-В	84.9	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	84.9	12	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	88.5	7	1	Surface Damage Aggregate Missing	over lifetime	No Remedial Action Taken	-	satisfactory
2023-17	23-4:5-B	88.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	88.5	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	89.6	6-10	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-В	92.8	3-5	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-В	92.8	9-10	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	101	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	101.1	3-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	105	4	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	109	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4-5-B	113 1	6	2	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4-5-B	113.1	8-9	2	Eracture Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23 4.5 P	117	0.5	2	Grack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23-4.5-В	117	0	2		Normal degradation of pipe		-	Condition remains
2023-17	23-4:5-B	117	5	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-17	23-4:5-B	120.4	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		Satisfactory Condition remains
2023-17	23-4:5-B	121.5	4-5	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-17	23-4:5-B	127.4	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-17	23-4:5-B	129	5-6	2	Fracture Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-18	23-1:5-A	3	10-11	2	Fracture Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-18	23-1:5-A	15.1	6-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-18	23-1:5-A	23.1	4	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-18	23-1:5-A	31	6-8	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-18	23-1:5-A	35.5	4-6	2	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-18	23-1:5-A	35.5	7-8	2	Fracture Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-19	23-1:23-2	5.1	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-19	23-1:23-2	7.5	7-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	8	8-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	9.5	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	9.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	12.2	6-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	14.9	7-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	14.9	11	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1.72-7	17 7	6-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	72-1.23-2	10.0	7_11	2	Crack Circumforontial	Normal degradation of pipe	No Remedial Action Takon	-	Condition remains
2023-19	23-1.23-2	10.0	/-11	2		Normal degradation of pipe		-	Condition remains
2023-19	23-1:23-2	19.9	- 11			Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-19	23-1:23-2	22.7	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	Satisfactory Condition remains
2023-19	23-1:23-2	22.7	10	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-20	23-2:23-3	0-52.6	10-2	1	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-20	23-2:23-3	3.1	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023			•					
2023-20	23-2:23-3	3.1	7-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	3.9	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	5	6-8	1	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	5	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	6.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	6.8	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	7.9	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	7.9	1-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	8.4	10-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2-23-3	85	1	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2-23-3	9.8	5-8	2	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2.23-3	10.2	6.9	1	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2.23-3	11.5	2.5	1	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2.23-3	14.2	2-3	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2:23-3	14.2	7	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2:23-3	17.6	7-4	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2:23-3	21.7	2	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2:23-3	22	7-6	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-20	23-2:23-3	25.1	6-10	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u>-</u>	satisfactory Condition remains
2023-20	23-2:23-3	33.9	12-5	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u>-</u>	satisfactory Condition remains
2023-20	23-2:23-3	33.9	4	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-20	23-2:23-3	37	1	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-20	23-2:23-3	39	3-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-20	23-2:23-3	44.4	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-21	23-3:23-4	0-26.1	12-12	1	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-21	23-3:23-4	4.9	5-6	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-21	23-3:23-4	7.4	6-7	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-21	23-3:23-4	11.1	6-8	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-21	23-3:23-4	14.6	6-9	2	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-21	23-3:23-4	14.6	11	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-21	23-3:23-4	16	6-8	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-21	23-3:23-4	18.2	5	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-21	23-3:23-4	23.7	10-6	2	Crack Multiple	over lifetime Degradation due to elevated	No Remedial Action Taken	-	satisfactory
2023-22	5-F:D-12	0	6	1	Surface Damage Aggregate Visible	levels of H2S Degradation due to elevated	Liner Installed	January-2024	-
2023-22	5-F:D-12	0-55.8	9-3	2	Surface Damage Aggregate Projecting	levels of H2S Normal degradation of pipe	Liner Installed	January-2024	-
2023-22	5-F:D-12	2	8-9	2	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-22	5-F:D-12	2	1-3	2	Fracture Multiple	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	9	2-3	3	Surface Damage Reinforcement Visible	levels of H2S	Liner Installed	January-2024	-
2023-22	5-F:D-12	12.4	7-8	2	Fracture Multiple	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	15.5	6-7	2	Crack Multiple	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	21.4	7-8	1	Crack Spiral	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	24.3	6-7	2	Crack Multiple	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	24.3	4	1	Crack Longitudinal	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	25.5	7-8	1	Crack Circumferential	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	27.3	8-9	2	Crack Spiral	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	27.3	4	2	Crack Longitudinal	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	31.5	5-6	2	Fracture Circumferential	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	31.5	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	36.5	3-9	2	Crack Multiple	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	40.4	6	1	Crack Longitudinal	over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	40.4	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	40.5	1	2	Crack Longitudinal	vormal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	44.3	3-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	44.3	8-9	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	48.9	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	48.9	12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	52.3	11-12	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	52.3	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	55.8	7-8	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023		1		Γ				
2023-22	5-F:D-12	55.8	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	55.8	2	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	55.8-134.5	9-3	3	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	59.8	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	64.2	3-5	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	68	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	75.9	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	91.9	5-8	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	96.8	4-6	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	105	10-12	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-E-D-12	113.2	6	1	Crack Longitudinal	Normal degradation of pipe	Liner Installed	lanuary-2024	-
2023-22	5-F·D-12	113.2	3	1	Crack Longitudinal	Normal degradation of pipe	Liner Installed	January-2024	-
2023-22	5-1.0-12	115.2	7.0	2	Crack Digitudina	Normal degradation of pipe		January-2024	-
2023-22	5-F:D-12	116.9	7-8	2		Normal degradation of pipe	Liner Installed	January-2024	-
2023-22	5-F:D-12	116.9	5-6	2	Crack Multiple	Normal degradation of pipe	Liner Installed	January-2024	-
2023-22	5-F:D-12	128.6	8	1	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-36	5-F:D-12	0-136.9	8-4	1	Surface Damage Aggregate Visible	over lifetime Normal degradation of pipe	Liner Installed	January-2024	_
2023-36	5-F:D-12	5.6	8-9	2	Surface Damage Aggregate Missing	over lifetime Normal degradation of pipe	Liner Installed	January-2024	
2023-36	5-F:D-12	23	8-10	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-36	5-F:D-12	28	3-4	1	Crack Circumferential	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-36	5-F:D-12	34.8	9-11	1	Crack Multiple	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-36	5-F:D-12	38.9	8	1	Crack Longitudinal	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	40.8	8-10	1	Crack Circumferential	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	53.5	8-10	1	Crack Circumferential	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	59.7	7-10	1	Crack Multiple	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	63.8	7-8	1	Crack Circumferential	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	63.8	10	2	Surface Damage Aggregate Missing	over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	66.5	10	2	Surface Damage Aggregate Missing	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	69.3	9-3	3	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	72.2	NA	1	Joint Separated Medium	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	79	6-9	1	Intruding Sealing Material Grout	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	111.8	9-10	3	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	117	3-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	124.1	3-6	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	134.1	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-28	5-F·5-F	2-61 3	10-2	3	Surface Damage Reinforcement Visible	Normal degradation of pipe	No Remedial Action Taken	-	Continue monitoring
2023-28	5-E-5-F	5.9	6-7	2	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	5 5 5 5	5.9	2.6	2	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-28	5-E:5-F	5.9	3-0	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-28	5-E:5-F	9.8	4-5	2	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	_	Condition remains
2023-28	5-E:5-F	17.9	12	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	<u>-</u>	satisfactory Condition remains
2023-28	5-E:5-F	35.5	8	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-28	5-E:5-F	38.3	5	2	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-28	5-E:5-F	38.3	9-3	2	Crack Longitudinal Hinge, 2	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-28	5-E:5-F	42.5	11	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-28	5-E:5-F	42.5	5	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-28	5-E:5-F	54.6	5-6	1	Crack Spiral	over lifetime	No Remedial Action Taken	-	satisfactory Continue montioring
2023-28	5-E:5-F	58.9	4	3	Fracture Longitudinal	over lifetime	No Remedial Action Taken	-	condition
2023-28	5-E:5-F	61.4-234	8-4	3	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	condition
2023-28	5-E:5-F	67.3	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-28	5-E:5-F	79.3	12	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-28	5-E:5-F	87.3	4-5	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-28	5-E:5-F	91.8	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	95.5	10-11	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	99.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	132.5	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	139.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	144 7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5_F·5_F	157 1	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Takon	-	Condition remains
2023-28	5-E-5-F	161	11-12	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-28	5-E:5-F	165.4	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	168.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	168.9	4-5	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-F·5-F	172 8	4-5	2	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022 28	5 E.5 F	177.1	12	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-28	5-E:5-F	1/7.1	12	1		Normal degradation of pipe	No Remedial Action Taken	_	Condition remains
2023-28	5-E:5-F	184.7	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-28	5-E:5-F	195.5	3-9	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-28	5-E:5-F	213.6	2	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-28	5-E:5-F	213.6	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-28	5-E:5-F	225.5	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-28	5-E:5-F	234.1-268	10-2	2	Surface Damage Reinforcement Visible	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-28	5-E:5-F	245.3	5-6	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-28	5-E:5-F	257.5	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-28	5-E:5-F	257.5	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	satisfactory
2023-28	5-E:5-F	263.7	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	0-207.7	12-12	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	2.3	5-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	3.1	5-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P·5-0	43	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P·5-0	5.3	4-7	2	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	5.0.5.0	5.5	4-7	2	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P:5-0	6	4-8	1		Normal degradation of pipe	No Remedial Action Taken		Condition remains
2023-29	5-P:5-O	6.9	5-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-29	5-P:5-O	7.5	5-8	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	9.1	3-8	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	11.3	5-8	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	12.8	4-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	17.6	4-8	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	20.2	4-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	24.2	5-7	2	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	27.5	5-7	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	30.6	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	31.1	5-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	34.9	4-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	36.1	5-8	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	38.5	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P·5-0	41 5	6-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P·5-0	47.4	5-6	1	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	51.50	42.4	5-0	2	Crack Circumferential	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P.5-0	43.9	5-0	2		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P:5-0	45.1	5-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P:5-O	47.1	6-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-29	5-P:5-O	49.6	5-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	51.1	5-7	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	52.1	6-7	1	Crack Circumferential	over lifetime Normal degradation of nine	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	54.2	2	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	54.6	5-7	1	Crack Multiple	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	58.4	4-9	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	60	4-6	1	Crack Spiral	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	61.8	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	61.8	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	62.5	5-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	66.4	3-7	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-0	69.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P·5-0	6934	7	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022 20	5-0-5 0	75.6		1	Crack Circumforontial	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	5-r.3-U	73.0	5-0		Crack Circumiterential	Normal degradation of pipe		-	Condition remains
2023-29	5-P:5-U		0-/			Normal degradation of pipe		-	Condition remains
2023-29	5-P:5-0	/9	5-7	1		Normal degradation of pipe	NO REMEDIAL ACTION Taken	-	Satisfactory Condition remains
2023-29	5-P:5-O	87.3	3-9	1	Crack Circumferential	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	100.1	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	I	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-29	5-P:5-O	107.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	119.7	4-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	123.2	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	126.8	4-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	131.6	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P-5-0	133.7	6-7	1	Crack Multiple	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2022 29	5 P 5 O	124.4	2	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-23	5-F.5-0	134.4	12 12	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P:5-0	138.3	12-12	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-29	5-P:5-O	139.1	5-7	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	_	satisfactory Condition remains
2023-29	5-P:5-O	143	4-7	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	145.9	3	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	145.9	6	1	Crack Longitudinal	over lifetime Normal degradation of pipe	No Remedial Action Taken		satisfactory Condition remains
2023-29	5-P:5-O	146.7-150	4-8	2	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	153.6-158.8	4-9	1	Crack Multiple	over lifetime Normal degradation of pipe	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	161.2	5-7	2	Crack Spiral	over lifetime	No Remedial Action Taken	-	satisfactory Condition remains
2023-29	5-P:5-O	165.9	6-8	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	174	3-9	1	Crack Circumferential	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	176.7	6	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	176.7	4	1	Crack Longitudinal	over lifetime	No Remedial Action Taken	-	satisfactory
2023-29	5-P:5-O	180.8	5-8	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	condition remains satisfactory
2023-29	5-P:5-O	184	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	184	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	206	7-5	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0:5-M	0-82	12-12	1	Surface Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0:5-M	12.8	9-10	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0:5-M	20.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0:5-M	21.4	4-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0:5-M	27.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0 [.] 5-M	36	7	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-0·5-M	51 5	5	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	E O'E M	51.5	7	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-30	5-0.5-M	72.0	,	1		Normal degradation of pipe	No Remedial Action Taken	-	Condition remains
2023-30	5-0:5-14	73.8	6	1		Normal degradation of pipe		-	Condition remains
2023-30	5-0:5-M	80.5	6	1	Crack Longitudinal	Normal degradation of pipe	No Remedial Action Taken		satisfactory
2023-34	5-M:D-12	52.6-106	12-12	2	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	Liner Installed	January-2024	_
2023-35	5-M:D-12	0-103.4	12-12	2	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	Liner Installed	January-2024	_
2023-37	5-M:D-12	0-164.1	12-12	2	Surface Damage Roughness Increased	over lifetime Normal degradation of pipe	Liner Installed	January-2024	
2023-37	5-M:D-12	17	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	January-2024	_
2023-37	5-M:D-12	17	5	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-37	5-M:D-12	22.5	7	2	Crack Longitudinal	over lifetime Normal degradation of pipe	Liner Installed	January-2024	-
2023-37	5-M:D-12	27-31	4	1	Crack Longitudinal	over lifetime	Liner Installed	January-2024	- Condition remains
2023-ST-9	23-1	0.5	9-10	1	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-9	23-1	1	5-9	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-9	23-1	3.8	6	1	Crack Longitudinal	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-9	23-1	3.8	7	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-10	23-2	4	4	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-10	23-2	6	9	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-10	23-2	6	1-4	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-10	23-2	7	12	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-11	23-3	1.5-4	2-6	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-11	23-3	4	11	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-11	23-3	5	6	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactorv
2023-ST-11	22.2	65	7	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Takon	-	Condition remains satisfactory
2023-31-11	23-3	0.0	12 12	1	Surface Damage Reports to serve to	Normal degradation of	No Pomodial Action Taken	-	Condition remains
2023-51-12	23-4	0.2	12-12	1	Surface Demonstration	Normal degradation of		-	Condition remains
2023-ST-12	23-4	5.5	. 9	1	Surrace Damage Aggregate Visible	Normal degradation of	NO REMEDIAL ACTION Taken	-	Satisfactory Condition remains
2023-ST-12	23-4	6	11-12	1	Crack Multiple	manhole over lifetime Normal degradation of	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-12	23-4	7	9-10	1	Crack Multiple	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-12	23-4	7.3	9-10	1	Crack Circumferential	manhole over lifetime Normal degradation of	No Remedial Action Taken	-	satisfactory Condition remains
2023-ST-13	5-C	0-9.8	12-12	2	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken	-	satisfactory

Segment ID	Manhole ID (start: finish)	Distance (feet)	Orientation on Pipe (clock)	Environmental Rating (1-4)	Description of Defect/ NASSCO Rating	Cause of Defect	Corrective Action	Date of Action	Life Expectancy
D-Street Inspectio	ons 2023								
2023-ST-13	5-0	4 5	12	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 57 12	E C	4 5	1	1	Grack Longitudinal	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-13	5-0	4.5	1	1	Clack Longitudinal	Normal degradation of		_	Condition remains
2023-ST-15	5-B	1-2.6	12-12	1	Surface Damage Aggregate Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-15	5-B	4.5-7	12-12	1	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-15	5-B	4.9-6.5	6	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-15	5-B	57	q	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains
2023 51 15	55	5.7		L	Surface Buildge Aggregate Missing	Normal degradation of		_	Condition remains
2023-ST-15	5-B	6.3	11	2	Surface Damage Aggregate Missing	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-15	5-B	8-10.8	12-12	2	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-16	5-D	1	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 ST 16	ED	256	12.6	2	Surface Damage Aggregate Visible	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-10	5-0	2.3-0	12-0	2	Surface Damage Aggregate Visible	Normal degradation of		_	Condition remains
2023-ST-17	5-E	1.3-3.8	12-12	1	Surface Damage Roughness Increased	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-17	5-E	3.8-6.5	12-12	1	Surface Damage Aggregate Missing	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-17	5-E	4.8	1	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 CT 17		F	6	2	Surface Damage Beinforcement Vicible	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-17	3-E	5	0	2	Surface Damage Reinforcement Visible	Normal degradation of		_	Condition remains
2023-ST-18	5-F	0.7	12-12	1	Surface Damage Aggregate Visible	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-18	5-F	2.3-8.5	12	2	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-19	5-M	1-7.5	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 ST 10	5 M	7.6	12 12	2	Surface Damage Aggregate Vicible	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-19	5-101	7.0	12-12	2	Surface Damage Aggregate VISIDIE	Normal degradation of		_	Condition remains
2023-ST-20	5-0	0.5	12-12	1	Surface Damage Aggregate Visible	manhole over lifetime	No Remedial Action Taken		satisfactory Condition remains
2023-ST-20	5-0	0.6-6.2	12-12	1	Surface Damage Roughness Increased	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-20	5-0	2.6	6	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 CT 20	E O		2.4	1	Crack Spiral	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-20	5-0	5.5	2-4	1	Clack Spiral	Normal degradation of		_	Condition remains
2023-ST-21	5-P	2.8	6-7	1	Surface Damage Aggregate Missing	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-21	5-P	3	12	1	Surface Damage Aggregate Missing	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-21	5-P	4.8	12	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023 57 21	5.0	5.2	2	1	Crack Longitudinal	Normal degradation of	No Remedial Action Takon	-	Condition remains
2023-31-21	5-1	3.2	2	1		Normal degradation of		_	Condition remains
2023-ST-22	B-02	5.5	6	1	Surface Damage Roughness Increased	manhole over lifetime Normal degradation of	No Remedial Action Taken		satisfactory Condition remains
2023-ST-22	B-02	6.5	12	1	Surface Damage Surface Spalling	manhole over lifetime	No Remedial Action Taken	-	satisfactory
2023-ST-22	B-02	7.2	3	1	Surface Damage Surface Spalling	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2022 57 22	D 00	0	11	2	Surface Damage Aggregate Missing	Normal degradation of	No Romodial Action Takon	-	Condition remains
2023-31-22	D-02	2	1 11	۷ ک	Surrace Damage Aggregate Missing	mannole over metime	NU NETHEUIAI ACUUM TAKEM	I	satistationy

Table B-2SWMU-1 Soil Sample DescriptionsHF Sinclair Puget Sound Refining LLC - Anacortes, WA

Sample ID	Date	Soil Sample Description	PID (ppm)	Sheen Test ^(a)
AOC-1				
B-1-23 6 ft	4/10/2023	Gravelly silty sand, brown	0.6	SS
B-2-23 6 ft	4/10/2023	Medium to fine silty sand, brown to black	1.1	SS
B-3-23 5 ft	4/13/2023	Silty sand with gravel, firm, brown	1087	VHS
B-4-23 5.5 ft	4/13/2023	Medium to fine sand, brown, firm	860	VHS
AOC-2				
B-1-14 ft-120224	12/2/2024	Silty sand with clay, gray, firm, moist	0.6	MS
B-1-16 ft-120224	12/2/2024	Silty clay with gravel, gray, firm, moist	0.1	SS
B-1-20 ft-120224	12/2/2024	Silty clay with gravel, gray, firm, moist	0.2	NS
B-2-14 ft-120224	12/2/2024	Silty sand with gravel, brown, soft, wet	0.1	NS
B-2-16 ft-120224	12/2/2024	Silty sand with gravel, brown, soft, moist	0.1	NS

(a) NS = No Sheen; VSS = Very Slight Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen; VHS = Very Heavy Sheen

Table B-3 SWMU-1 Soil Method C and Protection of Groundwater Quality MTCATPH Workbook Results HF Sinclair Puget Sound Refining LLC - Anacortes, WA

Sample ID	Measured TPH Soil	ا Soil Direct Contact Pa	Method C (For Industrial Lar thway: Exposure via Combin Dermal Contact	nd Use) ned Incidental Ingestion and	Soil Protection of Potable Groundwater Quality: Leaching Pathway
Sample D	(mg/kg)	TPH Cleanup Level ^(c) (mg/kg)	Noncancer Hazard Index (Must not exceed 1)	Cancer Hazard Index (Must not exceed 1x10 ⁻⁵)	Modeled Protective TPH Soil Concentration ^(d) (mg/kg)
AOC-1					
B-1-23 6 ft (4/10/2023)	51.01	24,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	170
B-2-23 6 ft (4/10/2023)	1,576.01	33,000	4.8 x 10 ⁻²	1.3 x 10 ⁻⁷	170
B-3-23 5 ft (4/13/2023)	100.72	18,000	5.6 x 10 ⁻³	6.7 x 10 ⁻⁸	170
B-4-23 5.5 ft (4/13/2023)	159.01	23,000	7.0 x 10 ⁻³	3.9 x 10 ⁻⁸	170
AOC-2					
B-1-14 ft-120224 (12/2/24)	83.13	40,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	830
B-1-16 ft-120224 (12/2/24)	51.13	24,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	300
B-1-20 ft-120224 (12/2/24)	51.13	24,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	300
B-2-14 ft-120224 (12/2/24)	51.13	24,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	300
B-2-16 ft-120224 (12/2/24)	51.13	24,000	2.1 x 10 ⁻³	5.1 x 10 ⁻⁹	300

(a) The measured total petroleum hydrocarbon (TPH) soil concentration is automatically calculated based on inserted soil analytical data into the MTCATPH Version 12.0 Workbook for Calculating Cleanup Levels for Petroleum Mixtures.

(b) The measured TPH sample concentration fails compliance if it exceeds the modeled TPH soil concentration that is protective of the target TPH groundwater concentration.

(c) The overall TPH cleanup levels are automatically calculated based on a noncancer Hazard Index (HI) of 1 via the MTCATPH Version 12.0 Workbook for Calculating Cleanup Levels for Petroleum Mixtures.

(d) The modeled TPH soil concentration is protective of the Method A TPH potable groundwater cleanup level from WAC 173-340-890 Table 720-1 (the target TPH groundwater concentration).

 $\operatorname{\textbf{BOLD}}$ & shaded indicates that the concentration in the sample exceeds the most stringent cleanup level.

Table B-4 SWMU-1 Soil Petroleum Analytical Results HF Sinclair Puget Sound Refining LLC - Anacortes, WA

			MTCA Method C	Protection of		AO	C-1				AOC-2		
Analyte	Method	Units	Direct Contact	Ground Water	B-1-23 6 ft	B-2-23 6 ft	B-3-23 5 ft	B-4-23 5.5 ft	B-1-14 ft-120224	B-1-16 ft-120224	B-1-20-120224	B-2-14 ft-120224	B-2-16 ft-120224
			Cleanup Level ^(a) :	(Vadose) ^(b) :	4/10/2023	4/10/2023	4/13/2023	4/13/2023	12/2/2024	12/2/2024	12/2/2024	12/2/2024	12/2/2024
Aliphatic EC 5-6	NWVPH	ug/L	-	-	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)
Aliphatic EC >6-8	NWVPH	ug/L	-	-	ND(<0.05)	ND(<0.05)	0.01	0.01	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)
Aliphatic EC >8-10	NWVPH	ug/L	-	-	ND(<0.05)	ND(<0.05)	0.0094	0.014	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)
Aliphatic EC >10-12	NWEPH	ug/L	-	-	ND(<0.012)	ND(<0.05)	ND(<0.012)	0.016	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aliphatic EC >12-16	NWEPH	ug/L	-	-	ND(<0.012)	0.056	0.014	0.023	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aliphatic EC >16-21	NWEPH	ug/L	-	-	ND(<0.012)	0.19	ND(<0.012)	0.015	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aliphatic EC >21-34	NWEPH	ug/L	-	-	ND(<0.012)	0.21	ND(<0.012)	ND(<0.013)	0.038	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aromatic EC >8-10	NWVPH	ug/L	-	-	ND(<0.05)	ND(<0.05)	0.012	0.015	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)	ND(<0.05)
Aromatic EC >10-12	NWEPH	ug/L	-	-	ND(<0.012)	ND(<0.01)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aromatic EC >12-16	NWEPH	ug/L	-	-	ND(<0.012)	ND(<0.01)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aromatic EC >16-21	NWEPH	ug/L	-	-	ND(<0.012)	0.1	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Aromatic EC >21-34	NWEPH	ug/L	-	-	ND(<0.012)	1	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.012)	ND(<0.013)	ND(<0.012)	ND(<0.011)
Benzene	EPA-8260	ug/L	2,400	0.03 ^(c)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Toluene	EPA-8260	ug/L	280,000	4.5	ND(<0.01)	ND(<0.01)	0.014	ND(<0.01)	(ND<0.01)	(ND<0.01)	(ND<0.01)	(ND<0.01)	(ND<0.01)
Ethylbenzene	EPA-8260	ug/L	350,000	5.9	ND(<0.01)	(ND<0.01)	0.018	ND(<0.01)	ND(<0.01)	ND(<0.01)	ND(<0.01)	ND(<0.01)	ND(<0.01)
Xylenes	EPA-8260	ug/L	700,000	14	ND(<0.02)	ND(<0.02)	0.066	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
Hexane	EPA-8260	ug/L	210,000	72	ND(<0.01)	ND(<0.01)	0.35	0.02	ND(<0.01)	ND(<0.01)	ND(<0.01)	ND(<0.01)	ND(<0.01)

(a) Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed then the non-carcinogenic value was applied.

(b) Protection of groundwater values obtained from CLARC tables unless otherwise noted, as discussed in WAC 173-340-720.

ND indicates analyte was not detected at level above reporting limit (shown in parentheses)

Table B-5 SWMU-1 Soil Sample Metal Analytical Results HF Sinclair Puget Sound Refining LLC - Anacortes, WA

	EPA-6020	EPA-6020	EPA-7196	CrVI - Total Cr	EPA-6020	EPA-6020	EPA-7471	EPA-6020
Sample ID	Arsenic	Cadmium	Chromium (VI)	Chromium(III)	Lead	Nickel	Mercury	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method C Direct Contact Cleanup Level ^(a) :	88	3500	260	5,300,000	1000 ^(c)	70,000	2.0 ^(c)	1,100,000
Protection of Ground Water (Vadose) ^(b) :	20 ^(c)	0.69	19 ^(c)	480,000	3,000	130	2.1	-
AOC-1								
B-1-23 6 ft (4/10/2023)	2.6	0.11	ND(<5)	26	6.8	38	0.025	41
B-2-23 6 ft (4/10/2023)	3.2	0.12	ND(<5)	40	6.7	52	0.044	49
B-3-23 5 ft (4/13/2023)	4	ND(<0.1)	ND(<5)	37	4	64	0.026	52
B-4-23 5.5 ft (4/13/2023)	2.8	ND(<0.1)	ND(<5)	33	3	61	0.038	41
AOC-2								
B-1-14 ft-120224 (12/2/24)	3.2	0.11	ND(<5)	38	3.7	52	0.032	52
B-1-16 ft-120224 (12/2/24)	6.2	0.16	ND(<5)	44	5.2	52	0.041	71
B-1-20 ft-120224 (12/2/24)	5.3	0.47	ND(<5)	52	5.6	120	0.049	77
B-2-14 ft-120224 (12/2/24)	2.7	ND(<0.1)	ND(<5)	34	2.2	66	0.083	35
B-2-16 ft-120224 (12/2/24)	2.5	ND(<0.1)	ND(<5)	30	2.1	67	ND(<0.02)	32

(a) Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value was listed

then the non-carcinogenic value was applied.

^(b) Protection of groundwater values obtained from CLARC tables unless otherwise noted.

(c) MTCA A cleanup level for industrial properties was chosen because it is an Applicable or Relevant and Appropriate Requirement (ARAR). MTCA A cleanup levels are already adjusted for leaching and natural background concentrations.

ND indicates analyte was Not Detected at level above reporting limit (shown in parentheses)

Table B-6 SWMU-1 Soil Sample cPAH Analytical Results HF Sinclair Puget Sound Refining LLC - Anacortes, WA

Sample ID	EPA-8270 Benzo[A]Anthracene	EPA-8270 Benzo[A]Pyrene	EPA-8270 Benzo[B]Fluoranthene	EPA-8270 Benzo[K]fluoranthene	EPA-8270 Chrysene	EPA-8270 Dibenz[A,H]Anthracene	EPA-8270 Indeno[1,2,3-Cd]Pyrene	Total cPAH Equivalent (TEQ) ^(e)	Total TMEQ*
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MTCA Method C Direct Contact Cleanup Level ^(a) :		130						130	3.9
Protection of Ground Water (Vadose) ^(b) :	0.72 ^(c)	4	2.46 ^(c)	2.46 ^(c)	0.8 ^(c)	3.57 ^(c)	6.94 ^(c)		
Toxicity Equivalency Factor (TEF):	0.1	1	0.1	0.1	0.01	0.1	0.1		
Relative Mobility Factor (RMF _n):	2.71	1	0.79	0.79	2.43	0.54	0.28		
AOC-1									
B-1-23 6 ft (4/10/2023)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015
B-2-23 6 ft (4/10/2023)	0.076	0.35	0.17	ND(<0.02)	0.11	0.12	0.1	0.399	0.397
B-3-23 5 ft (4/13/2023)	ND(<0.1)	ND(<0.1)	ND(<0.1)	ND(<0.1)	0.11	ND(<0.1)	ND(<0.1)	0.016	0.078
B-4-23 5.5 ft (4/13/2023)	0.096	0.07	0.067	ND(<0.02)	0.17	ND(<0.02)	ND(<0.02)	0.091	0.107
AOC-2									
B-1-14 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015
B-1-16 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015
B-1-20 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015
B-2-14 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015
B-2-16 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.015	0.015

(a) Method C cleanup levels obtained from CLARC tables calculated from WAC 173-370-745, Equation 745-2 (carcinogens) based on soil direct contact. If no carcinogenic value

was listed then the non-carcinogenic value was applied.

(b) Protection of groundwater values obtained from CLARC tables unless otherwise noted.

(c) Values calculated from WAC 173-340-747, Equation 747-1. cPAHs were calculated using the MTCA Method A groundwater cleanup level for benzo[a]pyrene.

^(d) cPAH level calculated using Toxicity equivalency methodology provided in WAC 173-340-708(8)

(e) MTCA A cleanup level for industrial properties was chosen because it is an ARAR. MTCA A cleanup levels are already adjusted for leaching and natural background concentrations.

ND indicates analyte was not detected at level above reporting limit (shown in parentheses)

For ND values, the TEF was multiplied by one half the reporting limit

TEF - Toxicity Equivalency Factor (WAC 173-340-900 table 708.2)

TEQ - Toxicity Equivalency to benzo(a)pyrene, calculated by multiplying result by appropriate TEF.

TMEQ - Toxic Mobility Equivalent Concentration, calculated by multiplying result by appropriate TEF and RMF

RMFn - Relative Mobility Factor (Evaluating the Human Health Toxicity of Carcinogenic PAHs (cPAHs) Using Toxicity Equivalency Factors (TEFs) - Implementation Memorandum #10)

Table B-7
SWMU-1 Soil Sample PAH Analytical Results
HF Sinclair Puget Sound Refining LLC - Anacortes, WA

	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270
Sample ID	Acenaphthene	Acenaphthylene	Anthracene	Benzo[G,H,I]Perylene	Fluoranthene	Fluorene	Total Naphthalene ^(d)	Phenanthrene	Pyrene
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
MTCA Method C Direct Contact Cleanup Level ^(a) :	210,000	-	1,100,000	-	140,000	140,000	70,000	-	110,000
Protection of Ground Water (Vadose) ^(b) :	49	-	1,100	-	630	51	5 ^(c)	-	330
AOC-1									
B-1-23 6 ft (4/10/2023)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
B-2-23 6 ft (4/10/2023)	0.027	0.03	0.091	0.51	0.068	ND(<0.02)	ND(<0.02)	ND(<0.02)	0.047
B-3-23 5 ft (4/13/2023)	0.53	0.12	ND(<0.1)	ND(<0.1)	ND(<0.1)	0.65	5.2	3.00	0.4
B-4-23 5.5 ft (4/13/2023)	0.18	0.04	ND(<0.02)	0.03	0.11	0.17	0.84	0.86	0.32
AOC-2									
B-1-14 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
B-1-16 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
B-1-20 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
B-2-14 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)
B-2-16 ft-120224 (12/2/24)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)	ND(<0.02)

Table B-8 SWMU-1 B Street: Groundwater Petroleum Analytical Data Table HF Sinclair Puget Sound Refining LLC - Anacortes, WA

Analista	Mathad	Unite	MTCA Method A		W-130	W-131	Field Equipment Blank	١	V-130	W-131	Field Equipment Blank
Analyte	ivietnoa	Units	Cleanup Level	12/13/2024	12/13/2024 (dup.)	12/13/2024	12/13/2024	1/22/2025	1/22/2025 (dup.)	1/22/2025	1/22/2025
Aliphatic EC 5-6	NWVPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >6-8	NWVPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >8-10	NWVPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >10-12	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >12-16	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >16-21	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aliphatic EC >21-34	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aromatic EC >8-10	NWVPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aromatic EC >10-12	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aromatic EC >12-16	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aromatic EC >16-21	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Aromatic EC >21-34	NWEPH	ug/L	No Level	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)	ND(<50)
Benzene	EPA-8260	ug/L	5 ^(a)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Toluene	EPA-8260	ug/L	1,000 ^(a)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Ethylbenzene	EPA-8260	ug/L	700 ^(a)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Xylenes	EPA-8260	ug/L	1,000	ND(<4.0)	ND(<4.0)	ND(<4.0)	ND(<4.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)
Hexane	EPA-8260	ug/L	-	ND(<6.8)	ND(<6.8)	ND(<6.8)	ND(<6.8)	ND(<1.0)	ND(<1.0)	ND(<1.0)	ND(<1.0)

ND indicates analyte was Not Detected at level above reporting limit. Reporting limit is given in parentheses.

^(a) Indicates Washington Maximum Contaminant Level (MCL).

Table B-9
SWMU-1 B Street: Groundwater Sample Metal Analytical Results
HF Sinclair Puget Sound Refining LLC - Anacortes, WA

		EPA-200.8	EPA-200.8	EPA-7196	Calc-Cr3	EPA-200.8	EPA-200.8	EPA-200.8	EPA-245.1	EPA-200.8
Well ID	Date	Arsenic	Cadmium	Chromium VI	Chromium III	Chromium	Lead	Nickel	Mercury	Zinc
Weinib	Date	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)	(Dissolved)
		μg/L	μg/L		μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
MTC	CA Method A Cleanup Levels:	5	5	-	-	50	15	-	2	-
EPA Drinking Water MCL ^{(a}		10	-	-	-	-	-	-	-	-
W-130	12/13/2024	2.4	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	4.4
	12/13/2024 (dup.)	2.3	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
	1/22/2025	2.2	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
	1/22/2025 (dup.)	2.2	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
W-131	12/13/2024	5.1	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
	1/22/2025	4.0	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
Field Equipment Blank	12/13/2024 (FEB)	ND(<1.0)	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)
	1/22/2025 (FEB)	ND(<1.0)	ND(<1.0)	ND(<10)	ND(<2.0)	ND(<2.0)	ND(<1.0)	ND(<2.0)	ND(<0.20)	ND(<2.5)

(a) EPA's current arsenic drinking water maximum contaminant level (MCL) was chosen as the cleanup level because it is an ARAR. EPA's MCL protects consumers from the effects of long-term, chronic exposure to arsenic.

BOLD & shaded - indicates that the concentration in the sample exceeds the most stringent cleanup level.

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

Table B-10 SWMU-1 B Street: Groundwater Sample cPAH Analytical Results

HF Sinc	lair Puget	Sound I	Refining	LLC - /	Anacortes,	WA
---------	------------	---------	----------	---------	------------	----

Sample ID	Date	EPA - 8270 Benzo[A]Anthracene	EPA - 8270 Benzo[A]Pyrene	EPA - 8270 Benzo[B]Fluoranthene	EPA - 8270 Benzo[K]fluoranthene	EPA - 8270 Chrysene	EPA - 8270 Dibenz[A,H]Anthracene	EPA - 8270 Indeno[1,2,3-Cd]Pyrene	Total cPAH Equivalent (TEq) ^(a)
		μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
То	icity Equivalency Factor (TEF):	0.1	1	0.1	0.1	0.01	0.1	0.1	
N	ITCA Method A Cleanup Level:								0.1 ^(b)
W-130	12/13/2024	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
	12/13/2024 (dup.)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
	1/22/2025	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
	1/22/2025 (dup.)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
W-131	12/13/2024	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
	1/22/2025	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015
Field Equipment Blank	12/13/2024 (FEB)	0.095	0.085	0.09	0.091	0.097	0.077	0.086	0.130
	1/22/2025 (FEB)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.015

^(a) cPAH level calculated using Toxicity equivalency methodology provided in WAC 173-340-708(8)

use. If no carcinogenic value was listed then the non-carcinogenic value was applied.

^(b) Method A cleanup level of Benzo(a)pyrene

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

For ND values, the TEF was multiplied by one half the reporting limit

TEF - Toxicity Equivalency Factor (WAC 173-340-900 table 708.2)

TEq - Toxicity Equivalency to benzo(a)pyrene, calculated by multiplying result by appropriate TEF.

Table B-11 SWMU-1 B Street: Groundwater Sample PAH Analytical Results HF Sinclair Puget Sound Refining LLC - Anacortes, WA

		EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270	EPA-8270
Sample ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[G,H,I]Perylene	Fluoranthene	Fluorene	Naphthalenes ^(b)	Phenanthrene	Pyrene
		μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
МТ	CA Method A Cleanup Level:	-	-	-	-	-	-	160	-	-
MTCA	A Method B Cleanup Level ^(a) :	480	-	2400	-	640	320	160	-	240
W-130	12/13/2024	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)
	12/13/2024 (dup.)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)
	1/22/2025	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)
	1/22/2025 (dup.)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)
W-131	12/13/2024	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)
	1/22/2025	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	0.196	ND(<0.020)	ND(<0.020)
Field Equipment Blank	12/13/2024 (FEB)	0.11	0.088	0.097	0.098	0.11	0.09	0.233	0.1	0.099
	1/22/2025 (FEB)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)	ND(<0.020)

(a) Method A and B cleanup levels obtained from CLARC tables calculated from WAC 173-340-720, Equation 720-1 and 720-2 (carcinogens), respectively, based on drinking water beneficial

use. If no carcinogenic value was listed then the non-carcinogenic value was applied.

^(b) Sum of naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

ND - indicates analyte was not detected at level above reporting limit (shown in parentheses)

Table B-12 SWMU-1 B Street: Groundwater Chemistry Parameters HFS OWS AOC-2 Investigation HF Sinclair Puget Sound Refining LLC - Anacortes, WA

Well ID	Date	DTW	GW Elevation	Temp	EC	TDS	Salinity	DO	рН	ORP	Turbidity
		(ft)	(ft)	(°C)	(mS/cm)	(g/L)	(ppt)	(mg/L)		(mV)	(NTU)
W-130	12/13/2024	11.85		23.6	0.2735	0.1779	0.13	5.71	7.69	40.7	2.28
	1/22/2025	11.81		24.8	0.2933	0.1935	0.14	5.51	7.25	76.1	1.35
W-131	12/13/2024	11.81		17.2	0.2832	0.1845	0.14	0.34	6.88	77.5	5.85
	1/22/2025	11.75		15.4	0.2601	0.1703	0.13	1.03	7.37	74.0	1.38

Table B-13Oil Water Sewer - EIM Submission InformationHF Sinclair Puget Sound Refinery - Anacortes, WA

Study	Sampling Location	Sampling Dates	Receipt Date of	Validation	Date s	Associated EIM Study		
Study	Sampling Location	Sampling Dates	Validated Data	Performed	EIM Location File	EIM Result File	EIM Well Water-Level File	ID Number
AOC-1	B-1-23 6 ft	4/10/2023	4/27/2023	EPA2B	6/14/2023	6/15/2023		CSID2865OWS
AOC-1	B-2-23 6 ft	4/10/2023	4/27/2023	EPA2B	6/14/2023	6/15/2023		CSID2865OWS
AOC-1	B-3-23 5 ft	4/13/2023	4/28/2023	EPA2B	6/14/2023	6/15/2023		CSID2865OWS
AOC-1	B-4-23 5.5 ft	4/13/2023	4/28/2023	EPA2B	6/14/2023	6/15/2023		CSID2865OWS
AOC-2	MW-130	12/13/2024	12/31/2024	EPA2B	1/7/2025	1/7/2025	1/7/2025	CSID2865OWS
AOC-2	MW-131	12/13/2024	12/31/2024	EPA2B	1/7/2025	1/7/2025	1/7/2025	CSID2865OWS
AOC-2	MW-130	1/22/2025	2/11/2025	EPA2B	1/7/2025	2/20/2025	2/20/2025	CSID2865OWS
AOC-2	MW-131	1/22/2025	2/11/2025	EPA2B	1/7/2025	2/20/2025	2/20/2025	CSID2865OWS
AOC-2	B-1-14 ft-120224	12/2/2024	12/20/2024	EPA2B	1/7/2025	1/7/2025		CSID2865OWS
AOC-2	B-1-16 ft-120224	12/2/2024	12/20/2024	EPA2B	1/7/2025	1/7/2025		CSID2865OWS
AOC-2	B-1-20 ft-120224	12/2/2024	12/20/2024	EPA2B	1/7/2025	1/7/2025		CSID2865OWS
AOC-2	B-2-14 ft-120224	12/2/2024	12/20/2024	EPA2B	1/7/2025	1/7/2025		CSID2865OWS
AOC-2	B-2-16 ft-120224	12/2/2024	12/20/2024	EPA2B	1/7/2025	1/7/2025		CSID2865OWS

APPENDIX C -2023 TRC PROCESS SEWER INSPECTION AND REPAIR RECOMMENDATIONS REPORT



2023 Process Sewer Inspections and Repair Recommendations

Date: March 5, 2024 Prepared For: HF Sinclair Puget Sound Refining LLC Prepared By: TRC Environmental Corporation





Contents

1.	Field Inspections	.1
	1.1. Background	.1
	1.2. Process Sewer Field Inspections	.1
2.	Field Data Review	.4
	2.1. Video Review	.4
	2.2. Repair Recommendations	.4

Figures

Figure 1	Process Sewer Inspections Scope						
Figure 2A	2023 Sewer Inspections and Prioritization Rated Defects 3 & 4						
Figure 2B	2023 Sewer Inspections and Prioritization Rated Defects 3 & 4						
Figure 2C	2023 Sewer Inspections and Prioritization Rated Defects 3 & 4						
Figure 2D	2023 Sewer Inspections and Prioritization Rated Defects 3 & 4						
Figure 2E	2023 Sewer Inspections and Prioritization Rated Defects 3 & 4						
Tables							
Table 1	Inspected Segments						
Table 2	Inspected Manholes						
Attachmer	its						
Attachment 1	HF Sinclair Puget Sound Refining LLC Process Sewer Prioritization Rating System						

- Attachment 2 Process Segment Inspection Summary Reports
- Attachment 3 Process Structure Inspection Summary Reports



1. Field Inspections

1.1. Background

The HF Sinclair Puget Sound Refining LLC (HFSPSR) Puget Sound Refinery's ("Refinery") process sewer, also referred to as Oily Water Sewer (OWS), has been in operation since constructed in 1958. The process sewer system is the underground piping system that consists of drain hubs, manholes, hatches, and other access points, which conveys process wastewater to the Refinery's wastewater treatment system.

An Investigation and Response Plan (IRP), dated June 15, 2022, was prepared for the Refinery in accordance with the requirements in the Agreed Order No. DE 16298 (AO), Section VII.A. The IRP describes measures to investigate the process sewer system and respond to releases or threatened releases, if any, discovered during the investigation. The process sewer inspection process covers a ten (10)-year cycle. This report describes sections of the process sewer inspected during 2023, and into the first quarter of 2024, in accordance with the IRP, and findings from those inspections.

1.2. Process Sewer Field Inspections

During 2023, and into the first quarter of 2024, approximately 3,850 linear feet (LF) of sewer line segments and 28 manholes (also known as "structures") were inspected. Field inspections were completed by Vortex Companies, LLC ("Vortex") and Insituform Technologies, LLC ("Insituform"). Data were processed and filed with a Setup ID. Locations were confirmed in the field daily with Vortex and Refinery personnel and are presented in **Figure 1**. The following **Table 1** and **Table 2** present segments and manholes inspected during this field inspection effort, with **Table 1** also presenting comments associated with the video footage.

Manhole 5-A and part of segment 5-A to 23-1 were not inspected during this effort due to Refinery sewer isolation operations. Manhole D-12 was inspected during this effort but is recommended for reinspection during a future effort with additional flow mitigation into manhole. These structures and segment will be inspected in a later phase.

Setup ID	Segment ID	Pipe Dia. (IN)	Inspected Footage (LF)	Comments
2023-1	D-1.1:D-2.1	15	253.4	
2023-2	D-2.1:D-3.1	15	255.4	
2023-3	D-3.1:D-4.1	15	412.3	
2023-4	D-4.1:D-20	15	82.9	
2023-5	D-20:D-6.1	15	227.7	
2023-6	D-6.1:D-6	15	10.5	
2023-7	D-6:D-19	15	82	

Table	1.	Inspected	Segments
-------	----	-----------	----------



Setup ID	Segment ID	Pipe Dia. (IN)	Inspected Footage (LF)	Comments
2023-8	D-19:D-20C	19	64.3	
2023-9	D-22:D-23	30	332	
2023-10	D-23:D-24	30	217.3	
2023-11	B-1:B-3	10	209.4	
2023-12	B-02:5-P	21	55.7	
2023-13	5-B:5-C	18	82	
2023-14	5-C: 5-D	18	265.3	
2023-15	5-D: 5-E	18	89.5	
2023-16	B-02:5-P	21	55.2	Reinspection of 2023-12.
2023-17	23-4: 5-B	18	133.2	
2023-18	23-1:5-A	18	38.7	Survey abandoned early due to sewer isolation plug.
2023-19	23-1:23-2	18	26.6	
2023-20	23-2:23-3	18	52.6	
2023-21	23-3:23-4	18	26.1	
2023-22	5-F:D-12	21	134.5	Survey abandoned early due to tap in pipe bottom.
2023-23	D-1.1:D-2.1	15	253.1	Reinspection of 2023-1.
2023-24	D-2.1:D-3.1	15	253.3	Reinspection of 2023-2.
2023-25	D-3.1:D-4.1	15	412	Reinspection of 2023-3.
2023-26	D-6:D-19	30	82.3	Reinspection of 2023-7.
2023-27	D-21:D-22	30	14.9	Survey abandoned early due to high water level.
2023-28	5-E:5-F	21	268	
2023-29	5-P:5-0	21	207.7	
2023-30	5-0:5-M	21	82	
2023-31	B-1:B-3	10	208.7	Reinspection of 2023-11.
2023-32	D-21:D-22	30	21.5	Reinspection of 2023-27.
2023-33	D-20C:D-22	30	16.2	
2023-34	5-M:D-12	21	53.4	Inspection ended early.



Setup ID	Segment ID	Pipe Dia. (IN)	Inspected Footage (LF)	Comments
2023-35	5-M:D-12	21	103.4	Reinspection of 2023-34. Survey abandoned early due to high water level.
2023-36	5-F:D-12	21	136.9	Reinspection of 2023-22.
2023-37	5-M:D-12	21	203	Reinspection of 2023-34 and 2023-35.

Table 2. Inspected Manholes

Table 2. Inspected MailIDIes					
Setup ID	Manhole ID				
2023-ST-1	D-1.1				
2023-ST-2	D-2.1				
2023-ST-3	D-3.1				
2023-ST-4	D-4.1				
2023-ST-5	D-20				
2023-ST-6	D-6.1				
2023-ST-7	D-6				
2023-ST-8	D-23				
2023-ST-9	23-1				
2023-ST-10	23-2				
2023-ST-11	23-3				
2023-ST-12	23-4				
2023-ST-13	5-C				
2023-ST-14	D-21				
2023-ST-15	5-B				
2023-ST-16	5-D				
2023-ST-17	5-E				
2023-ST-18	5-F				
2023-ST-19	5-M				
2023-ST-20	5-0				
2023-ST-21	5-P				



Setup ID	Manhole ID
2023-ST-22	B-02
2023-ST-23	B-1
2023-ST-24	B-3
2023-ST-25	D-19
2023-ST-26	D-20C
2023-ST-27	D-22
2023-ST-28	D-12

2. Field Data Review

2.1. Video Review

Sewer segment and manhole inspection videos for the listed segments and manholes in **Table 1** and **Table 2** were provided to TRC by Vortex between August 9, 2023, and August 28, 2023 and by Insituform on January 24, 2024. Following receipt of sewer inspection videos, TRC's team of certified National Association of Sewer Service Companies (NASSCO) staff reviewed videos for completeness and quality and provided an initial identification of defects using a NASSCO certified software. Sewer segments and manholes were reviewed using NASSCO's Pipeline Assessment Certification Program (PACP) and Manhole Assessment Certification Program (MACP) structural rating (SR) system to structurally rate sewer defects (e.g., cracking, deformities, etc.).

Following structural rating, TRC assigned defects a separate prioritization rating (PR) which takes into consideration the potential for release. This rating system was made specifically for the Refinery and can be found in **Attachment 1**. Each PR category is based on defect characteristics and the prioritization for follow-up actions and documentation.

Summary inspection reports, including PR identifiers and photos of defects, for segments and manholes can be found in **Attachment 2** and **Attachment 3**, respectively.

2.2. Repair Recommendations

Cleaning and inspection activities for the sewers revealed that some locations required further analysis or rehabilitation. Defects rated with a PR of 3 or 4 are grouped together in repair areas (e.g., Repair Area 1, Repair Area 2, etc.) based on proximity and are shown on **Figure 2A through Figure 2E.**

Repair Area 1 (2023-5, 2023-7, and 2023-26)

- 2023-5 (D-20:D-6.1)
 - Continue monitoring, or scope for future repair, sewer segment for PR=3 fracture between approximately 103 and 108 ft south of MH D-20.
- 2023-7 and 2023-26 (D-6:D-19)



• Continue monitoring, or scope for future repair, sewer segment for PR=3 multiple repair patches and fracture between approximately 60 and 85 ft south of MH D-6.

Repair Area 2 (2023-10)

- 2023-10 (D-23:D-24)
 - Line with cured in place pipe (CIPP), or dig and replace, entire segment from MH D-23 to MH D-24 for PR=3 surface damage corrosion.

Repair Area 3 (2023-22 and 2023-28)

- 2023-22 (5-F:D-12)¹
 - CIPP entire segment from MH 5-F to MH D-12, for PR=3 surface damage reinforcement visible.
- 2023-28 (5-E:5-F)
 - CIPP entire segment from MH 5-E to MH 5-F, for PR=3 surface damage reinforcement visible and fracture.

Repair Area 4 (2023-13 and 2023-14)

- 2023-13 (5-B:5-C)
 - Continue monitoring, or scope for future repair, sewer segment for PR=3 fracture between approximately 78 and 83 ft east of MH 5-B.
- 2023-14 (5-C:5-D)
 - Dig and replace sewer segment for PR=3 joint offset between approximately 262 and 267 ft east of MH 5-C.

Repair Area 5 (2023-11 and 2023-31)

- 2023-11 and 2023-31 (B-1:B-3)
 - CIPP entire segment from B-1 to B-3, for PR=3 fractures and PR=4 broken section of pipe.

¹ 2023-22 (5-F:D-12) and 2023-34 (5-M:D-12) were lined with CIPP on January 19, 2024.



Figures







Point Defects • Prioritization Rating = 3 • Prioritization Rating = 4 Continuous Defects Prioritization Rating = 3 Sewer Structure — Sewer Lines Sewer Inspection Route BASE MAP: GOOGLE EARTH PRO AERIAL IMAGERY SERVICE LAYER, 2/2024 DATA SOURCES: TRC 働 100 50 1:1,200 1" = 100' FFF1 PROJECT: HF SINCLAIR PUGET SOUND REFINING LLC PUGET SOUND REFINERY 2023 PROCESS SEWER INSPECTIONS AND REPAIR RECOMMENDATIONS TITI F 2023 SEWER INSPECTIONS AND **PRIORITIZATION RATED DEFECTS 3 & 4** 542643.0000.0000 DRAWN BY: A. CLINE PROJ. NO.: CHECKED BY: S. RAY FIGURE 2B APPROVED BY: N. LONGTIN FEBRUARY 2024 DATE 505 EAST HUNTLAND DRIVE SUITE #250 AUSTIN, TX 78752 PHONE: 512.329.6080 **IRC** PSR 3 4 Defects.aprx






Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet, Map Rotation: 0



Attachment 1: HF Sinclair Puget Sound Refinery Process Sewer Prioritization Rating System

HF Sinclair Puget Sound Refining LLC Sewer Prioritization Ratings

Rating	Characteristic / Examples	Actions and Documentation
4	Significant structural defect with potential for release. Examples: Large holes at or below the segment/manhole flow line and above groundwater table; completely separated joints with exposed surrounding soil above groundwater table; collapsed pipe sections.	Conduct initial release investigation involving the collection of soil and/or shallow groundwater sample(s). Groundwater samples will be collected only if the potential release occurred at or below the shallow groundwater table elevation. Schedule for moderate priority mitigation effort (primarily repair based on Refinery operational needs and accessibility or reinspection to monitor defect condition). If soil or groundwater concentrations exceed cleanup levels specified in Section 3.4 of IRP, a workplan for initiating an interim remedial action will be submitted to Ecology within 120 days. If a presumptive interim action is selected, the workplan will be submitted to Ecology within 60 days of the completion on the site characterization work.
3	Moderate structural defect. Examples: Significant fractures/cracks at or below the pipe/manhole flow line; groundwater infiltration at defect; significant corrosion. Defects that both higher risk for future potential release or structural failure.	Document in the Refinery record. Schedule for low priority mitigation effort (primarily repair based on Refinery operational needs and accessibility or reinspection to monitor defect condition).
2	Small to moderate structural defect. Examples: Moderate fractures/cracks above the pipe/manhole flow line; joint improperly seated; pipe reinforcement visible, moderate corrosion in pipe.	Document in the Refinery record.
1	Small structural defect. Examples: Hairline cracks; minor corrosion/deterioration of pipe/manhole material; visible aggregate; small offset joint; missing sealing rings.	Document in the Refinery record.

Notes:

1. IRP = Investigation and Response Plan dated June 15, 2022.



Attachment 2: Process Segment Inspection Summary Reports



Setup ID 202	23-1	Inspection	Date Au	g 9, 2023	Inspe	cted Le	ngth	(ft)	2	53.4 Defects	s Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	6
Segment ID D-1.1	:D-2.1 Pi	rimary Pipe	Material	RCP	Pipe	Diame	ter (i	in)		15 Peak Priorit	tization Rating	1	Peak C/O&M Rating	0		
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR O	M	С	PR	Remarks			Photos			
Manhole	Point	0	Constructiona	1 0		0)	0	0	D-1.1	Verter industrial Bi age 7 age 10 age 14 age 24 - 46 afe					
Miscellaneous Water Level	Point	0	Miscellaneou	s 0		0)	0	0	Water Level at Start of Survey			Nortax Industria 86-89-2023 10.40(52: AM 24.46 ft			
Surface Damage Aggregate Visible	Continuou	s 0-253.4	Structural	0	12- 12	2)	0		Surface Damage Aggregate Visible					prev industrial s 25 4rs s 25 4rs	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Multiple	Point	176	Structural	0	5-6	3	0	0	1	Crack Multiple	Vortes 1 08-09-20 11:02-9 174-72
Crack Longitudinal	Point	221.5	Structural	0	8	2	0	0	1	Crack Longitudinal	Wortex 1 85-69-2 11,96-10 722:00
Crack Longitudinal	Point	221.5	Structural	0	4	2	0	0	1	Crack Longitudinal	201 GA 2 80 - 92 11:96 - 19 227 - 40
Crack Multiple	Point	250.8	Structural	0	6-7	3	0	0	1	Crack Multiple	Torreb. Industriant Models 2603 Trassiszent 201-11:07 Trassiszent 201-11:
Crack Longitudinal	Point	250.8	Structural	0	2	2	0	0	1	Crack Longitudinal	
Manhole	Point	253.4	Constructional	0		0	0	0	0	D-2.1	





Setup ID	2023-2	Inspectio	n Date	Aug 9, 2023	Inspect	ed Leng	yth (ft)	2	55.4		Defects Rated ≥3	0	Peak Structural Rating	3	Total DD Defecte	4
Segment ID	D-2.1:D-3.1	Primary Pipe	e Material	RCP	Pipe D)iamete	r (in)		15		Peak Prioritization Rating	1	Peak C/O&M Rating	2	Total PR Defects	4
Desc	cription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks			Photos		
Ma	anhole	Point	0	Constructional	0		0	0	0	0	D-2.1		verte louspriat 12 cm 3/2 Art 20 sin Art			
Miscellaneo	ous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	/	Augriss industrial alian Stranger 2005 Augrission Augrission 2005 Augrission Augrission Augrission 2005 Augrission Augrission Augrission 2005 Augrission Augrission Augrission Augrission Augrission Augrission 2005 Augrission Au			
Surface Dam Vi	nage Aggregate isible	Continuous	0 - 255.4	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible		The provide state The provide s	Perturbation of the second sec		



Į	Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
	Deposits Settled Fine	Continuous	37.5 - 93.2	O&M	10	6	0	2	0	0	Deposits Settled Fine	
	Crack Circumferential	Point	93.3	Structural	0	4-5	1	0	0	1	Crack Circumferential	
	Crack Longitudinal	Point	105.29	Structural	0	5	2	0	0	1	Crack Longitudinal	
	Deposits Settled Fine	Continuous	119.2 - 127	0&M	10	6	0	2	0	0	Deposits Settled Fine	Yortex Industria 12 69-225 12 69-28 PM 13 72 17
	Deposits Settled Fine	Point	168.6	0&M	10	6	0	2	0	0	Deposits Settled Fine	Vortes Industrial 07 D9-7023 12105 PM 168-73 T1



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	201.8	Structural	0	6-7	3	0	0	1	Crack Multiple	
Manhole	Point	255.4	Constructional	0		0	0	0	0	D-3.1	500 100 100 10 22 3 - 60 70 7 3 - 70 70 7 4 - 70 70 70 7 5 - 70 70 70 70 7 5 - 70 70 70 70 70 70 70 70 70 70 70 70 70





Setup ID	2023	3-3	nspection Da	nte Au	g 9, 202	3	Inspec	ted Le	ength (1	t)	412.	3 Defect	s Rated ≥3	0	Peak Stru	ctural Rating	2		07
Segment ID	D-3.1:D	0-4.1 Prin	nary Pipe Ma	terial	RCP		Pipe	Diamo	eter (in)		15	Peak Priori	tization Rating	2	Peak C/	O&M Rating	2	Total PR Defects	27
Descriptio	on	Spatial Type	Distance (ft)	Туре	Pe	cent	Clock	SR	O&M	С	PR	Remarks				Photos			
Miscellaneous Level	s Water	Point	0	Miscellane	ous	0		0	0	0	0	Water Level at Start of Survey			Vortex 1 89-99-20 72 3136 85-52	Hustrial			
Manhol	e	Point	0	Constructio	onal	0		0	0	0	0	D-3.1			Vortek I 88-89-26 2(112) 12537	ndustrial m st			
Surface Aggr Visible	regate	Continuous	0 - 412.3	Structura	ıl	0	12- 12	2	0	0	1	Surface Aggregate Visible	WorteX Industrial 09-09-00-23 07-19-09 PR -20-07-75		90 ere 67 da 25 da 25 da 20 da			Vortex Industrial 86-95-2823 27:3549 M - 55:09 Tt - 700 - 70	
									2				Ē	54D	00 * 140 * 20 93 * 54 * 25 * 3770 BK	0		Verse Trouble Claim 08-19-7029 4-29-04-7029 4-29-04-7029 4-29-04-70 4-20-04-70 4-20-04-70 4-20-04-70 4-20-04-70 4-20-	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Miscellaneous General Observation	Point	87.4	Miscellaneous	0	6	0	0	0	0	Object in pipe	
Miscellaneous General Observation	Point	116.8	Miscellaneous	0	6	0	0	0	0	Object in Pipe	Randes Industry ini Randes and services Randes
Crack Longitudinal	Point	122.7	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	171.1	Structural	0	3	2	0	0	1	Crack Longitudinal	
Miscellaneous General Observation	Point	177.1	Miscellaneous	0	6	0	0	0	0	Object in Pipe	YTCLAS Endustriask an an and an an an and an

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Deposits Settled Gravel	Continuous	228.1 - 236	O&M	10	6	0	2	0	0	Deposits Settled Gravel	
Crack Longitudinal	Point	237.5	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	246.1	Structural	0	4-5	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	261.9	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	268.5	Structural	0	2	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	292	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	327.9	Structural	0	7	2	0	0	1	Crack Longitudinal	BAD
Crack Circumferential	Point	334.6	Structural	0	3-5	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	337.6	Structural	0	5-6	1	0	0	1	Crack Circumferential	BAD



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	337.6	Structural	0	6-7	1	0	0	1	Crack Circumferential	Vorste Ludweitr, 445 99 99 2015 31,46 857 PH Relations R
Crack Circumferential	Point	341	Structural	0	4-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	341	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	343.8	Structural	0	6-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	347.3	Structural	0	4-5	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	347.3	Structural	0	7-8	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	354.8	Structural	0	5-10	2	0	0	1	Crack Multiple	
Crack Circumferential	Point	359.1	Structural	0	4-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	371	Structural	0	7-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	379.1	Structural	0	8-10	1	0	0	2	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	379.3	Structural	0	4-7	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	388.6	Structural	0	1	2	0	0	1	Crack Longitudinal	Petter-Augustricht Billion sonner 2013 sonner 101 sonner 101 s
Crack Longitudinal	Point	395.1	Structural	0	11	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	395.1	Structural	0	9	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	404.4	Structural	0	3-5	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	406.4	Structural	0	6-11	1	0	0	2	Crack Circumferential	
Deposits Settled Gravel	Point	406.7	O&M	10	6	0	2	0	0	Deposits Settled Gravel	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Manhole	Point	412.3	Constructional	0		0	0	0	0	D-4.1	Varies Industrial 975.99.20 972.96.80 PH 977.79.37 977.99.77





Setup ID	2023-4	Ins	pection Da	ate Aug 9,	2023	Inspec	cted L	ength (ft)	82.9	Defects Rat	ted ≥3	0	Peak Structural Rating	3	Total DD Defects	7
Segment ID	D-4.1:D-2	20 Prima	гу Ріре Ма	aterial RC	P	Pipe	Diam	eter (in)	15	Peak Prioritizati	ion Rating	2	Peak C/O&M Rating	0	Total PR Delects	/
Descript	otion	Spatial Type	Distance (ft)	Туре	Percent	t Clock	SR	0&M	С	PR	Remarks			Photos			
Miscellaneou Leve	us Water el	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Vorte: ladustria 8: 19: 10:23 6:12: 2: 60 2: 60 3:			
Surface Da Aggregate	amage Visible	Continuous	0 - 82.9	Structural	0	12- 12	1	0	0	1	Surface Damage Aggregate Visible	Vortey Industrial 613-19-27 613-19-27 2-35-77 		Image: set the			
Manho	ole	Point	0	Constructional	0		0	0	0	0	D-4.1			Vertas industriai mage 27423 5-13-247-85 5-247-85 240-55 2			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	7.8	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	49.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	55.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	73.7	Structural	0	6-7	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	79.8	Structural	0	12	2	0	0	2	Crack Longitudinal	
Crack Multiple	Point	79.8	Structural	0	6-7	3	0	0	1	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Manhole	Point	82.9	Constructional	0		1	0	0	0	D-20	VVnrtge Tridus trisid Galeria 2027 Galeria 2027 Galeria 12, RH 122, Martin





Setup ID	2023-5	Ins	pection Da	ate Au	g 10, 2023	Inspe	cted L	ength ((ft)	227.	7 Defects Rat	ted ≥3	1	Peak Structural Rating	4	Total PR Defects	64
Segment ID	D-20:D-6	.1 Primai	y Pipe Ma	aterial	RCP	Pipe	Diam	ieter (in	1)	15	Peak Prioritizati	ion Rating	3	Peak C/O&M Rating	4	Total FR Delects	04
Descript	ition	Spatial Type	Distance (ft)	Туре	Perce	nt Clock	SR	0&M	С	PR	Remarks			Photos			
Manho	ole	Point	0	Constructio	nal 0		0	0	0	0	D-20	Vorze z. zpolosta i a menos v ranka nego v					
Miscellaneou Leve	us Water el	Point	0	Miscellane	ous 10		0	0	0	0	Water Level at Start of Survey			Vottos. Endustrian 88-1930 033 9-42-55 AH 5-32-71 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Surface Da Aggregate	amage Visible	Continuous	0 - 227.7	Structura	1 0	12- 12	2	0	0	2	Surface Damage Aggregate Visible	Varfax Lodustria Bons 2003 Sodi 19 AM Li 23 Tr					



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	9.2	Structural	0	10-3	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	15.5	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	21.5	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	21.5	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	21.5	Structural	0	3	2	0	0	1	Crack Longitudinal	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	21.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	25.3	Structural	0	12- 12	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	27.4	Structural	0	9	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	27.4	Structural	0	12	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	45.3	Structural	0	8	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	45.3	Structural	0	3	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Tap Break-In Intruding	Point	54.7	Constructional	0	11	0	4	0	1	Tap Break-In Intruding	Warfs e Lindosert el 00-10-2023 10-2024 8-22-75 8-22-75 8-22-75 10-2024 10-20
Fracture Multiple	Point	57.4	Structural	0	10-3	4	0	0	2	Fracture Multiple	
Crack Longitudinal	Point	57.4	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	64.4	Structural	0	9	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	64.4	Structural	0	3	2	0	0	1	Crack Longitudinal	
Miscellaneous Water Level	Point	66.7	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	69.7	Structural	0	3-6	3	0	0	1	Crack Multiple	
Crack Multiple	Point	75.4	Structural	0	12- 12	3	0	0	1	Crack Multiple	
Tap Factory Activity	Point	79	Constructional	0	12	0	0	0	0	Tap Factory Activity	Vortes Indust (441 81-10-2023 101:27:37:44 75:72:21
Crack Multiple	Point	80.4	Structural	0	12-2	3	0	0	1	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	81.7	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	81.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	87.7	Structural	0	3-9	3	0	0	1	Crack Multiple	
Crack Multiple	Point	93.4	Structural	0	12- 12	3	0	0	2	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	99.5	Structural	0	12- 12	3	0	0	2	Crack Multiple	
Crack Multiple	Point	103.7	Structural	0	12- 12	3	0	0	2	Crack Multiple	Image: state stat



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	Server
Crack Multiple	Point	105.8	Structural	0	8-4	3	0	0	2	Crack Multiple	Important
Fracture Circumferential	Point	105.8	Structural	0	5-7	2	0	0	3	Fracture Circumferential	Interest preserved I
Crack Multiple	Point	107.7	Structural	0	12- 12	1	0	0	1	Crack Multiple	









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	110.1	Structural	0	6-9	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	111.8	Structural	0	8-4	2	0	0	1	Crack Multiple	
Crack Circumferential	Point	115.9	Structural	0	6-9	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	117.9	Structural	0	8-10	3	0	0	1	Crack Multiple	
Crack Circumferential	Point	117.9	Structural	0	5-6	1	0	0	1	Crack Circumferential	11.37 AL 48 11.37 AL 48 11.37 AL 48





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	124.1	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	129.8	Structural	0	9	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	129.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	135.8	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	141.9	Structural	0	12- 12	1	0	0	2	Crack Circumferential	VALUE 1000000000000000000000000000000000000



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	148.2	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	148.2	Structural	0	11	2	0	0	1	Crack Longitudinal	Vorter, Industrial Vorter, Industrial Vorter, Schröner III. Vorter, Schröner Vorter, Schrön
Crack Longitudinal	Point	154.1	Structural	0	9	2	0	0	1	Crack Longitudinal	Ange Trichada Grant Die State Grant 11,520 grant 354 llo r T 4 4 4
Crack Longitudinal	Point	154.1	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	154.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	160.2	Structural	0	1	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	160.2	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	166.6	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	166.6	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	172.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	172.3	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	172.3	Structural	0	12	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	172.3	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	172.3	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	178.2	Structural	0	6-11	3	0	0	1	Crack Multiple	
Crack Multiple	Point	184.5	Structural	0	8-9	2	0	0	1	Crack Multiple	
Crack Longitudinal	Point	190.4	Structural	0	9	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	190.4	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	196.4	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	196.4	Structural	0	8-10	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	196.4	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	202.4	Structural	0	1-2	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	208.2	Structural	0	1	2	0	0	1	Crack Longitudinal	


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	214.3	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	220.4	Structural	0	12	2	0	0	1	Crack Longitudinal	
Manhole	Point	227.7	Constructional	0		0	0	0	0	D-6.1	89-10-2022 12:90-19-202 22:700-91 22:7,00-91





Setup ID	2023-6	Inspection D	ate	Aug 10, 2023	Inspected	l Length	n (ft)	10	.5		Defects Rated ≥3	0	Peak Structural Rating	4		
Segment ID	D-6.1:D-6	Primary Pipe M	laterial	RCP	Pipe Dia	ameter (in)	1	5	Pea	ak Prioritization Rating	2	Peak C/O&M Rating	0	Total PR Defects	3
Des	scription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks			Photos		
Ma	anhole	Point	0	Constructional	0		0	0	0	0	D-6.1		Voriek Industri 82-89-1023 17515-42-94 230.00 (1			
Miscellaneo	ous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Surve	vey	Vortex Industri 15-10-2023 173.13-140 PM 238.40 Tt 7			
Surface Dan Inc	nage Roughness creased	Continuous	0 - 10.5	Structural	0	12- 12	1	0	0	1	Surface Damage Roughnes Increased	ess	Vertex Industrial B 18-2028 1 190-11 Vertex Industrial Vertex Indu		t paustrust 10 3 10 3 10 4 10 4 10 10 4 10 4 10 10 10 10 10 10 10 10 10 10	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Fracture Multiple	Point	0.5	Structural	0	8-9	4	0	0	2	Fracture Multiple	
Crack Longitudinal	Point	4	Structural	0	11	2	0	0	1	Crack Longitudinal	
Manhole	Point	10.5	Constructional	0		0	0	0	0	D-6	Vortex Indus 88-10-263 12.182-37 PH 4.27 Yr 8





Setup ID	2023-7	Inspection	n Date	Aug 1	0, 2023	Insp	pected	Lengt	h (ft)		82 De	fects Rated ≥3	3	Peak Structural R	ating	3		
Segment ID	D-6:D-19	Primary Pipe	e Material	R	RCP	Pi	pe Dia	meter	(in)		15 Peak P	rioritization Rating	3	Peak C/O&M Ra	ting	2	Total PR Defects	9
Description	Spatial Type	Distance (ft)	Туре	2	Percent	Clock	SR	0&M	С	PR	Remarks			Pho	otos	Ň		
Manhole	Point	0	Construct	ional	0		0	0	0	0	D-6			Aprilan Industrial 19. do 2023 20022 Feb 2015 Feb 305 Feb 400				
Miscellaneous Water Level	Point	0	Miscellan	eous	10		0	0	0	0	Water Level at Start of Survey			Vortro. (Fourt 14) 06 19 423 113 20 9 M 235 07 Tr 255 07 Tr				•
Surface Damag Aggregate Visibl	e e Continuou	us 0-82	Structu	ral	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible	Nortes Industrial 05-00-1073 Fybrid 2-Pri 3-Refit		Worker, Industration. Ober 14:202 21:15:32 PR 22:53 PR 22:53 PR 22:53 PR 22:54 PR 22:55 PR 20:51 PR 20:52 PR			ACT PC 2 TRUE TI A 1 B 4 7 723 S 7 10 PC S 8 20 TT	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	4.8	Constructional	0	7-8	2	0	0	2	Fracture Circumferential	Process Tapostraat
Crack Circumferential	Point	4.8	Structural	0	9-7	1	0	0	1	Crack Circumferential	
Miscellaneous Water Level	Point	7	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	Vortes ing 19 10 292 2: 07:5 PX - 0:45 11 - 1: - 1: - 1: - 1: - 1: - 1: - 1: -
Crack Longitudinal	Point	13	Structural	0	4	2	0	0	1	Crack Longitudinal	
Obstruction Rocks	Point	14	O&M	10	6	0	2	0	0	Obstruction Rocks	Yonfor Industrial Basis 23 PR Program 9:05 Tr



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Miscellaneous Water Level	Point	33.4	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	Vortex Indo 08 10 2023 2120107 PM 33 16 FE
Deposits Settled Gravel	Continuous	37.5 - 52.8	O&M	10	6	0	2	0	0	Deposits Settled Gravel	Nortex Industrial Nortex Industrial 27.50 ft
Crack Longitudinal	Point	45.5	Structural	0	1	2	0	0	1	Crack Longitudinal	
Miscellaneous Water Level	Point	53.6	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	Vortex 1993 96 19 293 31 29 493 58 56 11
Point Repair Patch	Point	61.9	Structural	0	12	0	0	0	3	Point Repair Patch	Footness Industrial Anduard 975 Status of the the status of the stat



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	62.3	Structural	0	1-11	1	0	0	2	Crack Circumferential	Here have been set of the set of
Point Repair Patch	Continuous	66.1 - 75.1	Structural	20	12-3	0	0	0	3	Point Repair Patch	The set of th
Deposits Attached Encrustation	Point	78.5	0&M	10	12	0	2	0	0	Deposits Attached Encrustation	Vorter Industria 06530-2023 2/4/500 PN 24/50 FF





















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	The second second
Manhole	Point	82	Constructional	0		0	0	0	0	D-19	Vortes Today 10% 10 2023 10% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10%
Fracture Longitudinal	Point	82	Structural	0	6	3	0	0	3	Fracture Longitudinal	Voctex Indus 08 18 2023 2147/31 PM 02/09 TF







Setup ID	2023-8		Inspectior	Date	Oct 11	,2023	specte	d Leng	th (ft)	d il	64.3	efects Rated ≥3	0	Peak Structural Rating	2	Total DD Defecto	4
Segment ID	D-19:D-20	0	Primary Pipe	Material	S	P	Pipe Di	amete	r (in)		20 Peak	Prioritization Rating	1	Peak C/O&M Rating	2	Total PR Delects	4
Descriptio	n Sp Ty	atial /pe	Distance (ft)	Туре	Pe	ercent Cloc	k SR	0&M	С	PR	Remarks			Photos			
Manhole	Po	oint	0	Constructio	onal	0	0	0	0	0	D-19			Weiter Lagustrial Weiter Ass Backas Ass Backas Backas Ass Backas Ass Backas Ass Bac	100 - 100 -		
Miscellaneo Water Leve	el Po	oint	0	Miscellane	ous	10	0	0	0	0	Water Level a Start of Surve			Vortex Industrial Vortex Industrial 91-26-23 91-26-23 1-4-97 1-4-97 0-00000000000000000000000000000000000			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	22.222
Surface Damage Surface Spalling	Continuous	0 - 64.3	Structural	0	12- 12	2	0	0	1	Surface Damage Surface Spalling	Image: state in the state
Deposits Settled Gravel	Continuous	18.2 - 22.2	O&M	10		0	2	0	0	Deposits Settled Gravel	Wortex Index 1 2023 1 2023 1 2021 2 2023 1 2021 2 2027 1 2025 1 2025
Crack Longitudinal	Point	20.2	Structural	0	8	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	40.4	Structural	0	4	2	0	0	1	Crack Longitudinal	Vortier Industrial TRT-1-2033 A-1-3-9 Art A-1-4-4 Art Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art A-1-4-4 Art Art A-1-4-4 Art Art A-1-4-4 Art Art A-1-4-4
Crack Longitudinal	Point	59.1	Structural	0	7	2	0	0	1	Crack Longitudinal	
Manhole	Point	64.3	Constructional	0		0	0	0	0	D-20C	909-19- 2023 9-39/72- An 5-9-37/72- An 5-9-37/72- An









Setup ID	2023-9	Inspec	tion Date	Aug 11, 2	023	Inspe	cted Le	ength	(ft)	332	Defects Rated ≥3 0 Peak Structural Rating 3
Segment ID	D-22:D-23	Primary P	Pipe Material	SP		Pipe	e Diame	eter (ir	ר)	30	Peak Prioritization Rating 2 Peak C/O&M Rating 0
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	Photos
Manhole	Point	0	Constructiona	1 0		0	0	0	0	D-22	
Miscellaneous Water Level	Point	0	Miscellaneous	s 10		0	0	0	0	Water Leve at Start of Survey	Vortex Industrial Vortex Indust
Surface Damage Corrosion	Continuous	0 - 332	Structural	0	3-9	3	0	0	2	Surface Damage Corrosion	Vortes Industrial Smult. Jo23 11.125 PP Pr 11.78 ft 11.78
											Vortex-Indvortiat BS-11-2023 1:41:97-99 32.29/ft

Page 1 of 5 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating



Ver tex does 1770 - 2023	ortex Industrial 9-11-2023 40-43 PR 67-91 ft 67-91 ft 10-11-2023 PACKER INDUSTRIE 51-10 PR 122-37 ft 122-37 ft
	ortex Industrial 19.13.2023 19.13.2024 19.13.2024 19.13.2024 19.14.93 ft 0.14.93 ft
	Ortex Industria 18-11-1023 2022 35-445 2023 5-445 2023 5-445 2024 5-455 2024 5-455 2025 5-4555 2025 5-4555 2025 5-4555 2025 5-4555 2025 5-5555 2025 5-5555





















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
											Vortex Industrial 89-11-2023 231,01 ft 235.40 Ff 235.94 ft 235.94 ft 245.94 ft 24
Crack Longitudinal	Point	10	Structural	0	5	2	0	0	1	Crack Longitudinal	
Surface Damage Roughness Increase	Point	47.7	Structural	0	9	1	0	0	2	Surface Damage Roughness Increase	Vortex Industrial BB-11-2023 1-44:41 PM 47.17 ft
Crack Longitudinal	Point	49.8	Structural	0	4	2	0	0	1	Crack Longitudinal	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Roughness Increased	Continuous	55 - 61.3	Structural	0	11-1	1	0	0	1	Surface Damage Roughness Increased	Vortex Industrial 06:11:2023 11:46:07 PM 53:20 ft
Crack Longitudinal	Continuous	110.8 - 127.2	Structural	0	3	2	0	0	1	Crack Longitudinal	House's Industrial Bar 2023 E-Jacob PR 2029 E-Jacob PR 2020 E-Jacob PR 2020 E-
Crack Longitudinal	Continuous	129.2 - 147	Structural	0	1	2	0	0	2	Crack Longitudinal	Vortex Industrial BB-11-2023 IS52:00 PM IZ6.30 ft IS52:00 PM IS52:00 PM
Surface Damage Roughness Increased	Point	162	Structural	0	12	1	0	0	1	Surface Damage Roughness Increased	Vorte Tiduarial Di 31:203 Ito 66 ft
Surface Damage Roughness Increased	Continuous	189.2 - 208.9	Structural	0	9-3	1	0	0	1	Surface Damage Roughness Increased	Vortex Industrial 08-11-2013 1158:17 PM 189:00 ft W-Par













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Roughness Increased	Continuous	237 - 247	Structural	0	11	1	0	0	1	Surface Damage Roughness Increased	Vortex Industrial 08-11-2623 27:01:45.90 234,70 ft
Crack Longitudinal	Point	309.6	Structural	0	10	2	0	0	1	Crack Longitudinal	
Manhole	Point	332	Constructional	0		0	0	0	0	D-23	









Setup ID 2023-10) Insp	ection Date	Aug 11, 2023	Insp	ected Le	ength ((ft)	217.	.3	Defects Rated ≥3	4	Peak Structural Rating	3	Total DD Defecto	14
Segment ID D-23:D-2	4 Primary	Pipe Material	SP	Pip	e Diame	eter (in)	30		Peak Prioritization Rating	3	Peak C/O&M Rating	4	Total PR Delects	14
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks		Pho	tos		3
Surface Damage Corrosio	n Continuous	0 - 8	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion		Vortes Industria 8e-11-2023 3rub:59 PN 3.62 ts	Vortex Industrial 08-11-2033 3:01:33 PM 3.86 fr		
Miscellaneous Water Leve	el Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey		Vortex Industrial 08-11-203 3 100-56 PM 3.42 TT			
Manhole	Point	0	Constructional	0		0	0	0	0	D-23		Vortex Industrial Wallinged The State of the Indone Me			
Surface Damage Corrosio	n Continuous	8 - 17	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion		Vortes Industrial UN-11-2023 IIN-37 PR II-39 fr			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Corrosion	Point	17	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	Vortex Industrial 09-11-2023 3:07:08 PH 17:09 Ti
Surface Damage Corrosion	Continuous	19 - 75	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	Vorter Talustriat 30925 87 37.36 ft Vorter Tausstriat 81.32 99 Pt 18.32 ft















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Corrosion	Continuous	75 - 88	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	Vortex Industriat 09-11-2023/ 3:13:7023/ 76-38 ft 76-38 ft
Surface Damage Corrosion	Continuous	88 - 120	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	Vortex Industrial 00-11-2023 3:27:10 PM 93.73 ft Vortex Industrial 00-11-2023 3:13:57 PM 124.75 ft
Surface Damage Roughness Increased	Continuous	117 - 125.4	Structural	0	9-1	1	0	0	1	Surface Damage Roughness Increased	00rtex Industrial 85-11-2023 3-20-06 PM 115-23 ft

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Corrosion	Continuous	120 - 150	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	Vortex Industrial Bize.ol ft
Surface Damage Roughness Increased	Point	135	Structural	0	11-1	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Roughness Increased	Continuous	146 - 158	Structural	0	10-2	1	0	0	1	Surface Damage Roughness Increased	Vertex Industrial 88-15-2023 3:23:56 Pr 165:93.00



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Corrosion	Continuous	150 - 176.1	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	139.89 Tr 139.89 Tr 139.89 Tr
Surface Damage Roughness Increased	Continuous	165 - 171.4	Structural	0	10-2	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Corrosion	Continuous	176.2 - 217.3	Structural	0	12- 12	3	0	0	2	Surface Damage Corrosion	Vortex Industrial The 14:003 V75.93, Ht V75.93, Ht V75.94, Ht V75.94, Ht V75.95, Ht



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Spalling	Point	187.6	Structural	5	11	2	0	0	1	Surface Damage Spalling	Sortes. Industrials, Book - 2003 B27A-827 PM - 3273 B1 Tu - 2004 B27A-827 PM - 3273 B1 Tu - 2004 B27A-827 PM - 3274 B27A-827 PM - 3274 B27A-827
Miscellaneous General Observation	Point	206.5	Miscellaneous	5	10	0	0	0	0	Ring Inserted in Pipe	Warter Industrian De 11 2023 2 71 al PR 206 55 1t
Manhole	Point	217.3	Constructional	0		0	0	0	0	D-24	Vortex Industrial eg 11 2023 3:49:46 PM 214.79 Tr
Line Down	Point	217.3	Constructional	100		0	4	4	0	Line Down	Vortex Industrial Statisty Ph 236 01 ft





Setup ID	2023-11	Inspection D	ate Aug	g 11, 2023	Inspe	ected L	.ength	(ft)	209	.4 Defects	s Rated ≥3	5	Peak Structural Rating	4		05
Segment ID	B-1:B-3	Primary Pipe M	laterial	VCP	Pipe	e Diam	neter (ir	1)	10	Peak Priorit	tization Rating	4	Peak C/O&M Rating	2	Total PR Defects	95
Description	Spatia Type	l Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks			Photos			
Manhole	Point	0	Constructior	nal O	1 21	0	0	0	0	B-1		Vortex indus 08-11-2023 4:48:53 PM 5.55 FL	trial Wortex Int B5-11-2023 4152:47 PF 3.52 r	ustral - t		
Miscellaneous Water Level	S Point	0	Miscellaneo	us 20		0	0	0	0	Water Level at Start of Survey		Vortex Indus 00-11-2023 4:48:53 PM 3:38 ft	trial Vortex Ind Ball-2023 4:52146 PP 3:62 f	ustriat t		
Fracture Multip	le Point	5.9	Structural	0	6-11	4	0	0	3	Fracture Multiple	Varter Troustriat 05-11-2023 4-521-5-70 5-42 Tr				or i par troduji i la i i si i formi s. si v tr	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	7	Structural	0	12-1	3	0	0	2	Crack Multiple	Vortex 1 08-11-20: 4:49:05 i 6.35
Crack Longitudinal	Point	7.1	Structural	0	8	2	0	0	1	Crack Longitudinal	Vortex 1 08 11 20 196 32 7,33
Joint Offset Medium	Point	9.8	Structural	0		3	0	0	2	Joint Offset Medium	Vortex 1 64:15-15 6:56-45: 8.69 X-14
Crack Longitudinal	Point	10	Structural	0	3	2	0	0	1	Crack Longitudinal	Volice Final Volice Final 1970 - Lorde 1970 - Lorde 18.00 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Multiple	Doint	14.2	Structural	0	12-	2	0	0	2	Fracture Multiple	Vortex 1 BB-11-20 4:59:49 13.09 1
	Foint	14.2	Structural		12	2			5		PH 44
Crack Multiple	Point	18.2	Structural	0	1-3	3	0	0	2	Crack Multiple	Vortex tedustrial DB-11-2027 S103:16-PR 18.25 Ft 18.25 Tt 18.25 Tt 18.
Crack Multiple	Point	18.2	Structural	0	5-6	3	0	0	2	Crack Multiple	5100[19]











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	E T Look and the
Crack Multiple	Point	22.2	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vertex.Inductors 3:35:26 mpr 2:2:39 pr 3:35:26 mpr
Crack Spiral	Point	24.5	Structural	0	2-6	2	0	0	1	Crack Spiral	Vorter Industriet 318:12-2023 78:51-20 77:53 77:53 78:54 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Crack Multiple	Point	26.5	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial S1:12:023 S1:12:05 S1:12:06 S1:12:07 S1:12:07





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Longitudinal	Point	27.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	30.4	Structural	0	2	2	0	0	1	Crack Longitudinal	Vortex In 08-11-202 5:18:04 F 38,44
Crack Longitudinal	Point	34.4	Structural	0	1	2	0	0	1	Crack Longitudinal	Vortex Industrial 08-11-2023 5:2101 PM 34.36 Tt
Crack Longitudinal	Point	34.4	Structural	0	4	2	0	0	1	Crack Longitudinal	Vortex Industrial 08-11-2023 S:21:13 PM 34.36 TC
Crack Longitudinal	Point	34.4	Structural	0	7	2	0	0	1	Crack Longitudinal	5120148 7 34 36
Crack Longitudinal	Point	34.4	Structural	0	9	2	0	0	1	Crack Longitudinal	Vin 1127 1 08-11-20 34.36

Photos ortex Indust 8-11-2023 :21:05 PH 34.36 FL 0ftes Indus 8-11-2023 :21:15 PM 34.36 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	38.4	Structural	0	6-7	2	0	0	2	Fracture Circumferential	Vortex I 08-11-20 5:23:23 38.39
Crack Spiral	Point	38.4	Structural	0	7-10	2	0	0	2	Crack Spiral	Vortex Industriat 96-11-3033 5123156 PM 38.39 ft
Crack Spiral	Point	38.4	Structural	0	2-5	2	0	0	2	Crack Spiral	Vortex Industrial 08:11:2023 5:24:44 pM 38:35 Tt 38:35 Tt
Crack Spiral	Point	42.2	Structural	0	6-11	2	0	0	2	Crack Spiral	Vortex Industrial 95-11-2023 51-25-57 PM 40.44 Tt 40.44 Tt 100 11-20 100 100 100 100 100 100 100 100 100 100 100 100 100
Crack Longitudinal	Point	42.2	Structural	0	5	2	0	0	2	Crack Longitudinal	Vortex transfit at 51.28.13 42.73.17 42.73.17



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	46.3	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial 08:11:2023 51:29:27 PN 43:40 Tt Vortex Industrial 08:11:20 44:43 Vortex Industrial 09:11:20 Vortex Industrial 10:11:20 Vortex Industrial 10:11:20
Crack Multiple	Point	50.4	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex, Industrial 08-11-203 S13009 PM S0-31 TI S0-31 TI S0-31 TI S0-31 S0-32
Crack Spiral	Point	54	Structural	0	12-5	2	0	0	2	Crack Spiral	Vortex 1 98-11-20 5:38:10 50.70



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Multiple	Point	54.4	Structural	0	12- 12	3	0	0	3	Fracture Multiple	Vortex lature Industrial Stream Industrial Vortex lature Industrial Vortex lature
Crack Longitudinal	Point	58.5	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortex. I 08-11-20 3148:51 38-05
Crack Spiral	Point	58.5	Structural	0	2-6	2	0	0	2	Crack Spiral	Vortex Industrial 05:11:2023 Silia M Solds Tr
Crack Longitudinal	Point	58.5	Structural	0	10	2	0	0	1	Crack Longitudinal	Sortas 1 08-11-20 5150-56 58-45



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	62.8	Structural	0	7	2	0	0	2	Crack Longitudinal	Vortex Industria 08-11-2023 5153199 PM 62.61 ft
Crack Longitudinal	Point	62.8	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Spiral	Point	62.8	Structural	0	1-6	2	0	0	2	Crack Spiral	Vortex Industrial 08-11-203 5:52:37 PM 61.00 ft 00-11-202 5:54:32 F 5:22:1 00-11-202 5:54:32 F 5:52:1 00-11-202 5:54:32 F 5:52:1 00-11-202 5:54:32 F 5:52:1 00-11-202 5:54:32 F 5:52:1 00-11-202 5:54:32 F 5:54:32 F 5:54:
Crack Spiral	Point	66.4	Structural	0	11-5	2	0	0	2	Crack Spiral	berlar Tribustrial 00-11-2023 3:537:49 PM 66.36 ft
Crack Spiral	Point	66.4	Structural	0	6-8	2	0	0	2	Crack Spiral	Vortex 1 08-11-20 5:56:53 66.36















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Joint Offset Medium	Point	70.3	Structural	0		3	0	0	1	Joint Offset Medium	Vortex 1 08:11:20 3:199:12 68:50
Fracture Circumferential	Point	70.5	Structural	0	10- 11	4	0	0	2	Fracture Circumferential	Vortex Industrial 08-11-2023 6:01:33 PM 70.53 ft
Fracture Spiral	Point	70.5	Structural	0	7-9	3	0	0	2	Fracture Spiral	Vortex Industrial 00:11-20 6:00:21 PM 70:55 Tt
Crack Multiple	Point	70.5	Structural	0	3-5	3	0	0	2	Crack Multiple	Vortex Industrial 09:11:20:23 61:02:53 PM 70:53 Tt 70:53 Tt 70:55



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	74.3	Structural	0	12- 12	2	0	0	2	Crack Spiral	Vortex Industrial 08-11-2023 07-26 PM 72.34 ft 09-14 00-11-2023 0-27-12 0-27-
Crack Spiral	Point	78	Structural	0	12-8	2	0	0	2	Crack Spiral	Vortex industrial 0:93:30 PF 0:93:76 0:00 FF 0:00 FF <
Crack Spiral	Point	82.4	Structural	0	2-5	2	0	0	2	Crack Spiral	Vortex Industrial 08:11:2023 6:12:33 PM 82:38 ft
Crack Longitudinal	Point	82.4	Structural	0	7	2	0	0	2	Crack Longitudinal	Vortex Industrial 05-11-2023 0712:30 PM 82-38 ft 82-38 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	86.3	Structural	0	5	2	0	0	1	Crack Longitudinal	Vortex 1 68-11-20 9:15:53 86-33
Crack Longitudinal	Point	86.3	Structural	0	9	2	0	0	2	Crack Longitudinal	Vortex Industrial 08-41-2023 9:14:15 PM 85.33 ft
Crack Multiple	Point	90.7	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industriat 05:11:20:3 05:11:20:3 05:11:20:3 05:11:20:3 05:11:20:3 05:11:20:3 06:11:20:3 07:12:20:3 07:12:20:3 07:12:20:3 07:12:20:3 07:12:35: RN 08:11:20:30: RN 08:11:20:30: RN 09:12:35: RN 09:12:35: RN 09:12:35: RN 09:12:35: RN 09:12:35: RN 09:12:30: RN 09:12:30: RN 09:12:30: RN 100:12:12:10:10 100:12:12:10:10 100:12:10:10 100:12:10:10 100:12:10:10 100:12:10:10 100:12:10:10 100:12:10:10 100:12:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 100:10:10 <tr< td=""></tr<>
Crack Spiral	Point	94.6	Structural	0	12- 12	2	0	0	2	Crack Spiral	Yorlex Industrial 01:12073 02:2071 92:6271 91:2013 92:000



Ŧ

Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	98.7	Structural	0	5-1	2	0	0	2	Crack Spiral	Vortex Industrial 0F-11-2023 6:23:36 PR 96.65 It 96.65 Contemporation 96.65 Contemporation 96
Crack Spiral	Point	102.5	Structural	0	6-1	2	0	0	2	Crack Spiral	Vortex Industrial 06-11-2023 6:25:31 PR 102:38 ft 06-21:29 06:00 06:00 06:00 06:00 06:00 06:00 06:00
Crack Longitudinal	Point	102.7	Structural	0	5	2	0	0	2	Crack Longitudinal	00+13.4 09-33.4 102-26 102-10
Fracture Longitudinal	Point	106.7	Structural	0	5	2	0	0	2	Fracture Longitudinal	Vorte en 1997 e 2000 095-11-24 6-30-12 and 195-25 10-2



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Continuous	107.2 - 110.9	Structural	0	12	2	0	0	2	Crack Longitudinal	Vortex Industrial 08-11-2023 6:31:37 PM 107.21 ft
Fracture Multiple	Point	111	Structural	0	12-9	3	0	0	3	Fracture Multiple	Vortex Ir BB_11-100 Giala as 116.89
Crack Multiple	Point	114.7	Structural	0	12- 12	2	0	0	2	Crack Multiple	Wortes Industrial 08-11-2023 6:35:32 PM 112,64 ft 114.65 98:32:02 99:32:02


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Multiple	Point	118.5	Structural	0	12-9	3	0	0	2	Crack Multiple	Vortex Industrial 04.17.2023 11.2023
Crack Multiple	Point	122.8	Structural	0	5-6	3	0	0	2	Crack Multiple	
Crack Spiral	Point	122.8	Structural	0	7-11	2	0	0	2	Crack Spiral	Vortex Industrial 08:11:20:3 126:64 ft 126:64 ft 126:54 ft 128:56 ft 12
Joint Offset Medium	Point	122.8	Structural	0		3	0	0	1	Joint Offset Medium	Vortex 1 08-11-20 6742:43 120.49





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	126.6	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vorter Industrial 08-11-2023 6: 46:15 pm 126:50 ft
Obstruction Rocks	Point	130.8	O&M	10	6	0	2	0	0	Obstruction Rocks	Vortex Industrial 06-51-2023 614535 PR 133.79 ft 130.79
Crack Multiple	Point	130.8	Structural	0	12- 12	3	0	0	1	Crack Multiple	Vortex Industrial 89:33-2020 91:35:79 tt 155:79 tt 156:79 tt 169:11-20 156:79 tt 169:11-20 156:79 tt 156:79 tt
Crack Spiral	Point	134	Structural	0	1-6	2	0	0	2	Crack Spiral	Vortex Industrial 08-11-2023 6:51:52 PM 132.52 Tt 134.73
Crack Hinge 2	Point	134.7	Structural	0	6, 9	2	0	0	2	Crack Hinge 2	Vortex-Industrial 06-31-2023 01321-30 PM ISI4-23-71

Photos



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Spiral	Point	135.5	Structural	0	7-10	2	0	0	2	Crack Spiral	Vortex 1 05-11-20 6:51:51 132-20
Crack Longitudinal	Point	138.8	Structural	0	4	2	0	0	1	Crack Longitudinal	90ftex 1 85.11,20 6;56:12 133.34
Crack Circumferential	Point	138.8	Structural	0	12-2	1	0	0	2	Crack Circumferential	Vortex Industrial 00-11-2033 0:56:06 PM 135.83 ft
Crack Spiral	Point	138.8	Structural	0	7-12	2	0	0	2	Crack Spiral	Vortex Industriai 08-11-2023 6:54:35 PM 136-78 ft
Crack Multiple	Point	142.7	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial 08-11-2023 0-557:22 PN 140-39 ft 142.72



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	146.7	Structural	0	7-9	2	0	0	2	Crack Spiral	Vortex Industrial 08-11-2023 7:00:39 PM 140.73 ft 140.73 ft
Crack Longitudinal	Point	146.7	Structural	0	5	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	151	Structural	0	4	2	0	0	1	Crack Longitudinal	Varies I da 15 20 73 51 21 159 21
Crack Multiple	Point	154.7	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial 152:09 TH 152:09 TH 152:09 TH 152:09 TH 154:05 Vortex Industrial 09:01:200 7:80:24 PH 154:05 Vortex Industrial 09:01:200 7:80:24 PH 154:05 TH 154:05
Crack Spiral	Point	158.8	Structural	0	4-5	2	0	0	2	Crack Spiral	Var (ex. Thousan) is a 08 11, 2322 73 85 33, 49 13 59, 49 13 59, 49 14



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Longitudinal	Point	158.8	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortea I 08-11-20 7:06:44 138:83
Crack Longitudinal	Point	158.8	Structural	0	8	2	0	0	1	Crack Longitudinal	Vortex 1 88-11-20 7/49723 - 138-72
Crack Longitudinal	Point	162.7	Structural	0	7	2	0	0	2	Crack Longitudinal	Vortex I 05-11-20 7:09:13 162.57
Crack Longitudinal	Point	162.7	Structural	0	5	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	162.7	Structural	0	2	2	0	0	1	Crack Longitudinal	Vortex I 08 11 20 719543 162.67
Fracture Circumferential	Point	166.8	Structural	0	10- 11	2	0	0	2	Fracture Circumferential	Vortex Industriai B6:11:2023 7:11:17 PM 165:82 Tt



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	Rest and a second
Crack Multiple	Point	166.8	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial 00-11-2023 7:10:31 PM 194.94 ft 194.94
Crack Spiral	Point	170.8	Structural	0	3-5	2	0	0	2	Crack Spiral	Vortex Induštriat 08-11-2013 Tilki02 FM -120-82 ft
Crack Longitudinal	Point	170.8	Structural	0	7	2	0	0	2	Crack Longitudinal	Vortex Industrial 06:11-2023 7:13:19 PM 178:62 ft
Crack Multiple	Point	174.8	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortex Industrial 71.77.87 178.64 178.64 178.64 178.64 178.64 178.64 178.64 178.64 178.64 178.64 178.64



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Deposits Settled Hard/Compacted	Point	174.8	O&M	10	5-6	0	2	0	0	Deposits Settled Hard/Compacted	Vortex Indestria 08-11-2023 7:16:15 Pt 1/4-03 0
Crack Longitudinal	Point	174.8	Structural	0	8	2	0	0	2	Crack Longitudinal	Voriex Industriak 06-11.2023 7:15:19 PM 174-83 Tr
Fracture Circumferential	Point	178.8	Structural	0	3-4	2	0	0	2	Fracture Circumferential	Vortex 1 98-11-20 7:18-53 178.64
Crack Longitudinal	Point	178.8	Structural	0	12	2	0	0	1	Crack Longitudinal	Vortex Industriat 00-11-2023 7718:38 FP 178:58 ft
Crack Multiple	Point	178.8	Structural	0	6-9	3	0	0	2	Crack Multiple	Vortex I dB 112-36 1732-04



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	182.9	Structural	0	12-9	3	0	0	2	Crack Multiple	Vortes Industrial 98:13-2023 199:13-2023 7:13:16 P 101:21 P 11:20:20 P <t< th=""></t<>
Crack Spiral	Point	190.8	Structural	0	3-5	2	0	0	2	Crack Spiral	Yortex Industrial 06-13-2022 143-20
Crack Spiral	Point	190.8	Structural	0	6-10	2	0	0	2	Crack Spiral	Vertex industriat 08-31-2023 77:22393 PM 188-79 rt
Crack Spiral	Point	195	Structural	0	1-5	2	0	0	2	Crack Spiral	Vortex Industrial Wortex Industrial 7:25:53 PR 194:97'H* 194:97'H* 194:97'H*

Photos



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	198.8	Structural	0	6-7	2	0	0	2	Crack Spiral	Vortes 1 95-11-20 71-271-28 118-82
Crack Longitudinal	Point	198.8	Structural	0	3	2	0	0	1	Crack Longitudinal	Vortek 1 96-11-202 97-29-30 P - 139, 82, 149
Joint Offset Medium	Point	198.8	Structural	0		3	0	0	2	Joint Offset Medium	Vortax 1 66-11-20 7:23:09 197:96
Miscellaneous Water Level	Point	203	Miscellaneous	30		0	0	0	0	Miscellaneous Water Level	Vorter Tedustriat 905-11-2923 7-26:21 PW 202-44 tt
Crack Multiple	Point	203	Structural	0	10-5	3	0	0	2	Crack Multiple	Vortex Industria) 05 11 - 2023 7:29:46 PR _203.03 TL _203.03 TL _203.03



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Broken	Point	206.8	Structural	0	5-8	4	0	0	4	Broken	Varies 10 Varies 10 1 give 10 2 to 11 to 2 t
											266.77
Joint Offset Medium	Point	206.8	Structural	0		3	0	0	2	Joint Offset Medium	Vorta, 202 08-11-202 7;30:49 P 205-21
Manhole	Point	209.4	Constructional	0		0	0	0	0	B-3	Vortes Industria 03-11-2027 7:32:09 PM 207,09 Tt

Photos





Process Segment Inspection Summary Report

Setup ID	2023-12	Inspe	ection Date	e Aug 13, 2	023	Inspecte	ed Ler	ngth (ft)		55.7	Defects Rated ≥	≥3	0	Peak Structural Rating	4		7
Segment ID	B-02:5-P	Primary	Pipe Mate	erial RCP		Pipe D	iame	ter (in)		21	Peak Prioritization R	Rating	2	Peak C/O&M Rating	2	Total PR Defects	/
Descrij	ption	Spatial Type	Distance (ft)	Туре	Percen	t Clock	SR	0&M	С	PR	Remarks			Photo	S		
Manh	nole	Point	0	Constructional	0		0	0	0	0	B-02			Torsey Endustrial a 12-202 2 day 43 bits a 10 day 2 day 43 bits a 10 day 2 day 43 bits a 10 day 2 day 4 d			
Miscellaneous	s Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey			Wortey Indust 251 8-13-2023 3-12:15 PM 7:22 TP			
Surface D Roughness	Damage Increased	Continuous	0 - 55.7	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	vorres industria 5 4 2 2 4 pm 2 2 2 2 m 2 2 2 2 m	AL Solution Martin Mart	Image: Part of A Indust - 1st Image: Part of A Indust - 1st </td <td>A state of the sta</td> <td>Wortee Industrial Jizi 43 48 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi44 Jizi44 <</td> <td></td>	A state of the sta	Wortee Industrial Jizi 43 48 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi 44 Jizi44 Jizi44 <	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Intruding Sealing Material Grout	Point	25.7	O&M	10	7-8	0	2	0	0	Intruding Sealing Material Grout	Vorites Tadustrist UB-14-2028 3-13-32 PR 2-33-4 TT
Crack Longitudinal	Point	25.7	Structural	0	9	2	0	0	1	Crack Longitudinal	
Surface Aggregate Visible	Point	41.5	Structural	0	8-9	2	0	0	2	Surface Aggregate Visible	Vortex Endustrial RK-13-2623 R-16-354 PP 31:17-11 Vortex Endustrial RK-15-2623 R-16-354 PP 31:17-11 Vortex Endustrial RK-15-2623 RK-15-2623 R-16-354 PP 31:17-11 Vortex Endustrial RK-15-2623 RK-15
Miscellaneous Water Level	Point	41.7	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	
Crack Multiple	Continuous	44 - 47.1	Structural	0	5-10	3	0	0	2	Crack Multiple	Vertes Indu-trua 9:13:2029 3:14:1 0:10



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	48.2	Structural	0	3-7	1	0	0	2	Crack Circumferential	Vories Industriat Valid 2023 # 21:37 PH 44.22 ft
Surface Damage Aggregate Missing	Point	49.3	Structural	0	7-9	4	0	0	2	Surface Damage Aggregate Missing	The second secon
Crack Circumferential	Point	53.5	Structural	0	12- 12	1	0	0	2	Crack Circumferential	por teer Induserial SE-13 - 7023 PI25-55 PR - PIAL 3 - 70 - 70 - 70 - 70 - 70 - 70 - 70 - 70
Manhole	Point	55.7	Constructional	0		0	0	0	0	5-P	100-131-7073 100-131-7073 102-132-70 102-120-120-120 102-120-120 102-120-120 102-120-120 102-120-120 102-120 102-120-120 102-120-120 102-120-120 102-120 102-120-120 102-120-120 102-120-120 102-120-120 102-120 102-120-120 102





Process Segment Inspection Summary Report

Setup ID	2023-13	Inspe	ction Date	Aug 21, 2	023	Inspecte	ed Ler	igth (ft)		82	Defects Rated ≥	≥3	1	Peak Structural Rating	4	Tetel DD Defeate	06
Segment ID	5-B:5-C	Primary	Pipe Mate	erial RCP		Pipe D	iame	er (in)		18	Peak Prioritization R	Rating	3	Peak C/O&M Rating	0	Total PR Defects	26
Descrip	otion	Spatial Type	Distance (ft)	Туре	Percer	nt Clock	SR	0&M	С	PR	Remarks			Photo	os		
Manh	ole	Point	0	Constructional	0		0	0	0	0	5-В	Rurrey Journal Trail Tar 21 - Tasa Tar 24 - Tar 20 - 54 - Th 20 - 54 -					
Miscellaneous	Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Vortex.Industrial 85-31-2023 Tij29-56.AK 3-00 Tr			
Surface D Aggregate	e Visible	Continuous	0 - 82	Structural	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible	Vartex Industrial BD 2123023 TH 25.093 Ht 28.094 Ht 30		Image: Late of the state of the st	SVTEX INDUST(148) 5/22-2025 14/22/54 AN 5/00-17		



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	5	Structural	0	8	2	0	0	2	Crack Longitudinal	Vorten Treanstriat
Crack Longitudinal	Point	5	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	9.5	Structural	0	5-6	3	0	0	2	Crack Multiple	Pointer Trainfining Beller Train
Crack Longitudinal	Point	10.2	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	14.5	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	18.3	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	с	PR	Remarks	
Crack Longitudinal	Point	18.3	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	21.5	Structural	0	11	2	0	0	1	Crack Longitudinal	
Surface Damage Reinforcement Visible	Point	25.9	Structural	0	12	4	0	0	2	Surface Damage Reinforcement Visible	
Miscellaneous Water Level	Point	26	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Crack Spiral	Point	35.3	Structural	0	6-7	2	0	0	2	Crack Spiral	
Surface Damage Reinforcement Visible	Point	35.4	Structural	0	10	4	0	0	2	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	41.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	41.8	Structural	0	12-1	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	45.2	Structural	0	4	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	48.4	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	48.4	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	52.6	Structural	0	3	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	52.6	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	52.6	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	60.7	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	60.7	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	64.9	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	68.7	Structural	0	12	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	72.8	Structural	0	11	2	0	0	1	Crack Longitudinal	
Fracture Spiral	Point	80.9	Structural	0	5-8	2	0	0	3	Fracture Spiral	
Manhole	Point	82	Constructional	0		0	0	0	0	5-C	Vor tes Tentas i r Ann de se deze 22: se deze deze 80 deze nitioner (Ann de se deze deze deze deze deze deze deze





Process Segment Inspection Summary Report

Setup ID 2023-14	Inspecti	on Date	Aug 21, 2023	B Insp	ected L	ength	(ft)	265	.3	Defects Rated ≥3	1	Peak Structural Rating	4	Tatal DD Defeate	(0)
Segment ID 5-C: 5-D	Primary Pip	oe Material	RCP	Pip	be Diam	eter (iı	n)	18		Peak Prioritization Rating	3	Peak C/O&M Rating	2	Total PR Defects	69
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks		P	notos		
Surface Damage Aggregate Visible	Continuous	0 - 265.3	Structural	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible		Torier 1 and 1 f Late 1 a strate 1 a strate 1 a strate 1			
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey		Vortex, Insustration Distance of the second			
Manhole	Point	0	Constructional	0		0	0	0	0	5-C		10-21-203 10-203 10-21-203 10-			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	2	Structural	0	7	2	0	0	2	Crack Longitudinal	
Deposits Settled Gravel	Point	2	O&M	10	6	0	2	0	1	Deposits Settled Gravel	
Crack Longitudinal	Point	2	Structural	0	6	2	0	0	2	Crack Longitudinal	
Miscellaneous Water Level	Point	4.2	Miscellaneous	10)))	0	0	0	0	Miscellaneous Water Level	
Crack Circumferential	Point	39.5	Structural	0	6-8	1	0	0	2	Crack Circumferential	Vorben Industruat die 24 28 23 24 42 (54 5 1) 29 45 1)



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	40.9	Structural	0	8	2	0	0	1	Crack Longitudinal	
Miscellaneous Water Level	Point	40.9	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	
Crack Circumferential	Point	41.9	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	44.9	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	52.7	Structural	0	11	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	52.7	Structural	0	4-5	1	0	0	1	Crack Circumferential	dustrial R T



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	52.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	55.1	Structural	0	6-9	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	56.8	Structural	0	4-5	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	65	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	65	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	69.2	Structural	0	8	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Point	73.1	Structural	0	10	4	0	0	2	Surface Damage Reinforcement Visible	
Miscellaneous Water Level	Point	73.1	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Crack Circumferential	Point	77.3	Structural	0	5-6	1	0	0	2	Crack Circumferential	947144 204021-13. 88.83742023 87.84.85 90 27.22 **
Crack Longitudinal	Point	77.3	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	81.3	Structural	0	8	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	12
Surface Damage Reinforcement Visible	Point	85.5	Structural	0	4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Multiple	Point	89.5	Structural	0	3-4	3	0	0	2	Crack Multiple	
Crack Circumferential	Point	97.4	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	97.4	Structural	0	4-5	1	0	0	2	Crack Circumferential	Per de la constante de la constant
Crack Longitudinal	Point	101.7	Structural	0	8	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	101.7	Structural	0	4-6	3	0	0	2	Crack Multiple	Vortew Annustria 223:2023 Na 97:181/04 181/04 91
Crack Multiple	Point	105.7	Structural	0	3-4	3	0	0	2	Crack Multiple	
Surface Damage Reinforcement Visible	Point	113.7	Structural	0	5-7	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	122.1	Structural	0	5-7	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	126	Structural	0	7-10	4	0	0	2	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	Saa
Surface Damage Reinforcement Visible	Point	130.1	Structural	0	5-7	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	134.2	Structural	0	1-4	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	138.3	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Longitudinal	Point	146.4	Structural	0	2	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	Kenner
Crack Multiple	Point	146.4	Structural	0	8-9	3	0	0	2	Crack Multiple	
Surface Damage Reinforcement Visible	Point	150.5	Structural	0	50- 10	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	158.5	Structural	0	5-10	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Longitudinal	Point	162.4	Structural	0	3	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Point	166.7	Structural	0	8-1	4	0	0	2	Surface Damage Reinforcement Visible	Witch Industrial
Crack Longitudinal	Point	166.7	Structural	0	6	2	0	0	2	Crack Longitudinal	HERE LIGHT A
Crack Spiral	Point	166.7	Structural	0	9-10	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	170.8	Structural	0	6	2	0	0	1	Crack Longitudinal	Hursen Looustriat Harts Tanna Alasta Sama Alasta Sama Jara
Crack Multiple	Point	174.6	Structural	0	3-5	3	0	0	2	Crack Multiple	00/ftbs/Loduptnisi 98-32:2023 97-32:28-87 97-124:04-81



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Point	178.8	Structural	0	7-10	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Multiple	Point	182.9	Structural	0	4-5	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	187	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	187	Structural	0	3-4	1	0	0	1	Crack Circumferential	
Surface Damage Reinforcement Visible	Point	191	Structural	0	7-10	4	0	0	2	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	1
Crack Multiple	Point	191	Structural	0	3-5	3	0	0	2	Crack Multiple	HERE TOULETTAL HERE TOULETTAL LEG PH LEG PH LEG PH LEG PH LEG LEG LEG LEG LEG LEG LEG LEG LEG LEG
Crack Longitudinal	Point	195.2	Structural	0	6	2	0	0	1	Crack Longitudinal	Up: Tes- 20074611 1 14. GR 21-2023 5-21-21 28. 12-21-20 12-21-
Crack Multiple	Point	195.2	Structural	0	3-5	3	0	0	2	Crack Multiple	Vortex Industrig) Ba 25 - 2023 5: 23 22 - 24 23 - 25 - 27 23 - 27 24 23 - 27 24 24 - 27 24 - 27 24 24 - 27 24 24 - 27 24 24 - 27 24 - 27 24 24 - 27 24 24 - 27 24 24 - 27 24 24 -
Surface Damage Reinforcement Visible	Point	195.2	Structural	0	5-9	4	0	0	2	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	203	Structural	0	7	2	0	0	2	Crack Longitudinal	Deriver 2 types (* 1916) 1912 - 7403 1913 - 22 - 4403 1913 - 22 - 444 1917 - 22 - 444 1917 - 22 - 444 1917 - 2017 - 2017 1917 - 2017 - 2017 - 2017 1917 - 2017
Fracture Circumferential	Point	207	Structural	0	5-6	2	0	0	2	Fracture Circumferential	2024 - 2020 9123 - 2020 9123 - 30 - 90 205,
Surface Damage Reinforcement Visible	Point	215.3	Structural	0	5-10	4	0	0	2	Surface Damage Reinforcement Visible	Wartson Doministration in the constraints of the constraints of the co
Surface Damage Reinforcement Visible	Point	219.4	Structural	0	1-4	4	0	0	2	Surface Damage Reinforcement Visible	Viniting Studient (45.1) 00 a 22 d 0 2 d 3 3 3 4 3 5 Pri 2 3 3 4 3 5 Pri 2 3 5 4 7 d 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Surface Damage Reinforcement Visible	Point	223.5	Structural	0	6-10	4	0	0	2	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	223.5	Structural	0	3	2	0	0	1	Crack Longitudinal	
Surface Damage Reinforcement Visible	Point	227.4	Structural	0	6-10	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	231.4	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	239.5	Structural	0	7-8	1	0	0	2	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Point	243.5	Structural	0	12- 12	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	247.8	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	251.8	Structural	0	6-8	4	0	0	2	Surface Damage Reinforcement Visible	
Fracture Circumferential	Point	251.8	Structural	0	10- 11	2	0	0	2	Fracture Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	1.
Crack Circumferential	Point	251.8	Structural	0	10- 11	1	0	0	2	Crack Circumferential	
Surface Damage Reinforcement Visible	Point	255.6	Structural	0	7-10	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	259.8	Structural	0	6-10	4	0	0	2	Surface Damage Reinforcement Visible	
Joint Offset Large	Point	264.1	Structural	0		3	0	0	3	Joint Offset Large	Vere 27 - 1723 4 4 4 7 - 1723 7 4 2 - 27 70 7 4 4 4 13



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Manhole	Point	265.3	Constructional	0		0	0	0	0	5-D	a de la companya de la compa




Setup ID	2023-15	Inspectio	on Date	Aug 21, 2023	8 Insp	ected Le	ength	(ft)	89.	5	Defects Rated ≥3	0 Peak Structural Rating 4 Total PR Defects 31		
Segment ID	5-D: 5-E	Primary Pip	e Material	RCP	Pip	e Diam	eter (ir	n)	18		Peak Prioritization Rating	2 Peak C/O&M Rating 2		
Desc	ription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	Photos		
Mar	nhole	Point	0	Constructional	0		0	0	2	0	5-D			
Miscellaneou	us Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			
Surface Dam Vis	age Aggregate sible	Continuous	0 - 89.5	Structural	0	9-4	2	0	0	2	Surface Damage Aggregate Visible			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	3.2	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Spiral	Point	3.2	Structural	0	3-4	2	0	0	1	Crack Spiral	2) conservation to 24 76 - 21 - 2403 61 - 21 - 21 - 21 1 - 21 - 1 1 - 21 - 1 1 - 21 - 2
Crack Longitudinal	Point	3.2	Structural	0	6	2	0	0	1	Crack Longitudinal	Vurier Junus (m) 05721-2623 6:53138.94 3:11/11 3:11/11
Surface Damage Reinforcement Visible	Point	7.3	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	in rice. Tradus final in the to area in the to area in the to area in the total in totali in total in totali in totalin totali in to
Fracture Circumferential	Point	7.3	Structural	0	5-6	2	0	0	2	Fracture Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Aggregate Visible	Point	7.3	Structural	0	5-6	2	0	0	1	Surface Aggregate Visible	
Surface Damage Reinforcement Visible	Point	11.2	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	Vactor Louisian Alter Other Ot
Crack Longitudinal	Point	11.2	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	15.6	Structural	0	4-5	1	0	0	1	Crack Circumferential	tar (ex 3 ndsafras) 65 32 5023 65 327 6 PR 35 36 Fr
Crack Longitudinal	Point	15.6	Structural	0	2	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	15.6	Structural	0	6	2	0	0	2	Crack Longitudinal	
Fracture Circumferential	Point	19.4	Structural	0	6-7	2	0	0	2	Fracture Circumferential	NAPICA INdustrial T NAPICA INTERNATIONAL NAPICAL STREAM
Surface Aggregate Visible	Point	23.6	Structural	0	12- 12	2	0	0	2	Surface Aggregate Visible	
Surface Damage Reinforcement Visible	Point	23.6	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	23.6	Structural	0	10- 11	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	26.2	Structural	0	4	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	26.2	Structural	0	2-3	2	0	0	2	Fracture Circumferential	
Surface Damage Reinforcement Visible	Point	38.4	Structural	0	8	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Longitudinal	Point	43.2	Structural	0	6	2	0	0	2	Crack Longitudinal	
Miscellaneous Water Level	Point	47.5	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Surface Damage Reinforcement Visible	Point	48.2	Structural	0	4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	51.3	Structural	0	3-5	1	0	0	1	Crack Circumferential	100-00 1000/0010 99-00-00 97-014-00 51-20-50



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	55.9	Structural	0	1	2	0	0	2	Crack Longitudinal	
Crack Spiral	Point	59.5	Structural	0	6-9	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	62.3	Structural	0	4	2	0	0	1	Crack Longitudinal	
Surface Damage Reinforcement Visible	Point	67.3	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	71.8	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	71.8	Structural	0	4-5	1	0	0	2	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Point	71.8	Structural	0	3	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	79.5	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	87.9	Structural	0	10	4	0	0	2	Surface Damage Reinforcement Visible	
Manhole	Point	89.5	Constructional	0		0	0	0	0	5-E	





Setup ID	2023-16	Inspection	on Date	Aug 20, 2023	3 Insp	ected L	ength	(ft)	55.	2	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	16
Segment ID	B-02:5-P	Primary Pip	oe Material	RCP	Pip	be Diam	ieter (i	n)	21		Peak Prioritization Rating	2	Peak C/O&M Rating	2	Total T N Derecto	10
Descri	iption	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	5	P	notos		
Manl	hole	Point	0	Constructional	0		0	0	2	0	B-02	Wortes Industrial Re-2e-363 2:27 AS (P) - 3 43 TT 				
Miscellaneous	s Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	Vortex industrini DR.43-2023 21/21-44, PM 3,43 ft				
Surface Damag	ge Roughness ased	Continuous	0 - 55.2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased		3			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	3.4	Structural	0	5-7	2	0	0	2	Crack Spiral	
Crack Circumferential	Point	4.8	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	11.1	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	12.3	Structural	0	6-9	1	0	0	2	Crack Circumferential	Vortex Industrial 105-20-2023 2132:33 PM 12:31 T 12:31 T



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	15.3	Structural	0	5-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	20.1	Structural	0	3-9	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	21.5	Structural	0	5-9	1	0	0	2	Crack Circumferential	And the Engender of the second
Crack Circumferential	Point	22.8	Structural	0	8-9	1	0	0	2	Crack Circumferential	Vortex Industriat 08:20:2023 2:4000 ff 22:20 ff 2:200 ff



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Intruding Sealing Material Grout	Point	25.6	O&M	10	7	0	2	0	0	Intruding Sealing Material Grout	
Crack Circumferential	Point	29.3	Structural	0	5-6	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	37.6	Structural	0	2-6	1	0	0	2	Crack Circumferential	00 r184 Industrial 00 00 - 07.3 24 56:27 PM 32.02 ft
Crack Longitudinal	Point	41.2	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Multiple	Continuous	43 - 47.3	Structural	0	5-7	3	0	0	2	Crack Multiple	Varies, Industrial DE-20-2023 201000-2023 2020-002 2020-000 2020-000 20200-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2000-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2020-000 2000-000 2000-000 2000-0000 2000-0000 2000-0000 2000-0000 2000-0000 2000-0000 2000-0000 2000-0000 2000-0000 2000-00000000



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	12 5 7 7 8 3
Surface Damage Aggregate Missing	Point	48.7	Structural	0	12- 12	4	0	0	2	Surface Damage Aggregate Missing	Ser The DOUSLERAL 44 and 123 45 state 7% 13 state 7%
Crack Circumferential	Point	49.3	Structural	0	6-8	1	0	0	2	Crack Circumferential	Vortex Indostretal 08-26-22 2154:10 20 45:11.17
Crack Circumferential	Point	53.2	Structural	0	8-5	1	0	0	2	Crack Circumferential	Verter fremitrin 219314294 55933 Tr 55933 Tr 55935 2195551 PB 32235551 PB 3223716
Manhole	Point	55.2	Constructional	0		0	0	0	0	5-P	Verisi Industria) NS 24 2823 SS 28 Ft

Photos





Setup ID 2023	-17	nspection	Date Aug	20, 2023	Insp	ected	Length	n (ft)	13	33.2 Defec	cts Rated ≥3	0	Peak Structural Rating	4	Total DD Defects	
Segment ID 23-4:	5-B Prir	nary Pipe N	Material	RCP	Pip	e Diar	neter ((in)		18 Peak Prio	ritization Rating	2	Peak C/O&M Rating	0	Total PR Defects	55
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks			Photos			A
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Upres Angusteral 06 ps: Joca 456 422 Fm 517:44 ft 10 10 10 10 10 10 10 10 10 10			
Surface Aggregate Visible	Continuous	0 - 133.2	Structural	0	12- 12	2	0	0	1	Surface Aggregat Visible	e		Image: set of the set of			
Manhole	Point	0	Constructional	0		0	0	0	0	23-4			Hercer Broustrist			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Fracture Circumferential	Point	3.9	Structural	0	9	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	3.9	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	3.9	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	7.9	Structural	0	3	2	0	0	1	Crack Longitudinal	a the second
Crack Longitudinal	Point	7.9	Structural	0	11	2	0	0	1	Crack Longitudinal	Vortre Industra i Ba. 14-2633 4-38-71 PM 1:45-71
Fracture Circumferential	Point	11.8	Structural	0	5-6	2	0	0	2	Fracture Circumferential	Vorface - Industrial Mill 20130 235 Staff 1,51 PM 11,15 Tt 12



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	11.8	Structural	0	6	2	0	0	2	Crack Longitudinal	Va. 175 - 2 3 - 21 - 2 7 - 7 7 - 7 7 7 - 7 7 - 7 7 7 - 7 7 7 - 7 7 7 - 7 7 7 7 - 7 7 7 7
Crack Longitudinal	Point	15.5	Structural	0	5	2	0	0	2	Crack Longitudinal	90/76-5 60/20-21 51/92/30 73/77
Fracture Circumferential	Point	21.1	Structural	0	6-7	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	24.4	Structural	0	3	2	0	0	2	Crack Longitudinal	00-20-21 5109-37 28-31
Crack Longitudinal	Point	28.1	Structural	0	6	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	40.2	Structural	0	8	2	0	0	1	Crack Longitudinal	Vorter Industrie 88 20 - 2023 5:15:19 PR 40.18 1 40.18 1 40.1
Fracture Circumferential	Point	44.3	Structural	0	5-6	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	44.3	Structural	0	11	2	0	0	2	Crack Longitudinal	Vories-Edustria de:20:203 3:14:30 PT 44:20 TT Solution
Crack Longitudinal	Point	48.3	Structural	0	12	2	0	0	1	Crack Longitudinal	Vorser 88 28 - 2 5 - 18:53 83 - 3
Crack Longitudinal	Point	56.4	Structural	0	4	2	0	0	1	Crack Longitudinal	9051 c5 88 - 20 - 20 55 - 23 - 45 - 56 - 4



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	56.4	Structural	0	2	2	0	0	1	Crack Longitudinal	Varies Industrias 00-26-23 3-22-16 Ph 37-46-71
Fracture Circumferential	Point	56.4	Structural	0	7-8	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	60.6	Structural	0	1	2	0	0	1	Crack Longitudinal	Voriek Industraal 98 40 30 30 93 24 30 30 93 30 94 30
Crack Circumferential	Point	60.6	Structural	0	2-5	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	60.6	Structural	0	6	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	60.6	Structural	0	8	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	64.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	64.7	Structural	0	1	2	0	0	1	Crack Longitudinal	Versee Jacob
Crack Multiple	Point	68.7	Structural	0	12-1	3	0	0	1	Crack Multiple	Yan et al. Labourt ci su dos do 2003 desta provincia da anti- maria pro- maria pro-
Fracture Circumferential	Point	72.6	Structural	0	8-9	2	0	0	2	Fracture Circumferential	Vander 96 36 2 83 37 86 72 6
Crack Longitudinal	Point	72.6	Structural	0	12	2	0	0	2	Crack Longitudinal	VD 700 - 20 - 2 3 - 7 1 - 6 3 - 7 2 - 5



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	72.6	Structural	0	2	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	73	Structural	0	3-9	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	76.7	Structural	0	12	2	0	0	1	Crack Longitudinal	00-fte 4 08-34: 3-7 76- 3-7 76
Crack Circumferential	Point	76.7	Structural	0	6-9	1	0	0	2	Crack Circumferential	
Fracture Circumferential	Point	80.7	Structural	0	4-5	2	0	0	2	Fracture Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	80.7	Structural	0	1-2	1	0	0	2	Crack Circumferential	V07tm 08-20-3 5-33148 20-3
Crack Circumferential	Point	84.2	Structural	0	7-9	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	84.9	Structural	0	6	2	0	0	1	Crack Longitudinal	Horsey - Except Anal. State 22, 2025 State 23, 2025 State 24, 2025 State 2
Crack Longitudinal	Point	84.9	Structural	0	12	2	0	0	1	Crack Longitudinal	Voree Thomerian 96 - 20 - 2233 5 - 42 - 35 FM - 94 - 33 TM - 94 - 33 TM
Surface Damage Aggregate Missing	Point	88.5	Structural	0	7	4	0	0	1	Surface Damage Aggregate Missing	
Crack Longitudinal	Point	88.5	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	88.5	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	89.6	Structural	0	6-10	1	0	0	2	Crack Circumferential	
Fracture Circumferential	Point	92.8	Structural	0	3-5	1	0	0	2	Fracture Circumferential	Vestion There exists a second se
Fracture Circumferential	Point	92.8	Structural	0	9-10	2	0	0	2	Fracture Circumferential	1971 The Jonus (1981) at 1982 at 1983 at 1984 at 1984 at 1985
Crack Longitudinal	Point	101	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	101.1	Structural	0	3-5	1	0	0	2	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	105	Structural	0	4	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	109	Structural	0	6	2	0	0	2	Crack Longitudinal	307 15 5 1 5 1 1 9 4 5 1 7 1 9 4 5 2
Crack Longitudinal	Point	113.1	Structural	0	6	2	0	0	2	Crack Longitudinal	907 147 1 06 20 20 119 20 119 20
Fracture Circumferential	Point	113.1	Structural	0	8-9	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	117	Structural	0	8	2	0	0	2	Crack Longitudinal	001 20 - 20 61 21 - 20 61 21 - 20 7 - 127 - 10 7 - 127 - 127 - 127 7 - 127
Crack Longitudinal	Point	117	Structural	0	5	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	120.4	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	121.5	Structural	0	4-5	1	0	0	1	Crack Circumferential	Version Provide Provid
Crack Longitudinal	Point	127.4	Structural	0	7	2	0	0	2	Crack Longitudinal	
Fracture Circumferential	Point	129	Structural	0	5-6	2	0	0	2	Fracture Circumferential	
Manhole	Point	133.2	Constructional	0		0	0	0	0	5-B	tore are a real to the second se





Setup ID 2	023-18	Insp	pection Date	Aug 14	4, 2023	Ins	spected	Leng	th (ft)	38.7	Defects Rated ≥3	0	Peak Structural Rating	3		6
Segment ID 2	3-1:5-A	Primar	y Pipe Material	R	CP	F	Pipe Dia	amete	r (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0	Total PR Delects	0
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks			Photos			
Manhole	Point	0	Constructional	0		0	0	0	0	23-1			Reference Todust Hall Her 2003 Historia State Historia State Histo			
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey						
Fracture Circumferential	Point	3	Structural	0	10- 11	2	0	0	2	Fracture Circumferentia						
Crack Circumferential	Point	15.1	Structural	0	6-7	1	0	0	2	Crack Circumferentia			en en ingustrian a gastrian a filo a gastrian a gastria			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	23.1	Structural	0	4	2	0	0	1	Crack Longitudinal	er industrial de la 223 au 386 At 17 92 At
Crack Circumferential	Point	31	Structural	0	6-8	1	0	0	2	Crack Circumferential	
					1	1	12.14				

Photos



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	35.5	Structural	0	4-6	3	0	0	2	Crack Multiple	<image/>
Fracture Circumferential	Point	35.5	Structural	0	7-8	2	0	0	2	Fracture Circumferential	
Miscellaneous Survey Abandoned	Point	38.7	Miscellaneous	0		0	0	0	0	Plugged	

Photos





Setup ID	2023-19		nspection	Date	Aug 14,	2023	Insp	ected	Lengt	h (ft)	2	26.6 Defects	Rated ≥3	0	Peak Structural R	ating	2	Total DD Defecto	10
Segment ID	23-1:23-2	2 Prin	nary Pipe	Material	RC	Р	Pip	pe Dia	meter	(in)	12	18 Peak Prioritiz	zation Rating	2	Peak C/O&M Ra	ting	0	Total PR Defects	13
Descripti	ion	Spatial Type	Distance (ft)	Туре	P	ercent	Clock	SR	0&M	С	PR	Remarks			PI	notos			
Manhol	le	Point	0	Miscellane	eous	0		0	0	0	0	23-1			Nories inevit-is				
Miscellaneou Level	ıs Water	Point	0	Miscellane	eous	0		0	0	0	0	Water Level at Start of Survey			Norsex Industrial				
Crack Longit	tudinal	Point	5.1	Structur	al	0	6	2	0	0	1	Crack Longitudinal	urtes Tool (17-01) at 14 (44) 30:55 de A) 5, je ry		Wett To the second seco				
Crack Circum	ferential	Point	7.5	Structur	al	0	7-9	1	0	0	2	Crack Circumferential			901100 Jonus hiting 1915 Jak 2023 1915 71 40 48 71 53 66			Vertex Endistrin Teste dage B. On fo	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Circumferential	Point	8	Structural	0	8-9	1	0	0	1	Crack Circumferential	Vur tex 1 195 14 - 20 195 54 78 8 00
Crack Longitudinal	Point	9.5	Structural	0	9	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	9.5	Structural	0	6	2	0	0	1	Crack Longitudinal	Workes Industrial Brissississi Tilssis 201 432 11 432 11
Crack Circumferential	Point	12.2	Structural	0	6-9	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	14.9	Structural	0	7-5	1	0	0	1	Crack Circumferential	Verter reported to the second



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	14.9	Structural	0	11	2	0	0	2	Crack Longitudinal	Vor.42/ 08.14-2 11:13-2 2.5
Crack Circumferential	Point	17.7	Structural	0	6-5	1	0	0	2	Crack Circumferential	Here a construction of the
Crack Circumferential	Point	19.9	Structural	0	7-11	1	0	0	2	Crack Circumferential	Horizon Findia Hella J Barde - Zia Za - La Maria - Maria - Mari Maria - Maria - Ma Maria - Maria - Mar
Crack Longitudinal	Point	19.9	Structural	0	11	2	0	0	1	Crack Longitudinal	Vor ee 00 14 2 13 (7 4 19 3
Crack Longitudinal	Point	22.7	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	22.7	Structural	0	10	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Miscellaneous General Photograph	Point	22.7	Miscellaneous	0	6	0	0	0	0	Object in Joint	Voriev Industrial BB-14-2023 Ilrib:20 AM 22272 (1
Manhole	Point	26.6	Constructional	0		0	0	0	0	23-2	11.10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0





Setup ID	2023-2	0 Ins	pection Da	ate Aug 1	4, 2023	Inspec	cted L	ength ((ft)	52.	6 Defects Rat	ated ≥3 0 Peak Structural Rating 3 Total PR Defecter 25
Segment ID	23-2:23	-3 Prima	ry Pipe Ma	aterial F	CP	Pipe	Diam	eter (in)	18	Peak Prioritizati	ation Rating 2 Peak C/O&M Rating 0
Descript	tion	Spatial Type	Distance (ft)	Туре	Percent	t Clock	SR	0&M	С	PR	Remarks	Photos
Manho	ble	Point	0	Constructiona	I O		0	0	0	0	23-2	
Miscellaneou Leve	us Water I	Point	0	Miscellaneou	s 0		0	0	0	0	Water Level at Start of Survey	
Surface Da Aggregate	amage Visible	Continuous	0 - 52.6	Structural	0	10-2	2	0	0	1	Surface Damage Aggregate Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	3.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	3.1	Structural	0	7-9	1	0	0	1	Crack Circumferential	The decay thread the decay of t
Crack Circumferential	Point	3.9	Structural	0	7-8	1	0	0	1	Crack Circumferential	
Crack Spiral	Point	5	Structural	0	6-8	2	0	0	1	Crack Spiral	Vortes (news)rtsi 08-14-2023 11-50-53-20 5-00-74 5-00-74
Crack Circumferential	Point	5	Structural	0	7-8	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	6.8	Structural	0	6	2	0	0	1	Crack Longitudinal	Vortes Ind 06-14-277 12:05-31:05 20:07



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	6.8	Structural	0	11	2	0	0	1	Crack Longitudinal	Yorter Soddstriat De 14 2023 T2.80-37 PH 4 contr
Crack Longitudinal	Point	7.9	Structural	0	4	2	0	0	1	Crack Longitudinal	Yettex Industrijat de-n4-2023 12:03:00 PH 7.92 ft
Crack Multiple	Point	7.9	Structural	0	1-5	3	0	0	2	Crack Multiple	Vortes Tedus frial 08:14/2003 10:02:18:PH 7:02:11 7:02:11 7:02:11
Crack Circumferential	Point	8.4	Structural	0	10-5	1	0	0	2	Crack Circumferential	Vortex Loduştrial 12. 43.13 PP 3. 43.14 PP 3. 43.15 PP 4. 43.15 PP
Crack Longitudinal	Point	8.5	Structural	0	1	2	0	0	1	Crack Longitudinal	Yarıt 03. 22. 2



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	9.8	Structural	0	5-8	1	0	0	2	Crack Circumferential	Ver ter Ginnis fri af
Crack Circumferential	Point	10.3	Structural	0	6-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	11.6	Structural	0	2-5	1	0	0	1	Crack Circumferential	Ser ree-Industrijat BE 14-2025 Horen 231 Fr
Crack Longitudinal	Point	14.2	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	17.6	Structural	0	7-4	1	0	0	2	Crack Circumferential	Vortes Industriander 198-14-2923 199:15 58 PM 17-17 55 TT
Crack Longitudinal	Point	21.7	Structural	0	2	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	22	Structural	0	7-6	3	0	0	2	Crack Multiple	Unflue Linu(s ria) 08-34-2023 12-13-14 Pri 22-23-14 Pri 22-23-14 Pri 22-23-14 Pri 22-24 Pri 22-2
Crack Circumferential	Point	25.1	Structural	0	6-10	1	0	0	2	Crack Circumferential	Vool en industrij af. Seeder af dat industrij af. Seeder af dat industrij af. Seeder af dat industrij af dat industrij af dat industrij Seeder af dat industrij af dat industrij Seeder af dat industrij af dat industrij Seeder af dat industrij Seed
Crack Circumferential	Point	33.9	Structural	0	12-5	1	0	0	2	Crack Circumferential	Vorter Trouversit
Crack Longitudinal	Point	33.9	Structural	0	4	2	0	0	2	Crack Longitudinal	¥96 82 12
Crack Longitudinal	Point	37	Structural	0	1	2	0	0	1	Crack Longitudinal	00764-61760377331 08-44-2933 12-23-84-90 70-12-11 70-12-11 75-25 7
Crack Circumferential	Point	39	Structural	0	3-9	1	0	0	2	Crack Circumferential	The second



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Miscellaneous Water Level	Point	40.5	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	Work
Crack Longitudinal	Point	44.4	Structural	0	12	2	0	0	1	Crack Longitudinal	907 07.3 12:2 4
Miscellaneous General Photograph	Point	51.7	Miscellaneous	0	6	0	0	0	0	Miscellaneous General Photograph	
Manhole	Point	52.6	Constructional	0		0	0	0	0	23-3	Vortex. Industriai 00 44 7757 12.19, 14 50 14 40 Tr




Setup ID	2023-2	1 Ins	pection Da	ate Aug 14	, 2023	Inspec	cted L	ength ((ft)	26.1	Defects Rat	ted ≥3	0	Peak Structural Rating	3	Total PR Defects	0
Segment ID	23-3:23	4 Prima	гу Ріре Ма	nterial RC	P	Pipe	Diam	eter (in)	18	Peak Prioritizati	ion Rating	2	Peak C/O&M Rating	0	Total PR Delects	9
Descript	tion	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks			Photos			
Miscellaneou Leve	us Water !	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Vorase industrial Testar 2003 Testar 2003 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2007 Testar 2003 Testar 2003			
Surface Da Aggregate	amage Visible	Continuous	0 - 26.1	Structural	0	12- 12	1	0	0	1	Surface Damage Aggregate Visible	High moustrait An areas I an area			Industrial 073 2 TI	Tree tas	
Manho	ole	Point	0	Constructional	0		0	0	0	0	23-3			Vorsex Industrial BH-14-2023 1-8:164-7H 			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	4.9	Structural	0	5-6	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	7.4	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	11.1	Structural	0	6-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	14.6	Structural	0	6-9	1	0	0	2	Crack Circumferential	Transfer Traincentral Transfer Traincentral Transfer By one Transfer Traincentral Transfer Traincentral Transfer Traincentral
Crack Longitudinal	Point	14.6	Structural	0	11	2	0	0	1	Crack Longitudinal	Jore er Chausforei Birda / 2023 Faister 27 Diff Williams
Crack Multiple	Point	16	Structural	0	6-8	3	0	0	2	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	18.2	Structural	0	5	2	0	0	1	Crack Longitudinal	ALLASS FORMATIONS
Crack Multiple	Point	23.7	Structural	0	10-6	3	0	0	2	Crack Multiple	Vortex Industrial BB 14:2023 IH2:23.66 ft 23.66 ft 11:23 24 25 25 25 25 25 25 25 25 25 25
Manhole	Point	26.1	Structural	0		0	0	0	0	23-4	Vorte Tou using the Tou to tou to the Tou to





Setup ID	2023-22	Inspect	lion Date	Aug 23, 20	23	Inspec	ted Lei	ngth (f	ft)	134.5	Defects Rated ≥3	2	Peak Structural Rating	4	Total DD Defecto	41
Segment ID	5-F:D-12	Primary Pi	ipe Material	RCP		Pipe	Diame	ter (in))	21	Peak Prioritization Rating	3	Peak C/O&M Rating	2	Total PR Delects	41
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remar	rks		Photos			
Miscellaneous Water Level	Point	0	Miscellaneou	s O		0	0	0	0	Water Lev Start of S	evel at Survey			and a second		
Manhole	Point	0	Construction	al O		0	0	0	0	5-F						
Surface Damage Aggregate Visible	Point	0	Structural	0	6	2	0	0	1	Surfac Dama Aggreg Visibl	ice ige gate ile					



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Aggregate Projecting	Continuous	0 - 55.8	Structural	0	9-3	3	0	0	2	Surface Damage Aggregate Projecting	
Crack Multiple	Point	2	Structural	0	8-9	3	0	0	2	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Multiple	Point	2	Structural	0	1-3	4	0	0	2	Fracture Multiple	
Deposits Attached Encrustation	Point	8.1	O&M	10	5-6	0	2	0	0	Deposits Attached Encrustation	
Surface Damage Reinforcement Visible	Point	9	Structural	0	2-3	4	0	0	3	Surface Damage Reinforcement Visible	Ut a stranger Ut
Fracture Multiple	Point	12.4	Structural	0	7-8	0	0	0	2	Fracture Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	15.5	Structural	0	6-7	3	0	0	2	Crack Multiple	Vertes Industrial PELAS 2008 404108 PC 13:50 PC
Crack Spiral	Point	21.4	Structural	0	7-8	2	0	0	1	Crack Spiral	This is in the constraint of the constraint
Crack Multiple	Point	24.3	Structural	0	6-7	2	0	0	2	Crack Multiple	90 TO 10 TO
Crack Longitudinal	Point	24.3	Structural	0	4	2	0	0	1	Crack Longitudinal	Vortes Industs 09:23-2423 4:38:11-PH 24:36 Tt 24:36 Tt
Crack Circumferential	Point	25.5	Structural	0	7-8	1	0	0	1	Crack Circumferential	Vortex Industrum) Bit 25-2823 Ri Alt 45-191 26-36-75





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	27.3	Structural	0	8-9	2	0	0	2	Crack Spiral	10713+ 2023 1252-22-223 1250-44-PH 277-35-11
Crack Longitudinal	Point	27.3	Structural	0	4	2	0	0	2	Crack Longitudinal	
Fracture Circumferential	Point	31.5	Structural	0	5-6	2	0	0	2	Fracture Circumferential	Verter Industry Verter Industry 08.75 /02.3 14.32.77 31.32.77
Crack Longitudinal	Point	31.5	Structural	0	7	2	0	0	2	Crack Longitudinal	Norther Enderstria, 07-53-203 2455-447 Bh _341 ST-BB
Crack Multiple	Point	36.5	Structural	0	3-9	3	0	0	2	Crack Multiple	VanderSongertaat

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	40.4	Structural	0	6	2	0	0	1	Crack Longitudinal	Vorrey indu 00.23-223 5:00:00 Pt 40.46
Crack Longitudinal	Point	40.4	Structural	0	8	2	0	0	1	Crack Longitudinal	Yarter indust Hérza zirza sug iz PK da 4a Hi
Crack Longitudinal	Point	40.5	Structural	0	1	2	0	0	2	Crack Longitudinal	Xar Bas Industro 05 23 2 633 5 Stollar, 71 2007 - 10 2007 - 10 200
Crack Spiral	Point	44.3	Structural	0	3-5	2	0	0	2	Crack Spiral	
Crack Spiral	Point	44.3	Structural	0	8-9	2	0	0	2	Crack Spiral	Péricki Indukréget Bon 29: 403 Singa Peri 44: 40: 57 Indukréget Bon 29: 403 Singa Peri 44: 40: 57 Singa Peri 50 Singa Peri 5











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	48.9	Structural	0	7-8	1	0	0	1	Crack Circumferential	Vurret trausr 85.23.2623 3r99:53.Vh 99:97 1.
Crack Longitudinal	Point	48.9	Structural	0	12	2	0	0	2	Crack Longitudinal	
Crack Multiple	Point	52.3	Structural	0	11- 12	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	52.3	Structural	0	5	2	0	0	2	Crack Longitudinal	Vortey Industriat 5108-35-87 33/37/14
Crack Multiple	Point	55.8	Structural	0	7-8	3	0	0	2	Crack Multiple	19 52 10 00 57 11 40 52 003 53 90 TT 53 90 TT















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	55.8	Structural	0	5	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	55.8	Structural	0	2	2	0	0	2	Crack Longitudinal	and a set of the set o







Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Continuous	55.8 - 134.5	Structural	0	9-3	4	0	0	3	Surface Damage Reinforcement Visible	
Crack Multiple	Point	59.8	Structural	0	12- 12	3	0	0	2	Crack Multiple	Mod Str. Tundorg (L.181) Mod Str. Tundorg (L.181) Mill Str. 2023 (L. 182) Mod Str. 2023 (L. 182) St. 242 (27, 29) Mod Str. 2023 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2013 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2013 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182) TO Str. 2014 (L. 182) Mod Str. 2014 (L. 182)



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	64.2	Structural	0	3-5	3	0	0	2	Crack Multiple	Warter i Industrialis BER32 7723 SEIBLAR PR 64.2.5 T
Crack Longitudinal	Point	68	Structural	0	4	2	0	0	1	Crack Longitudinal	Ves fex, Sindus Frial, BE-33-2923 5122107 PF 58.01117
Crack Circumferential	Point	75.9	Structural	0	4-5	0	0	0	1	Crack Circumferential	Истект Indus Ut 08 та 2023 5:06 db 201 77 3 dd - т 7 3 dd - т
Crack Multiple	Point	91.9	Structural	0	5-8	3	0	0	2	Crack Multiple	Vertex reactions of the second s





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	96.8	Structural	0	4-6	3	0	0	1	Crack Multiple	
Deposits Attached Encrustation	Point	99	O&M	10	4-5	0	2	0	0	Deposits Attached Encrustation	Address Canadian Control of Contr
Crack Circumferential	Point	105	Structural	0	10- 12	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	113.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	113.2	Structural	0	3	2	0	0	1	Crack Longitudinal	Vortes Industria 09:23:2623 3:32:45 Pr 113:23:41 133:28:41 134:41





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	116.9	Structural	0	7-8	3	0	0	2	Crack Multiple	Vortex Industrial 08:23-2023 5:45:25 PM 1:10 90 II 1:10 90 III
Crack Multiple	Point	116.9	Structural	0	5-6	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	128.6	Structural	0	8	2	0	0	1	Crack Longitudinal	Turtis Brude Bauds - Barts Sriss use Juli Star Barts
Obstruction Rocks	Point	132.6	O&M	10	7	0	0	0	0	Obstruction Rocks	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Miscellaneous Survey Abandoned	Point	134.5	Miscellaneous	0		0	0	0	0	Inspection ended due to tap at bottom of pipe	Vortex Industr. 98.23.2023 4:07:35 PH 334.52 ft
Tap Factory	Point	134.5	Constructional	0	5-7	0	0	0	0	Tap Factory	









Setup ID 2023	3-23	Inspection	Date Aug	18, 2023 RCP	lns; Pi	pected	Lengt	h (ft) (in)	2	53.1 Defect	s Rated ≥3 0 Peak Structural Rating 3 Total PR Defects 29
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-1.1	Vortex Industries) 81.45.2023 8.29.10 APC
Surface Damage Aggregate Visible	Continuous	s 0 - 253.1	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	Vorter Industrial 0 - Jacobi 2 - Jacobi 2 - Jacobi 4



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	10.2	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	16.7	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	46.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	52	Structural	0	6	2	0	0	1	Crack Longitudinal	2400.00 40 23 57.00 57.0
Crack Longitudinal	Point	64.7	Constructional	0	7	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	64.7	Structural	0	5-7	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	70.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	77.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	78.8	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	96.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	102.4	Structural	0	6-7	3	0	0	1	Crack Multiple	
Crack Multiple	Point	113.1	Structural	0	6-7	3	0	0	1	Crack Multiple	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	121.8	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	134.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	134.7	Structural	0	5-6	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	136.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	136.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	137.3	Structural	0	6	2	0	0	1	Crack Longitudinal	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Multiple	Point	150.7	Structural	0	5-8	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	155.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	166.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	179	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	185	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	216	Structural	0	6	2	0	0	1	Crack Longitudinal	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	227.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	245.6	Structural	0	6	2	0	0	1	Crack Longitudinal	2015 x 12 007 x 12 00
Fracture Circumferential	Point	245.6	Structural	0	5-6	2	0	0	2	Fracture Circumferential	
Crack Circumferential	Point	250.1	Structural	0	10-4	1	0	0	1	Crack Circumferential	
Manhole	Point	253.1	Constructional	0		0	0	0	0	D-2.1	Yor cen Tudo 11 -41 33-18-2023 12:82:35 mp ?44:18 fr



















Setup ID	2023-24	4 Ins	pection Dat	e Aug 19, 2	2023	Inspect	ed Lei	ngth (ft)	253.3	Defects Rate	ed ≥3	0	Peak Structural Rating	3	Total PD Defects	21
Segment ID	D-2.1:D-3	3.1 Prima	ry Pipe Mat	erial RCP	5	Pipe D	liame	ter (in)		15	Peak Prioritizatio	on Rating	2	Peak C/O&M Rating	0	Total FR Delects	51
Description	ion	Spatial Type	Distance (ft)	Туре	Percen	t Clock	SR	0&M	С	PR	Remarks			Photos	5		
Manhol	le	Point	0	Constructional	0		0	0	0	0	D-2.1	Vorter Industrial #2.16.27 32.33.1F 91 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1					
Miscellaneous Level	s Water	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey		Vorta: Industrial 08-18-2033 12:05:00 PH 2353:11 Tt				
Surface Dar Aggregate V	mage /isible	Continuous	0 - 253.3	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	Vertos Industrial Bonardes Personal Sentar Personal Sentar Personal Sentar Personal Sentar Personal Person		tours triat High High High High High High High High	The Industrial Biggers State of the Industrial Biggers To set fit	Protect industrial is and a search of the se	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	2.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	8.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	15.7	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	16.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	16.9	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Continuous	36.8 - 42.9	Structural	0	6	2	0	0	1	Crack Longitudinal	Vertex success of the second s



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	49	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	54.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	61	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	73	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	73.8	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	79	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	с	PR	Remarks	
Crack Multiple	Point	87.9	Structural	0	6-8	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	91.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	127.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	134	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	139.5	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	145.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	151.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	157.7	Structural	0	6	2	0	0	1	Crack Longitudinal	And the second sec
Crack Longitudinal	Point	163.7	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	169.7	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	175.6	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	175.6	Structural	0	6-7	2	0	0	2	Fracture Circumferential	
Crack Circumferential	Point	188	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	199.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	224	Structural	0	6-7	3	0	0	1	Crack Multiple	Worther ID Guist CLAI WART ID GUIST CLAI No LLA ST AN AD LLA ST AN AD LLA ST AN AD LLA ST AN AD LLA ST AN AD
Crack Longitudinal	Point	225.5	Structural	0	6	2	0	0	2	Crack Longitudinal	June fene Junuit, sed nyf. Bergerige 1932 fan sjer 1935 fa
Crack Longitudinal	Point	229.9	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	237.5	Structural	0	5-6	3	0	0	1	Crack Multiple	NET STORE FIAT
Manhole	Point	253.3	Constructional	0		0	0	0	0	D-3.1	Vortes Industriat 08-18-2023 1:49:38 PM 249:82 tt





Setup ID	2023	-25	Inspection	Date	Aug 19,	2023	Insp	ected	Lengt	h (ft) (in)	4	412 Defect	ts Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	44
Descriptio	on	Spatial Type	Distance (ft)	Туре	Pe	cent	Clock	SR	O&M	C	PR	Remarks	luzation Rating	Z	Peak 0/ Oaim Rating	Z		
Miscellaneous Level	s Water	Point	0	Miscellane	eous	0		0	0	0	0	Water Level at Start of Survey			Vortex Industrial 08-18-2023 3:B3:01 PH 3:02 Ft			
Surface Dar Aggregate V	mage ′isible	Continuous	0 - 412	Structura	al	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	Vortex Industrial 3:03:02 PH 3:03:02 PH 3:03:02 FH 3:02 FH 3:0				OPTEX Industrial 3252:16 PM 144:21TL 144:22TL 14	
Manhol	e	Point	0	Constructio	onal	0		0	0	0	0	D-3.1			Vortex Industrisi 08-18-2023 3:83:61 PM 3:02 Tt			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	6.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	85.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	158.3	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	170.4	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	176.3	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	245.7	Structural	0	5-6	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Longitudinal	Point	249.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	255.1	Structural	0	6	2	0	0	1	Crack Longitudinal	00 0 = x 1 4 = 50 - 32 = 12 - 32 = 12
Crack Longitudinal	Point	261.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	267.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	279.3	Structural	0	6	2	0	0	1	Crack Longitudinal	907 E.S. 1 41 (1) 20 27 (3)
Crack Longitudinal	Point	303.3	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	с	PR	Remarks	
Crack Longitudinal	Point	323.8	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	323.8	Structural	0	4-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	327.8	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	329.7	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	331.3	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	334.1	Structural	0	5-7	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	с	PR	Remarks	
Crack Longitudinal	Point	336.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	339.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	340.4	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	343.5	Structural	0	5-7	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	346.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	352.1	Structural	0	7	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	353.4	Structural	0	6-7	3	0	0	1	Crack Multiple	
Crack Multiple	Point	355.4	Structural	0	5-6	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	358	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	358	Structural	0	6	2	0	0	2	Crack Longitudinal	Wettes Industrial Wettes Industrial Wildson Wit 3572.00 Tr
Crack Longitudinal	Point	364.2	Structural	0	6	2	0	0	2	Crack Longitudinal	
Fracture Circumferential	Point	370.2	Structural	0	5-6	2	0	0	2	Fracture Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	States and
Crack Circumferential	Point	378.2	Structural	0	2-10	1	0	0	1	Crack Circumferential	vortex Industrial 98 18 2023 5 d l 39 PP 376 J2 /t : 98 4 19 00 000000000000000000000000000000000
Crack Circumferential	Point	380.7	Structural	0	5-7	1	0	0	1	Crack Circumferential	Yor vas Tokas I vas 44 - 023 34 - 13 - 023 34 -
Crack Longitudinal	Point	382.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	383.7	Structural	0	5-7	1	0	0	2	Crack Circumferential	Vortes Industrial 88.18/2023 5:80:37 PH 2037/3 F1
Crack Multiple	Point	385.5	Structural	0	5-6	3	0	0	2	Crack Multiple	




Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	394.5	Structural	0	6	2	0	0	1	Crack Longitudinal	Vor e and Bis 12 and Sis 12 and S
Crack Multiple	Point	398	Structural	0	5-7	3	0	0	2	Crack Multiple	
Crack Multiple	Point	398.8	Structural	0	4-6	3	0	0	1	Crack Multiple	Vortev Industrial
Crack Circumferential	Point	401.9	Structural	0	4-6	1	0	0	1	Crack Circumferential	70776 TORNATINA 10776 TORNATINA 107776 TORNATINA 107777 TORNATINA 1077777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 107777 TORNATINA 1077777 TORNATINA 107777 TORNATINA 1077777 TORNATINA 107777 TORNA
Crack Circumferential	Point	403.8	Structural	0	5-6	1	0	0	1	Crack Circumferential	Worren Industria 17.1520 Min Andrea 18.171 Fill 18.171 Fill 19.171
Crack Longitudinal	Point	406.5	Structural	0	2	2	0	0	1	Crack Longitudinal	Verwein, modern († 18) 9. Bestellen 2013 – 11 2013 – 11

Page 8 of 9 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	406.5	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Deposits Settled Gravel	Point	407	O&M	10	6	0	2	0	0	Deposits Settled Gravel	Vortex 1 98 - 18 - 26 53 - 26 - 56 - 386 - 51
Crack Multiple	Point	410.6	Structural	0	10-2	3	0	0	1	Crack Multiple	
Manhole	Point	412	Constructional	0		0	0	0	0	D-4.1	Durites Tuzastrast 115 - 2023 1-20-322 Pri - 422 10 11





Setup ID	2023-26	Inspe	ction Date	Aug 19, 20	23 In	spected	l Leng	th (ft)	8	32.3	Defects Rated ≥3	3	Peak Structural Rating	4		10
Segment ID	D-6:D-19	Primary	Pipe Materi	al RCP	b) lu M	Pipe Dia	ameter	(in)		15	Peak Prioritization Ratin	g 3	Peak C/O&M Rating	2	Total PR Defects	12
Descri	iption	Spatial Type	Distance (ft)	Туре	Percent	t Clock	SR	0&M	С	PR	Remarks		Pho	tos		
Manł	hole	Point	0	Constructional	0	1	0	0	0	0	D-6		Variation and an and a second se	2		
Miscellaneous	s Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey		Vertices Protects of aver-			
Surface Dama Visil	age Aggregate ible	Continuous	0 - 82.3	Structural	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible			Yor tes Todus P19L III 29 UA-9 11 29 UA-9 11 29 UA-9 11 29 UA-9 11 29 UA-9 11 29 UA-9 12 20 UA-9 12 UA-		



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Fracture Longitudinal	Point	11.9	Structural	0	6	3	0	0	2	Fracture Longitudinal	
Crack Spiral	Point	11.9	Structural	0	3-5	2	0	0	1	Crack Spiral	
Crack Longitudinal	Point	24.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	44.5	Structural	0	5	2	0	0	1	Crack Longitudinal	
Fracture Longitudinal	Point	48.5	Structural	0	6	3	0	0	2	Fracture Longitudinal	
Crack Longitudinal	Point	52.7	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	с	PR	Remarks	
Crack Longitudinal	Point	56.7	Structural	0	6	2	0	0	2	Crack Longitudinal	
Point Repair Patch	Point	60.7	Structural	0	12	0	0	0	3	Point Repair Patch	
Point Repair Patch Defective	Continuous	64 - 73.4	Structural	10	12-1	4	0	0	3	Point Repair Patch Defective	
Crack Longitudinal	Point	64.9	Structural	0	6	2	0	0	2	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Deposits Attached Encrustation	Point	76.9	O&M	10	12-1	0	2	0	0	Deposits Attached Encrustation	
Fracture Longitudinal	Point	81.2	Structural	0	6	3	0	0	3	Fracture Longitudinal	
Manhole	Point	82.3	Constructional	0		0	0	0	0	D-19	Yorisk Industriat





Setup ID 2023-27	Inspectio	n Date	Aug 16, 2023	Inspecte	ed Leng	th (ft)		14.9		Defects Rated ≥3	0	Peak Structural Rating	3		1
Segment ID D-21:D-22	Primary Pipe	e Material	SP	Pipe D	iamete	r (in)		30	P	eak Prioritization Rating	2	Peak C/O&M Rating	4	Total PR Delects	
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	15		Photos		
Manhole	Point	0	Constructional	0		0	0	0	0	D-21					
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey					
Surface Damage Corrosion	Continuous	0 - 14.9	Structural	0	12- 12	3	0	0	2	Surface Damage Corrosion		Image: state			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Line Down	Point	5.7	Constructional	100		0	4	4	0	Line Down	
Miscellaneous Survey Abandoned	Point	14.9	Miscellaneous	0		0	0	0	0	Impassable High Water Level	The second secon
Miscellaneous Water Level	Point	14.9	Miscellaneous	100		0	0	0	0	Miscellaneous Water Level	





Setup ID	2023-28	Inspect	tion Date	Aug 22, 20	023	Inspe	cted Le	ngth ((ft)	268	Defects Rated ≥3	3	Peak Structural Rating	4	Total DD Defecto	45
Segment ID	5-E:5-F	Primary P	ipe Material	RCP	Σ	Pipe	Diame	eter (in)	21	Peak Prioritization Rating	3	Peak C/O&M Rating	2	Total PR Derects	45
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remark	(S		Photos			
Manhole	Point	0	Constructiona	al O		0	0	0	0	5-E						
Miscellaneous Water Level	Point	0	Miscellaneou	s 10		0	0	0	0	Water Leve Start of Su	el at urvey	Yo (CC) On address - b chi address and chi add				7



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Continuous	2-61.3	Structural	0	10-2	4	0	0	3	Surface Damage Reinforcement Visible	
Crack Multiple	Point	5.9	Structural	0	6-7	0	0	0	2	Crack Multiple	Portie Industrial 12.22 July av 12.3 98 VO 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	5.9	Structural	0	3-6	0	0	0	2	Crack Multiple	
Crack Multiple	Point	9.8	Structural	0	4-5	0	0	0	2	Crack Multiple	Received and and and and and and and and and an
Deposits Attached Encrustation	Point	14.5	O&M	10	4-5	0	2	0	0	Deposits Attached Encrustation	Verter Leuistria en de regenerations 18 002, 15 pp 24 45 41
Crack Longitudinal	Point	17.9	Structural	0	12	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	26.5	O&M	10	10	0	2	0	0	Deposits Attached Encrustation	Var see a rouss ri a ar internet and a see

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Deposits Attached Encrustation	Point	34.4	O&M	10	7	0	2	0	0	Deposits Attached Encrustation	
Crack Longitudinal	Point	35.5	Structural	0	8	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	38.3	Structural	0	5	2	0	0	2	Crack Longitudinal	
Crack Longitudinal Hinge, 2	Point	38.3	Structural	0	9-3	2	0	0	2	Crack Longitudinal Hinge, 2	
Crack Longitudinal	Point	42.5	Structural	0	11	2	0	0	1	Crack Longitudinal	







Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	42.5	Structural	0	5	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	42.5	O&M	10	12- 12	0	2	0	0	Deposits Attached Encrustation	
Deposits Attached Encrustation	Point	46.5	O&M	10	3-9	0	2	0	0	Deposits Attached Encrustation	
Crack Spiral	Point	54.6	Structural	0	5-6	2	0	0	1	Crack Spiral	
Fracture Longitudinal	Point	58.9	Structural	0	4	3	0	0	3	Fracture Longitudinal	Vore and table if i dry and the print is the print of the print of the print of the print of the print of the print of the











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Surface Damage Reinforcement Visible	Continuous	61.4 - 234	Structural	0	8-4	4	0	0	3	Surface Damage Reinforcement Visible	
Deposits Attached Encrustation	Point	67.3	O&M	10	2-4	0	2	0	0	Deposits Attached Encrustation	Motter Longa (r) Bodriss (r) B



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	67.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	71.7	O&M	10	3-5	0	2	0	0	Deposits Attached Encrustation	
Deposits Attached Encrustation	Point	75.4	O&M	10	8-9	0	2	0	0	Deposits Attached Encrustation	Were Thouse
Deposits Attached Encrustation	Point	75.4	O&M	10	3-4	0	2	0	0	Deposits Attached Encrustation	
Deposits Attached Encrustation	Point	79.3	O&M	10	8	0	2	0	0	Deposits Attached Encrustation	Anna Tudhet Tali











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	79.3	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	87.3	Structural	0	4-5	3	0	0	1	Crack Multiple	
Crack Multiple	Point	91.8	Structural	0	6-7	3	0	0	1	Crack Multiple	
Crack Multiple	Point	95.5	Structural	0	10- 11	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	99.5	Structural	0	6	2	0	0	1	Crack Longitudinal	











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	103.4	Structural	0	12-1	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	107.5	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	111.5	Structural	0	12	2	0	0	1	Crack Longitudinal	And the second sec
Crack Multiple	Point	111.5	Structural	0	5-7	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	123.6	Structural	0	12	2	0	0	1	Crack Longitudinal	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	132.5	Structural	0	1	2	0	0	1	Crack Longitudinal	Unite - Lindu cut 1 19 2 2 0/2 19 3 3 5 (P) 2 2 2 1 4 (t)
Crack Longitudinal	Point	139.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	144.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	148.9	O&M	10	7-8	0	2	0	0	Deposits Attached Encrustation	North Carl 200 Best 1/301 Second Second Sec
Crack Longitudinal	Point	157.1	Structural	0	6	2	0	0	1	Crack Longitudinal	A COLUMN 111 35 D 2 PT 352 10 TA







Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	161	Structural	0	11- 12	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	165.4	Structural	0	6	2	0	0	1	Crack Longitudinal	obriska danuaki Maria da lakas Yima da FRA Jana da Katika Katika
Crack Longitudinal	Point	168.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	168.9	Structural	0	4-5	2	0	0	1	Crack Multiple	Vortex Indvitration 86-22-0235 7-92146 PH 136-35 TI
Crack Multiple	Point	172.8	Structural	0	4-5	2	0	0	2	Crack Multiple	











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	177.1	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	184.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	195.5	Structural	0	3-9	1	0	0	1	Crack Circumferential	Verife Indestrial UB 22:2953 7 klour Hr 204/2* T
Crack Longitudinal	Point	213.6	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	213.6	Structural	0	6	2	0	0	1	Crack Longitudinal	



























Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	225.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Surface Damage Reinforcement Visible	Continuous	234.1 - 268	Structural	0	10-2	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	245.3	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	257.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	257.5	Structural	0	11	2	0	0	1	Crack Longitudinal	











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	257.5	Structural	0	9	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	263.7	Structural	0	4	2	0	0	1	Crack Longitudinal	
Manhole	Point	268	Constructional	0		0	0	0	0	5-F	North & Andrea Marsail Andrea





Setup ID	2023-2	29 Ins	pection Date	Aug 24, 20	23 In:	spected	Lengt	th (ft)	20	07.7	Defects Rate	d ≥3	0	Peak Structural Ra	ting	3	T-4-1 DD D-(-++	-
Segment ID	5-P:5-0	0 Prima	ry Pipe Materi	al RCP	5) ju je	^p ipe Dia	meter	(in)		21	Peak Prioritizatio	n Rating	2	Peak C/O&M Rat	ng ()	Total PR Defects	66
Descript	tion	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks			3.2	Photos			
Manho	ble	Point	0	Constructional	0		0	0	0	0	5-P			Warren Industria. Marren 1943 Sinstein Amerikan Jose Te				
Miscellaneou Level	us Water !	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Sorraw Industria.				
Surface Da Roughness Ir	amage ncreased	Continuous	0 - 207.7	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	War 45. 1709 41 1112 46 0 41 1716 46 0 41 1717 46 0 41 0 41 1717 46 0 41 0 41 0 41 0 41 0 41 0 41 0 41 0		Spread 10005tr131 Spread 10005tr131 <t< td=""><td></td><td></td><td>Open-tropy State St</td><td></td></t<>			Open-tropy State St	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	2.3	Structural	0	5-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	3.1	Structural	0	5-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	4.3	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	5.3	Structural	0	4-7	1	0	0	2	Crack Circumferential	Important Important Important



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Circumferential	Point	6	Structural	0	4-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	6.9	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	7.5	Structural	0	5-8	1	0	0	1	Crack Circumferential	Image: Sector



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	9.1	Structural	0	3-8	1	0	0	1	Crack Circumferential	Vorrey Industrial US-24-223 II-31-09-24 US-27-10
Crack Circumferential	Point	11.3	Structural	0	5-8	1	0	0	1	Crack Circumferential	ror cor Lingustradi. Bisz zwoda Tradi, art tu vit international and the second se
Crack Circumferential	Point	12.8	Structural	0	4-7	1	0	0	1	Crack Circumferential	VICE 64 Podest, 10 WILL SA ARE VICE 94 ARE VICE 95 ARE
Crack Circumferential	Point	17.6	Structural	0	4-8	1	0	0	2	Crack Circumferential	Worker Theorem Hand



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	20.2	Structural	0	4-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	24.2	Structural	0	5-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	27.5	Structural	0	5-7	1	0	0	1	Crack Circumferential	Veren industeant B8 24 2003 12 401 TP Pr 27,52, TT TP TT TP TT TP TT TP TT TP TT TP TT
Crack Longitudinal	Point	30.6	Structural	0	6	2	0	0	1	Crack Longitudinal	Abr of andorst fail Abr of an another an



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	31.1	Structural	0	5-7	3	0	0	-	Crack Multiple	
Crack Circumferential	Point	34.9	Structural	0	4-8	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	36.1	Structural	0	5-8	3	0	0	1	Crack Multiple	Verter Industrial 88-33-2023 12:07:25 PH 89-95 10:07:05 PH 80-95 10:07:05 PH 10:07:05 PH 10:07:
Crack Multiple	Point	38.5	Structural	0	6-7	3	0	0	1	Crack Multiple	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	41.5	Structural	0	6-7	1	0	0	1	Crack Circumferential	rer i en ladita trial 55-24-7025 73 il 55 r/r - 41/35 r e
Crack Circumferential	Point	42.4	Structural	0	5-6	1	0	0	1	Crack Circumferential	11 10 4 10 4 10 10 10 10 10 10 10 10 10 10 10 10 10
Crack Circumferential	Point	43.9	Structural	0	6-8	1	0	0	2	Crack Circumferential	And an
Crack Circumferential	Point	45.1	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	47.1	Structural	0	6-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	49.6	Structural	0	5-7	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	51.1	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	52.1	Structural	0	6-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	54.2	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	54.6	Structural	0	5-7	3	0	0	1	Crack Multiple	
Crack Multiple	Point	58.4	Structural	0	4-9	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Spiral	Point	60	Structural	0	4-6	2	0	0	1	Crack Spiral	
Crack Longitudinal	Point	61.8	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	61.8	Structural	0	7	2	0	0	1	Crack Longitudinal	V III A VIII A VIIII A VIII A VIIII A VIIIII A VIIII A VIIIII A VIIII A VIIIII A VIIIII A VIIII A VIIII A VIIII A VIIIII A VIIIII A
Crack Multiple	Point	62.5	Structural	0	5-6	3	0	0	1	Crack Multiple	









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	66.4	Structural	0	3-7	0	0	0	2	Crack Multiple	
Crack Longitudinal	Point	69.4	Structural	0	2	2	0	0	1	Crack Longitudinal	Verties industrial pass rearry Course industrial verties indust
Crack Longitudinal	Point	69.4	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	75.6	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	77.2	Structural	0	6-7	3	0	0	1	Crack Multiple	

Page 10 of 17 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Circumferential	Point	79	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	87.3	Structural	0	3-9	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	100.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	107.9	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	119.7	Structural	0	4-6	2	0	0	1	Crack Multiple	
Crack Longitudinal	Point	123.2	Structural	0	10	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	126.8	Structural	0	4-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	131.6	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	133.7	Structural	0	6-7	3	0	0	1	Crack Multiple	Wet is the set of the



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	134.4	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	138.3	Structural	0	12- 12	1	0	0	2	Crack Circumferential	the strate trace of the strate
Crack Multiple	Point	139.1	Structural	0	5-7	3	0	0	1	Crack Multiple	for here industrial of the ind
Crack Multiple	Point	143	Structural	0	4-7	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	145.9	Structural	0	3	2	0	0	1	Crack Longitudinal	Vin Sterndustrink de 14 1024 11 584 ref 13 5 ref 14 ref 1

Page 13 of 17 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	145.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Continuous	146.7 - 150	Structural	0	4-8	3	0	0	2	Crack Multiple	
Crack Multiple	Continuous	153.6 - 158.8	Structural	0	4-9	3	0	0	1	Crack Multiple	


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	161.2	Structural	0	5-7	2	0	0	2	Crack Spiral	
Crack Circumferential	Point	165.9	Structural	0	6-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	174	Structural	0	3-9	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	176.7	Structural	0	6	2	0	0	1	Crack Longitudinal	



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Longitudinal	Point	176.7	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	180.8	Structural	0	5-8	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	184	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	184	Structural	0	7	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	206	Structural	0	7-5	2	0	0	2	Fracture Circumferential	orreineustres a state a stat
Manhole	Point	207.7	Constructional	0		0	0	0	0	5-0	Vortex Indústrial 08/24/2023 1/99/29 PM 207/10 T





Process Segment Inspection Summary Report

Setup ID	2023-30	Insp	ection Date	Aug 24	4, 2023	Ins	pected	Leng	th (ft)	82	Defects Rated ≥3	0	Peak Structural Rating	3		14
Segment ID	5-0:5-M	Primary	y Pipe Material	RC	CP	P	ipe Dia	meter	(in)	21	Peak Prioritization Rating	1	Peak C/O&M Rating	0	Total PR Defects	14
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks			Photos	22		
Manhole	Point	0	Constructional	0		0	0	0	0	5-0			Vortet Industraat Value 2025 V24.122 PP 2 an 19			
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey			Uproci- Ladustras EB-74-2023 1:54-20.8 Hk 2:00 Th			
Surface Aggregate Visible	Continuous	0 - 82	Structural	0	12- 12	2	0	0	1	Surface Aggregate Visible	Unries Industriat wh.24 30036 2.85 30 Jr - 15 38 Jr	s. protectional testem 2.50 million				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	2	Structural	0	6	2	0	0	1	Crack Longitudinal	Vortex Industrial 88-24-2023 1:55-42 MP 2:00 TT 2:00 TT 40 TT 2:00 TT 40
Crack Longitudinal	Point	5.4	Structural	0	6	2	0	0	1	Crack Longitudinal	Vartex Indust 08-24-2022 1-56-28 Pr 5-28 1-56-28 Pr 5-28 1-56-28 1-5
Crack Multiple	Point	7.7	Structural	0	4-8	3	0	0	1	Crack Multiple	Weight and
Crack Longitudinal	Point	12.7	Structural	0	5	2	0	0	1	Crack Longitudinal	



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	12.8	Constructional	0	9-10	3	0	0	1	Crack Multiple	Arr col and other all and other and other all and other al
Crack Longitudinal	Point	20.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	21.4	Structural	0	4-7	3	0	0	1	Crack Multiple	OPTER: Industrial Industrial Industrial
Crack Longitudinal	Point	27.1	Structural	0	6	2	0	0	1	Crack Longitudinal	207700 Tradit V 1 41 2024 - 2723 7 43 - 3 6 190 2 2 - 200 - 1 2 3 - 200 - 1 2 - 200 - 200 - 1 2 - 200 - 1 2 - 200 - 1 2 - 200 - 1 2 - 20
Crack Longitudinal	Point	36	Structural	0	7	2	0	0	1	Crack Longitudinal	

























Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	51.5	Structural	0	5	2	0	0	1	Crack Longitudinal	Yur ex draustriat 18-24-2023 2:8334.PM -45-70 TC
Crack Longitudinal	Point	51.5	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortex Industrien 78-24-2027 2-183-14-5Pk
Crack Longitudinal	Point	73.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	80.5	Structural	0	6	2	0	0	1	Crack Longitudinal	Burdies, Londustrian Burdies, Londustrian Burdies, Strate Burdies, Londustrian Burdies, Londu
Manhole	Point	82	Constructional	0		0	0	0	0	5-M	Vortex Industrial 06-24-2023 2:33:13 PM 51.96 Tt 51.96 Tt





Process Segment Inspection Summary Report

Setup ID	2023-31	Inspec	tion Date	Aug 25, 20	023	Inspe	cted Le	ength ((ft)	208.7	D)efects Rated ≥3	5	Peak Str	uctural Rating	4		
Segment ID	B-1:B-3	Primary P	ipe Material	VCP	53	Pipe	e Diame	eter (ir	1)	10	Peak	Prioritization Rating	4	Peak C	/O&M Rating	2	Total PR Defects	90
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remar	ks				Photos			
Manhole	Point	0	Constructiona	1 0		0	0	0	0	B-1				Vortex Indu 18:25-2023 18:17:16 AM 13:35 ft	htriat			
Miscellaneous Water Level	Point	0	Miscellaneou	5 0		0	0	0	0	Water Lev Start of S	vel at urvey			Vortex Indu 88-23-2023 10:17:17 AM 11.35 Tt	trasi			
Crack Multiple	Point	2	Structural	0	11-1	3	0	0	2	Crack Mu	ltiple	Average Lodie Friday	Upree Industrial Breas ages 14-69 ft	And	Vortex Indus Design of the second sec			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	2	Structural	0	5	2	0	0	1	Crack Longitudinal	Verbex Lindus Re 35 2003 Jul 29:05 AM Value 1
Fracture Multiple	Point	5.7	Structural	0	6-10	3	0	0	3	Fracture Multiple	WHT WAS REPORTED WHT WAS REPORTED WHT WAS REPORTED
Crack Longitudinal	Point	9.3	Structural	0	12	2	0	0	1	Crack Longitudinal	Vortet bidogritiat

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Multiple	Point	13.6	Structural	0	12- 12	3	0	0	3	Fracture Multiple	Wortes Industrie Wortes Industrie Wortes Industrie
Crack Multiple	Point	17.6	Structural	0	5-6	3	0	0	1	Crack Multiple	
Crack Multiple	Point	17.6	Structural	0	10-1	3	0	0	2	Crack Multiple	vortex_Endboartal 08-25-2023 10-33:33 AM 17.55 ft 10-32:43 AM 17.55 ft
Fracture Spiral	Point	17.6	Structural	0	6-7	3	0	0	2	Fracture Spiral	Vortex Industri 00-25-2023 10:33:25 AN 17.55 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Continuous	21.5 - 26	Structural	0	12- 12	3	0	0	2	Crack Multiple	Werter Lowertriet Werter Lowertriet Werter Lowertrie Werter Lowertrie </th
Crack Longitudinal	Point	29.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	29.2	O&M	10	5-7	0	2	0	0	Deposits Attached Encrustation	Vortex Industriat 08-25-2023 10-31-26 AM 27-71 ft Vortex Industriat 10-32-2023 10-32



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	29.2	Structural	0	2	2	0	0	1	Crack Longitudinal	Vorter Indust EB.25-2023 IU.33-42 AP 25.23 T
Crack Longitudinal	Point	33.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	33.5	Structural	0	7	2	0	0	1	Crack Longitudinal	Vo * 25 · 10 · 10 · 10 · 10 · 10 · 10 · 10 · 1
Crack Longitudinal	Continuous	33.5 - 36.8	Structural	0	10	2	0	0	1	Crack Longitudinal	Vortes Industrial' - 88 25-2022 10/3/2014 AM 32-85 FT 33-85 FT
Crack Spiral	Point	37.4	Structural	0	3-5	2	0	0	1	Crack Spiral	Vortex Tonustraal 88-25-2023 10:30:55.49 31-34 17
Crack Longitudinal	Point	37.4	Structural	0	6	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Circumferential	Point	37.4	Structural	0	7-8	2	0	0	1	Fracture Circumferential	Vortex Industrial- 88:25-2023 Tarderist Ant -37:44 Tt
Crack Spiral	Point	37.4	Structural	0	8-10	2	0	0	1	Crack Spiral	Vortex Industrial 96-25-2023 10:56:04 AM 37.44 Tt
Crack Multiple	Point	41.7	Structural	0	5-11	3	0	0	2	Crack Multiple	Vortex Industriat 68-25-2023 10:52:70-25 41:05 fr 41:05 fr
										•	terrer Industr
Fracture Multiple	Point	45.3	Structural	0	12- 12	3	0	0	2	Fracture Multiple	2/ 90.ctr:07 0 10 20 1002 10 25 20 4 10 20 4 10 20 4 10 20 4
)					Vortex Industr 88-25-2023 18:57:166 AR 45:31 ft 45:31 ft

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	49.5	Structural	0	12- 12	3	0	0	2	Crack Multiple	
Fracture Multiple	Point	53.4	Structural	0	12- 12	3	0	0	3	Fracture Multiple	Vortex Industria 06-23-2023 III (22:48-67 12:22:48-67 13:22:48-67 14:22:48-67 15:22:48-7 15:28-7 15:28-7 15:28-7 15:28-7



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	57.4	Structural	0	3-7	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	57.4	Structural	0	12	2	0	0	1	Crack Longitudinal	Vortes Indust 88-25-2023 11:86-22 AV 57-30 T
Fracture Spiral	Point	57.4	Structural	0	10- 11	3	0	0	2	Fracture Spiral	Vortex Indust. 68-25-2023 II:86:20 AM 37:40 Pt
Crack Longitudinal	Point	61.7	Structural	0	10	2	0	0	1	Crack Longitudinal	Vortex Indust 08-35-2023 11:09-03 AH 63.68 ft

































Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	61.7	Structural	0	3-5	3	0	0	2	Crack Longitudinal	the set of
Crack Longitudinal	Point	61.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	61.7	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	65.5	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortex Indust 08-25-2023 11:11:51 AM 55.47 ft
Fracture Spiral	Point	65.5	Structural	0	2-3	3	0	0	2	Fracture Spiral	107:62-1023 11:13:64 AM 65.47 ft





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	65.5	Structural	0	2-5	2	0	0	1	Crack Spiral	Vorter Indestriël 89-25-2023 13:13-26 AM 63.87 ft
Fracture Multiple	Point	69.6	Structural	0	5-6	4	0	0	2	Fracture Multiple	Vorter Industrial 88-25-2033 11:12:47 AN 67.09 ft
Fracture Spiral	Point	69.6	Structural	0	7-9	3	0	0	2	Fracture Spiral	Derte Industrielt 0 87 te 20 2023 11:123 223 20 11:23 223 20 11:25 223 20 11:25 20 20 11:25 20
Fracture Circumferential	Point	69.6	Structural	0	10- 11	2	0	0	2	Fracture Circumferential	Vorter Industrial 08-25-2023 11:15:20 AP 67.09 ft 67.09 ft 12:16:20 AF 13:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:20 AF 14:16:21 AF 09:56 ft 09:56 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	69.6	Structural	0	3-4	3	0	0	2	Crack Multiple	Vortee Industrial R 23 2023 11 17522 AM 69.50 Ft 10 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Crack Multiple	Point	73.5	Structural	0	12- 12	3	0	0	2	Crack Multiple	THE TOP AT
Crack Multiple	Point	77.8	Structural	0	12-5	2	0	0	2	Crack Multiple	Vortex Industrial 00-25:7023 11:24:14 AN 77.81 ft
Crack Longitudinal	Point	77.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	81.6	Structural	0	6-7	3	0	0	1	Crack Multiple	Vortex Indu III: 23: 44 4 10: 42 10: 42 10 10: 42 10 10: 42 10 10: 42 10 10: 42 10 10 10 10 10 10 10 10 10 10 10 10 10











Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Fracture Multiple	Point	81.6	Structural	0	2-5	3	0	0	2	Fracture Multiple	vortex Industrial 88-25-2023 11:26:52 AM 81:62 Ft
Crack Longitudinal	Point	85.8	Structural	0	1	2	0	0	2	Crack Longitudinal	Vir tex Induct 11,25,32423 11,25,45, AM 15,52 Tt
Deposits Attached Encrustation	Point	85.8	O&M	10	5-7	0	2	0	0	Deposits Attached Encrustation	Verter Industriet 08-25-2023 11:27:40 AH 03.82 ft
Crack Longitudinal	Point	85.8	Structural	0	9	2	0	0	2	Crack Longitudinal	Transfer Totosterial att-22,723 Transfer 2 Ad 23, 12 Tr
Crack Longitudinal	Point	85.8	Structural	0	4	2	0	0	1	Crack Longitudinal	the second secon

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	89.6	Structural	0	12- 12	3	0	0	2	Crack Multiple	Urtes Trais Be 25:2023 11:31:47 AR 95:75 ft Vertes Trais 11:32:17 AR 85:75 ft Vertes Trais 11:32:17 AR 85:75 ft
Crack Multiple	Point	93.4	Structural	0	12- 12	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	98	Structural	0	5	2	0	0	1	Crack Longitudinal	













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	98	Structural	0	7-11	3	0	0		Crack Spiral	Vortex Industr 11 di 22 AW 17
Crack Multiple	Point	101.7	Structural	0	6-12	3	0	0	2	Crack Multiple	yortex.IndustClat 05-25-2023 11:40:135 AM 101,72 ft 101,71 ft
Deposits Settled Hard/Compacted	Point	101.7	O&M	10	6-7	0	2	0	0	Deposits Settled Hard/Compacted	WITTER MANUELTITELE CONTROL OF AND



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	106.2	Structural	0	5-7	3	0	0	2	Crack Multiple	Image: the transmission of the tran
Fracture Multiple	Point	109.8	Structural	0	12- 12	3	0	0	3	Fracture Multiple	Implementation Implementation Implementation Implementa
Crack Multiple	Point	113.8	Structural	0	12- 12	3	0	0	2	Crack Multiple	vortex industrial 11:59:14 AN 11:57:77 11:5



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	118	Structural	0	12-6	3	0	0	2	Crack Multiple	PP 12 - 10 00 11 12 12 1 21 22 12 23 41 - 127 25 71 -
Crack Spiral	Point	118	Structural	0	6-8	2	0	0	1	Crack Spiral	Nortex Industriat 98-25-2023 11:53:80 AX 117,95-71
Joint Offset Medium	Point	121.8	Structural	0		3	0	0	1	Joint Offset Medium	Vorter Industri 88-55-2023 1139-36 ft 119-36 ft
Crack Multiple	Point	121.8	Structural	0	12- 12	3	0	0	2	Crack Multiple	Uprise Industrial Uprise Industrial <t< td=""></t<>













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	126	Structural	0	12- 12	3	0	0	1	Crack Multiple	
Crack Multiple	Point	130.4	Structural	0	12- 12	3	0	0	2	Crack Multiple	Vortee Industration
Crack Multiple	Point	133.8	Structural	0	2-6	2	0	0	2	Crack Multiple	W0 * 5.8 * 3028 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 3.9 * 0° 12 * 00 * 0.9 * 0° 12 * 00 * 0.9 * 0° 12 * 00 * 0.9 * 0° 12 * 0.0 * 0.









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	133.8	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortex Indust 09:25.8023 12:06:53 Pt 353.83 Pt
Crack Longitudinal	Point	133.8	Structural	0	9	2	0	0	1	Crack Longitudinal	Vortex Industrial 88-25-2073 12:07132 PH 133-83 TF
Crack Circumferential	Point	134.4	Structural	0	7-10	1	0	0	1	Crack Circumferential	Vortex Indust 198-25-2023 12:09:03 PM 133.83 ft
Crack Multiple	Point	137.8	Structural	0	4-9	3	0	0	1	Crack Multiple	Vortex Industrial 13:23-23/23 13:29 13:29



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Crack Multiple	Point	142	Structural	0	12- 12	3	0	0	1	Crack Multiple	Wortes induction Image: Account of the second of the s
Crack Longitudinal	Point	145.9	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Spiral	Point	145.9	Structural	0	6-9	2	0	0	1	Crack Spiral	Vorter Industrial 08-25-2023 12:13:06 PM -435-86 ft
Crack Longitudinal	Point	149.7	Structural	0	3	2	0	0	1	Crack Longitudinal	dar tex. Tadus tr 88 33-7023 121.10:23 43 139.72 43
Crack Longitudinal	Point	149.7	Structural	0	2	2	0	0	1	Crack Longitudinal	00+10+1 THOUGH 00-25,2023 12:13:15 PM 149.73 ft 149.73 ft



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	No. Contractor and the
Crack Multiple	Point	153.9	Structural	0	12- 12	3	0	0	2	Crack Multiple	Werker, approximation Werker, approximation 12 22 20 approximation Werker, approximation 12 20 approximation Werker, approximation <td< th=""></td<>
Crack Longitudinal	Point	157.7	Structural	0	8	2	0	0	1	Crack Longitudinal	Vortex Industr 08-25-2023 12:28:33 PM 137-75 ft
Crack Spiral	Point	157.7	Structural	0	4-5	2	0	0	1	Crack Spiral	
Deposits Settled Hard/Compacted	Point	157.7	O&M	10	6	0	2	0	0	Deposits Settled Hard/Compacted	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	157.7	Structural	0	7	2	0	0	1	Crack Longitudinal	Vortex Indust 08-25-2023 12:28:52 Ft 157.22
Crack Multiple	Point	161.9	Structural	0	12-5	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	161.9	Structural	0	7	2	0	0	1	Crack Longitudinal	Worts Indust 88:25-3625 12:33:31 Pt 161.08 Ft
Crack Longitudinal	Point	161.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Fracture Circumferential	Point	166	Structural	0	10- 11	2	0	0	2	Fracture Circumferential	Vortex Industrial 08-25-2023 12:34-22 20 105:96 ft 105:96 ft

























Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Multiple	Point	166	Structural	0	7-9	3	0	0	1	Crack Multiple	Vortex Indust 00.25.2023 12:33:30 PH 155.90 Pt
Crack Multiple	Point	166	Structural	0	3-5	2	0	0	1	Crack Multiple	Dorfter - Todas / / / / / / / / / / / / / / / / / / /
Crack Multiple	Point	170	Structural	0	2-5	3	0	0	1	Crack Multiple	Description of the second seco
Crack Longitudinal	Point	170	Structural	0	7	2	0	0	1	Crack Longitudinal	Wortex Industr 08 25-2023 12:50-06 ft
Deposits Attached Encrustation	Point	173.8	O&M	10	4-6	0	2	0	0	Deposits Attached Encrustation	Portex Industrial BE-25-2023 12:42:21 PM 271.77 ft



















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	173.8	Structural	0	8	2	0	0	1	Crack Longitudinal	Vortex Industr 08-25-2023 12:43:30 PM 173.70 ft
Crack Multiple	Point	177.9	Structural	0	6-9	3	0	0	1	Crack Multiple	Image: State of the state
Crack Longitudinal	Point	177.9	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Spiral	Point	181.9	Structural	0	1-6	2	0	0	1	Crack Spiral	We to Ke Industrial We are the training of th
Crack Multiple	Point	181.9	Structural	0	7-8	3	0	0	1	Crack Multiple	Vortez Tradu 670,00 86 55 2003 17:457,55 PM 1931,48 51

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	186	Structural	0	7	2	0	0	1	Crack Longitudinal	90/tsv Industr 08/25-2023 12:50:58 PM 180:04 ft
Crack Spiral	Point	190.1	Structural	0	6-10	2	0	0	2	Crack Spiral	Vertex Industre Marza-2923 13:52:54 FM 196-05 71
Crack Spiral	Point	190.1	Structural	0	4-5	2	0	0	1	Crack Spiral	
Crack Spiral	Point	194	Structural	0	2-5	2	0	0	1	Crack Spiral	00/fter Industrial 02/fter 20 PM 12/57/20 PM 194.00 Tt
Crack Spiral	Point	198.1	Structural	0	6-7	1	0	0	1	Crack Spiral	

















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Longitudinal	Point	198.1	Structural	0	4	2	0	0	1	Crack Longitudinal	Uff que 1 - 3 adus 1 off 425 - 2023 12 (37) 49 Pm 196-10 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Crack Multiple	Point	202	Structural	0	11-4	3	0	0	2	Crack Multiple	Vorter Industrial 1932 52 2023 1932 12 PF 202.02 ft 202.02 ft 1930 10 PF 202.02 ft 1930 10 PF 1930 10 PF 193
Crack Longitudinal	Point	202	Structural	0	11	2	0	0	1	Crack Longitudinal	Vortes Industrial 86 25 2023 1:01:37 PM 202.02 st
Joint Offset Medium	Point	206	Structural	0		3	0	0	2	Joint Offset Medium	Wortex Indust 88-25-2023 1:122:53 PH 284.16 ft













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Broken	Point	206	Structural	0	5-8	4	0	0	4	Broken	
Crack Longitudinal	Point	206	Structural	0	1	2	0	0	1	Crack Longitudinal	99116x Indusf 00/25-2623 I-24-34 PT 205,35 ft 4 4
Manhole	Point	208.7	Constructional	0		0	0	0	0	В-3	Vortex Indust 06-25-2023 1:03:23 Pf 205:39 ft





Process Segment Inspection Summary Report

Setup ID	2023-32	2 Insp	ection Date	Aug 28, 202	23 In	spected	Lengt	h (ft)	2	1.5	Defects Rated ≥3	0	Peak Structural Rating	3	Tetal DD Defects	
Segment ID	D-21:D-2	2 Primary	/ Pipe Materi	al SP		Pipe Dia	meter	(in)	3	30	Peak Prioritization Rating	2	Peak C/O&M Rating	4	Total PR Defects	
Descrip	otion	Spatial Type	Distance (ft)	Туре	Percen	t Clock	SR	O&M	С	PR	Remarks		Ph	otos		
Manho	ole	Point	0	Constructional	0		0	0	0	0	D-21		The P is a second			
Miscellaneo Leve	ous Water el	Point	0	Miscellaneous	scellaneous 0 0 0		0	0	Water Level at Start of Survey							
Surface Da Corros	amage	Continuous	0 - 21.5	Structural	0	12- 12	3	0	0	2	Surface Damage Corrosion					



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Line Down	Point	5.1	Constructional	100		0	4	4	0	Line Down	рец на 1 ланияти и и н - 2 л 2013 и - 2 л 2013 и - 2 л 2014 2 74 - 1
Manhole	Point	21.5	Constructional	0		0	0	0	0	D-22	To see





Process Segment Inspection Summary Report

Setup ID	2023-33	Inspectio	n Date	Aug 28, 2023	Inspec	ted Leng	gth (ft)	16.2	Defects Rated ≥3			Peak Structural Rating	2	Total PR Defects	1
Segment ID	D-20C:D-22	Primary Pip	e Material	SP	Pipe	Diamete	er (in)		30	L.C	Peak Prioritization Rating	1	Peak C/O&M Rating	4	TOTALER DELECTS	
Desc	cription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	E		Photos		
Mai	inhole	Point	0	Constructional	0		0	0	0	0	D-20C					
Miscellaneou	Miscellaneous Water Level		0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey		a constraint a de anotación a de a de a de a de a de a de a de a de			
Surface Dar Spa	mage Surface alling	Continuous	0 - 16.2	Structural	0	12- 12	2	0	0	1	Surface Damage Surface Spalling					


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Line Left Down	Point	6.2	Constructional	50		0	4	4	0	Line Left Down	
Line Right	Point	10.2	Constructional	15		0	4	2	0	Line Right	
Manhole	Point	16.2	Constructional	0		0	0	0	0	D-22	





Setup ID Segment ID	2023-34 5-M:D-12	lns Prima	pection Date ry Pipe Materia	Aug 24,	2023 Inspecter	ed Lengtl iameter	n (ft) (in)	53. 21	4	Peal	Defect: k Priori	efects Rated ≥3 0 Prioritization Rating 2			uctural Rating O&M Rating	1	Total PR Defects	1
	Description		Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	R	emarks				Photos	
	Manhole		Point	0	Constructional	0		0 0 0 0 0 5-M				Vortes TrausIfial ne-24,222 radius pri SL 46 (r						
Miscella	aneous Water Lev	vel	Point	52.6	Miscellaneous	10		0	0	0	0	Water Level	Water Level at Start of Survey			Romon Jonan (1997) Henry Constraint State of the State State of the State State State of the State		
Surface I	Damage Roughne Increased	ess	Continuous	52.6 - 106	Structural	10	12- 12	1	0	0	2	Surface Damage Roughness Increased				Norte Insustrial Bardings Sumer Sume		



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks
Deposits Settled Gravel	Continuous	52.6 - 106	O&M	10	6	0	2	0	0	Deposits Settled Gravel
Miscellaneous Survey Abandoned	Point	106	Miscellaneous	0		0	0	0	0	End of Inspection





Setup ID	2023-35	Inspecti	on Date	Aug 26, 2023	Insp	ected Le	ength	(ft)	103	.4	Defects Rated ≥3	0	Peak Structural Rating	2	Total PD Defects	1
Segment ID	5-M:D-12	Primary Pip	oe Material	RCP	Pip	be Diam	eter (iı	n)	21		Peak Prioritization Rating	2	Peak C/O&M Rating	4	Total PR Delects	
Desci	ription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	C	PR	Remarks		Ph	otos		
Mar	nhole	Point	0	Constructional	0		0	0	0	0	5-M		Vortes Januar (19) Mir 20, 2003 23 Mir Ale Wei 20 Jan Karl	No.		
Miscellaneou	us Water Level	Point	0	Miscellaneous	30		0	0	0	0	Water Level at Start of Survey		967-108 (2010) 257 () 1 967-27-2733 2019-26429 2019-20			
Surface Dama Incre	age Roughness eased	Continuous	0 - 103.4	O&M	0	12- 12	2	0	0	2	Surface Damage Roughness Increased		Verter trouterial Traines for Traines for			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks
Tap Factory	Point	9	Constructional	0	6	0	0	0	0	Tap Factory
Miscellaneous Water Level	Point	18.1	Miscellaneous	40		0	0	0	0	Miscellaneous Water Level
Miscellaneous Water Level	Point	67.7	Miscellaneous	50		0	0	0	0	Miscellaneous Water Level
Miscellaneous Camera Underwater	Point	96	Miscellaneous	0		0	4	0	0	Miscellaneous Camera Underwater
Miscellaneous Survey Abandoned	Point	103.4	Miscellaneous	0		0	0	0	0	Impassable water level





Setup ID	2023-36	Inspectio	on Date	Jan 17, 2024	1 Insp	ected L	ength	(ft)	136	.9	Defects Rated ≥3	2	Peak Structural Rating	4	Total DD Defects	10
Segment ID	5-F:D-12	Primary Pip	oe Material	RCP	Pip	e Diam	eter (ir	n)	21		Peak Prioritization Rating	3	Peak C/O&M Rating	2	Total PR Defects	19
Desc	ription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks		Ph	otos		
Mar	nhole	Point	0	Structural	0	111	0	0	0	0	5-F					
Miscellaneou	us Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey					
Surface Dam Vis	age Aggregate sible	Continuous	0 - 136.9	Structural	0	8-4	2	0	0	1	Surface Damage Aggregate Visible					
Surface Dam Mis	age Aggregate ssing	Point	5.6	Structural	0	8-9	4	0	0	2	Surface Damage Aggregate Missing	•				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Deposits Attached Encrustation	Point	7.3	O&M	10	5-6	0	2	0	0	Deposits Attached Encrustation	
Crack Multiple	Point	23	Structural	0	8-10	1	0	0	1	Crack Multiple	
Intruding Sealing Material Grout	Point	26.4	Constructional	10	4-5	0	2	2	0	Intruding Sealing Material Grout	
Crack Circumferential	Point	28	Structural	0	3-4	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	34.8	Structural	0	9-11	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	38.9	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	40.8	Structural	0	8-10	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	C	PR	Remarks	
Crack Circumferential	Point	53.5	Structural	0	8-10	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	59.7	Structural	0	7-10	3	0	0	1	Crack Multiple	
Crack Circumferential	Point	63.8	Structural	0	7-8	1	0	0	1	Crack Circumferential	
Surface Damage Aggregate Missing	Point	63.8	Structural	0	10	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Aggregate Missing	Point	66.5	Structural	0	10	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Reinforcement Visible	Point	69.3	Structural	0	9-3	4	0	0	3	Surface Damage Reinforcement Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	1993
Joint Separated Medium	Point	72.2	Structural	0		3	0	0	1	Joint Separated Medium	
Intruding Sealing Material Grout	Point	79	O&M	10	6-9	0	2	0	1	Intruding Sealing Material Grout	
Deposits Settled Fine	Point	100.1	O&M	10	4-6	0	2	0	0	Deposits Settled Fine	
Surface Damage Reinforcement Visible	Point	111.8	Structural	0	9-10	4	0	0	3	Surface Damage Reinforcement Visible	
Crack Circumferential	Point	117	Structural	0	3-6	1	0	0	1	Crack Circumferential	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	PR	Remarks	
Crack Spiral	Point	124.1	Structural	0	3-6	2	0	0	1	Crack Spiral	
Miscellaneous Water Level	Point	127.5	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Crack Longitudinal	Point	134.1	Structural	0	7	2	0	0	1	Crack Longitudinal	
Tap Factory	Point	134.1	Constructional	0	6	0	0	0	0	Tap Factory	
Manhole	Point	136.9	Miscellaneous	0		0	0	0	0	D-12	





Setup ID 20	23-37	Inspection	Date	Jan 17, 2	2024	Inspect	ted Le	ngth (f	t)	203	Defects Rated ≥3	0	Peak Structural Rating	3	T-t-LDD D-forte	
Segment ID 5-N	:D-12 Pr	mary Pipe	Materia	I RCF	þ	Pipe D	Diame	eter (in)		21	Peak Prioritization Rating	2	Peak C/O&M Rating	2	Total PR Defects	Э
Description	Spati Typ	al Dista e (fi	nce)	Туре	Percent	t Clock	SR	O&M	С	PR	Remarks		Pho	tos		
Manhole	Poir	t C	Co	onstructional	0		0	0	0	0	5-M					
Miscellaneous Wa Level	er Poir	t 0	Mi	scellaneous	20		0	0	0	0	Water Level at Start of Survey					
Surface Damage Roughness Increas	ed Continu	ous 0 - 10	94.1	Structural	0	12- 12	1	0	0	2	Surface Damage Roughness Increased					



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Miscellaneous Water Level	Point	15.8	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	
Crack Longitudinal	Point	17	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	17	Structural	0	5	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	22.5	Structural	0	7	3	0	0	2	Crack Longitudinal	
Crack Longitudinal	Continuous	27 - 31	Structural	0	4	2	0	0	1	Crack Longitudinal	
Miscellaneous Water Level	Point	32.2	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Miscellaneous Water Level	Point	55.9	Miscellaneous	20		0	0	0	0	Miscellaneous Water Level	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Intruding Sealing Ring	Point	67.4	O&M	10	5-7	0	2	0	0	Intruding Sealing Ring	
Miscellaneous Water Level	Point	130.4	Miscellaneous	30		0	0	0	0	Miscellaneous Water Level	
Miscellaneous Water Level	Point	157.7	Miscellaneous	40		0	0	0	0	Miscellaneous Water Level	
Miscellaneous Water Level	Point	164.1	Miscellaneous	50		0	0	0	0	Miscellaneous Water Level	
Miscellaneous General Observation	Point	165	Miscellaneous	0		0	0	0	0	Video cuts and resumes without distance counter	
Miscellaneous Water Level	Point	165	Miscellaneous	0		0	0	0	0	Miscellaneous Water Level	
Tap Factory	Point	200.6	Constructional	0	6	0	0	0	0	Tap Factory	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	PR	Remarks	
Manhole	Point	203	Constructional	0		0	0	0	0	D-12	





Attachment 3: Process Structure Inspection Summary Reports



Setup ID	2023-ST-1	Inspe	ction date		Aug 9,	2023	Defec	ts Ra	ated ≥3	3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7.9
Structure ID	D-1.1	Peak Enviro	onmental Ra	ting	1		Peak C	/0&N	/I Ratin	ng	0	Rim to Bottom (ft)	12.4	Total ER Defects	5
Des	cription	Spatial Type	Distance (ft)	Ту	/pe	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellan Phot	eous General tograph	Point	0	Miscell	laneous	0		0	0	0	0	Side View of Structure			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	
Surface Damage Aggregate Missing	Point	4	Structural	0	3	4	0	0	1	Surface Damage Aggregate Missing	
Crack Longitudinal	Point	8.4	Structural	0	5	2	0	0	1	Crack Longitudinal	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Missing	Point	11.7	Structural	0	5	4	0	0	1	Surface Damage Aggregate Missing	
Surface Damage Aggregate Visible	Point	12	Structural	0	8	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Roughness Increased	Point	12	Structural	0	7-9	1	0	0	1	Surface Damage Roughness Increased	





Setup ID	2023-ST-2		Inspection	date	Aug 9, 2023	Defe	cts Rate	ed ≥3		0		Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	8
Structure ID	D-2.1	Pea	k Environmer	ntal Rating	2	Peak (C/O&M	Rating]	0		Rim to Bottom (ft)	8	Total ER Defects	4
D	escription		Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellaneou	s General Photogi	raph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struc	cture		
Miscellaneou	s General Photog	raph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Stru	cture		
Surface Dama	age Aggregate Vis	sible	Point	3	Structural	0	3	2	0	0	1	Surface Damage Aggree	gate Visible		



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks
Surface Damage Roughness Increased	Point	4	Structural	0	12-5	1	0	0	1	Surface Damage Roughness Increased
Surface Damage Roughness Increased	Point	6.2	Structural	0	6	1	0	0	1	Surface Damage Roughness Increased
Surface Damage Aggregate Missing	Point	12	Structural	0	2	4	0	0	2	Surface Damage Aggregate Missing





Setup ID	2023-ST-3	Inspe	ction date	Aug 9,	2023	Defe	ects Ra	ated≥3	3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	7.8
Structure ID	D-3.1	Peak Enviro	onmental Rating	2		Peak	C/0&I	M Ratir	ng	0	Rim to Bottom (ft)	11.6	Total ER Defects	6
Desc	cription	Spatial Type	Distance (ft)	-уре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellane Phot	eous General tograph	Point	0 Misce	llaneous	0		0	0	0	0	View Down Structure			
Miscellane Phot	eous General tograph	Point	0 Misce	llaneous	0		0	0	0	0	Side View of Structure			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Fracture Circumferential	Point	1.8	Structural	0	12- 12	3	0	0	1	Fracture Circumferential	
Fracture Circumferential	Point	3	Structural	0	2-3	3	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	3.5	Structural	0	05	2	0	0	2	Crack Longitudinal	
Surface Damage Roughness Increased	Point	6.7	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Crack Circumferential	Point	8	Structural	0	4-5	2	0	0	2	Crack Circumferential	
Deposits Other	Point	10	O&M	0	5	0	0	0	0	Deposits Other	
Crack Circumferential	Point	11	Structural	0	11- 03	2	0	0	2	Crack Circumferential	



TRC

Setup ID	2023-ST-4	Ins	spection da	ite	Aug 9, 2023	3	Defec	ts Rate	ed ≥3		0	Peak Structural	l Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	5.8
Structure ID	D-4.1	Peak Env	vironmenta	l Rating	2	P	eak C	/0&M I	Rating	J	0	Rim to Bottor	m (ft)	8.7	Total ER Defects	7
Descrij	ption	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER		Remarks			Photos	
Miscellaneou Photog	us General graph	Point	0	Miscellaneo	us O		0	0	0	0	View	Down Structure			<image/>	
Miscellaneou Photog	us General graph	Point	0	Miscellaneo	us O		0	0	0	0	Side \	/iew of Structure				
Surface Damag Increa	ge Roughness ased	Continuous	0 - 1.1	Structural	0	12- 12	1	0	0	1	Sur Roug	face Damage hness Increased				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Point	2	Structural	0	9-10	1	0	0	1	Surface Damage Roughness Increased	
Crack Longitudinal	Point	3	Structural	0	6	2	0	0	2	Crack Longitudinal	
Surface Damage Roughness Increased	Continuous	3.5 - 5.2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	













Descriptio	n	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Crack Multi	ple	Point	5.5	Structural	0	2-3	3	0	0	1	Crack Multiple	
Crack Longitu	dinal	Point	5.5	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitu	dinal	Point	6	Structural	0	9	2	0	0	1	Crack Longitudinal	
Deposits Settle	d Other	Point	8	O&M	0	12- 12	0	0	0	0	Deposits Settled Other	











Setup ID	2023-ST-5	Insp	pection date	Aug 1	0, 2023	De	fects	Rated 2	≥3	0	Peak Structural Ratin	g 2	Rim to Invert (ft) - Lowest Outgoing Pipe	4.9
Structure ID	D-20	Peak Env	ronmental R	ating	1	Pea	k C/0	&M Rat	ting	0	Rim to Bottom (ft)	7.6	Total ER Defects	2
Desci	ription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellanee Photo	eous General ograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure		<image/>	
Miscellane Photo	ous General ograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	1	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Visible	Continuous	2 - 4.4	Structural	0	9-2	2	0	0	1	Surface Damage Aggregate Visible	
Deposits Fine Settled	Point	7	O&M	10	12- 12	0	0	0	0	Deposits Fine Settled	



TRC

Setup ID	2023-ST-6	T-6 Inspection date			Aug 10, 2023	Defects	Rated	l≥3		0		Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	3.8
Structure ID	D-6.1	Pe	eak Environme	ntal Rating	2	Peak C/C	0&M Ra	ating	J	0		Rim to Bottom (ft)	3.8	Total ER Defects	6
De	scription		Spatial Type	Distance (ft)	Туре	Percent Cl	ock S	SR	O&M	С	ER	Remarks		Photos	
Miscellaneous	Miscellaneous General Photograph			0	Miscellaneous	0		0	0	0	0	View Down Structu	Jre		
Miscellaneous General Photograp			Point	0	Miscellaneous	0		0	0	0	0	Side View of Struct	ure		
Crack I	Longitudinal		Point	1	Structural	0	1	2	0	0	1	Crack Longitudina	al		
Crack Longitudinal			Point	1	Structural	0	3	2	0	0	1	Crack Longitudina	al		



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks
Surface Damage Aggregate Missing	Point	1.3	Structural	0	2	4	0	0	1	Surface Damage Aggregate Missing
Surface Damage Aggregate Visible	Point	1.7	O&M	0	12	2	0	0	1	Surface Damage Aggregate Visible
Crack Multiple	Continuous	2 - 3	Structural	0	4-7	3	0	0	2	Crack Multiple
Crack Multiple	Point	2.5	Structural	0	9-10	3	0	0	2	Crack Multiple



Setup ID	2023-ST-7		Inspection	date	Aug 10, 2	2023	De	efects I	Rated	≥3	0	Peak St	ructural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	8.3
Structure ID	D-6	Peak	Environme	ental Rating	1		Pea	1k C/08	&M Ra	ting	0	Rim to	o Bottom (ft)	10.1	Total ER Defects	3
Descript	tion	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Rema	arks			Photos	
Surface Da Aggregate \	amage Visible	Continuous	0 - 9.5	Structural	0	12- 12	2	0	0	1	Surface D Aggregate	amage e Visible			<image/>	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Surface Damage Roughness Increased	Continuous	1 - 2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Crack Multiple	Point	2.5	Structural	0	6-9	3	0	0	1	Crack Multiple	



TRC

Setup ID	2023-ST-8		Inspection	date	Aug 11, 202	3 Def	fects Ra	ated ≥3		0	Peak Structura	al Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe 10.7
Structure ID	D-23	Peak	Environmer	ntal Rating	2	Peal	(C/0&I	M Rating		0	Rim to Botto	om (ft)	10.7	Total ER Defects 4
Descri	iption	Spatial Type	Distance (ft)	Туре	Percent C	Clock SR	O&M	C ER		Re	emarks			Photos
Miscellaneo Photog	ous General graph	Point	0	Miscellaneou	us 0 au	0	0	0 0	N	View Do	wn Structure			
Miscellaneo Photog	ous General graph	Point	0	Miscellaneou	us O su	0	0	0 0	S	Side Viev	w of Structure			
Surface Damag	ge Roughness ased	Point	1	Structural	0	12- 12 1	0	0 1	R	Surfac Roughne	ce Damage ess Increased			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Crack Longitudinal	Point	1.5	Structural	0	9	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	2	Structural	0	5-7	3	0	0	2	Crack Multiple	
Surface Damage Roughness Increased	Point	4	Structural	0	8	1	0	0	1	Surface Damage Roughness Increased	
Deposits Settled Fine	Point	10	O&M	10	10	0	0	0	0	Deposits Settled Fine	

















Setup ID 2023-ST-9			Inspection of	late	Aug 14, 2023	Defe	cts Rate	ed ≥3		0		Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	8.3
Structure ID	23-1	Pea	k Environmen	tal Rating	1	Peak C	C/O&M	Rating	J	0		Rim to Bottom (ft)	8.6	Total ER Defects	4
De	escription		Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellaneous	s General Photog	graph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struc	ture		
Miscellaneous	s General Photog	graph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Strue	cture		


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks
Surface Damage Aggregate Visible	Point	0.5	Structural	0	9-10	2	0	0	1	Surface Damage Aggregate Visible
Surface Damage Roughness Increased	Point	1	Structural	0	5-9	1	0	0	1	Surface Damage Roughness Increased
Crack Longitudinal	Point	3.8	Constructional	0	6	2	0	0	1	Crack Longitudinal



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks
Crack Longitudinal	Point	3.8	Structural	0	7	2	0	0	1	Crack Longitudinal



>TRC

Setup ID	2023-ST-10		Inspection	date	Aug 14, 2023	Defe	ects Rat	ed ≥3		0 Peak Structural Rating 4			4	Rim to Invert (ft) - Lowest Outgoing Pipe	7
Structure ID	23-2	Peak	< Environme	ntal Rating	2	Peak	C/0&M	Ratin	g	0		Rim to Bottom (ft)	8.6	Total ER Defects	4
Desc	cription	S	patial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellaneous G	General Photogra	aph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struct	ure		
Miscellaneous G	General Photogra	aph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Struct	ture		
Surface Damage	e Aggregate Miss	sing	Point	4	Structural	0	8	4	0	0	2	Surface Damage Aggrega	te Missing		
Crack Lo	ongitudinal		Point	6	Structural	0	9	2	0	0	1	Crack Longitudin	al		













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	6	Structural	0	1-4	2	0	0	1	Surface Damage Aggregate Visible	
Crack Longitudinal	Point	7	Structural	0	12	2	0	0	1	Crack Longitudinal	



>TRC

Setup ID	2023-ST-11	Inspection	n date	Aug 14, 2023	Defe	ects Rat	ed ≥3		0		Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	7.8
Structure ID	23-3	Peak Environme	ental Rating	1	Peak	C/O&M	Rating		0		Rim to Bottom (ft)	8.1	Total ER Defects	4
De	scription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR (D&M	С	ER	Remarks		Photos	
Miscellaneous	General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struct	ure		
Miscellaneous	General Photograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Struc	ture		
Surface Damag	ge Aggregate Visible	Continuous	1.5 - 4	Structural	0	2-6	2	0	0	1	Surface Damage Aggrega	ate Visible		
Surface Damag	ge Aggregate Visible	Point	4	Structural	0	11	2	0	0	1	Surface Damage Aggrega	ate Visible		













Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	5	Structural	0	6	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Visible	Point	6.5	Structural	0	7	2	0	0	1	Surface Damage Aggregate Visible	





Setup ID	2023-ST-12	Inspec	ction date	Aug 14,	, 2023	Defe	ects Ra	ated ≥3	3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe 7.9
Structure ID	23-4	Peak Enviro	nmental Ra	ting 1		Peak	C/0&I	M Ratir	ng	0	Rim to Bottom (ft)	8.6	Total ER Defects 5
Desc	cription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks		Photos
Miscellane Photo	eous General ograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure		
Miscellane Photo	eous General ograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure		<image/>



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Point	0.2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Aggregate Visible	Point	5.5	Structural	0	9	2	0	0	1	Surface Damage Aggregate Visible	
Crack Multiple	Point	6	Structural	0	11- 12	3	0	0	1	Crack Multiple	
Crack Multiple	Point	7	Structural	0	9-10	3	0	0	1	Crack Multiple	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Crack Circumferential	Point	7.3	Structural	0	9-10	2	0	0	1	Crack Circumferential	



Setup ID	2023-ST-13	Insp	ection date		Aug 23,	, 2023	Defects	Rated	≥3		0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	9.5
Structure ID	5-C	Peak Envi	ronmental Ra	ating	2		Peak C/(0&M Ra	nting		0	Rim to Bottom (ft)	9.8	Total ER Defects	3
Descr	ription	Spatial Type	Distance (ft)	Тур	pe F	Percent	Clock SR	0&N	I C	ER		Remarks		Photos	
Miscellaneo Photo	ous General ograph	Point	0	Miscella	aneous	0	0	0	0	0		/iew Down Structure		<image/>	





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Continuous	0 - 9.8	Structural	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible	
Crack Longitudinal	Point	4.5	Structural	0	12	2	0	0	1	Crack Multiple	









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Crack Longitudinal	Point	4.5	Structural	0	1	2	0	0	1	Crack Longitudinal	



Setup ID2023-ST-14Structure IDD-21		Ins	spection da	te	Aug 16,	2023	Defe	cts Rat	ed ≥3		0	Peak Structural	Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7.1
Structure ID	D-21	Peak En	vironmenta	l Rating	2		Peak C	C/O&M	Rating	g	0	Rim to Bottor	m (ft)	7.6	Total ER Defects	4
Descri	ription	Spatial Type	Distance (ft)	Туре	Perc	ent Cloc	s SR	O&M	С	ER		Remarks			Photos	
Miscellanec Photo	ous General ograph	Point	0	Miscellane	ous 0		0	0	0	0	Viev	v Down Structure			<image/>	
Miscellanec Photo	ous General ograph	Point	0	Miscellane	ous 0		0	0	0	0	Side	View of Structure				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Point	0.3	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Crack Longitudinal	Point	1.3	Structural	0	4	2	0	0	1	Crack Longitudinal	









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Observation	Continuous	4 - 6	Structural	0	12-5	0	0	0	0	Concrete Shelf	
Crack Longitudinal	Point	4.7	Structural	0	3	2	0	0	1	Crack Longitudinal	
Surface Damage Aggregate Missing	Point	7.6	Structural	0	12- 12	4	0	0	2	Surface Damage Aggregate Missing	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Deposits Settled Compacted	Point	7.6	O&M	10	12- 12	0	0	0	0	Deposits Settled Compacted	



Setup ID2023-ST-15Structure ID5-B		Inspec	tion date	Aug 23,	2023	Defe	cts Rat	t ed ≥3		0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe 8.9
Structure ID	5-B	Peak Enviro	nmental Rati	ing 2		Peak (C/O&M	Ratin	g	0	Rim to Bottom (ft)	10.8	Total ER Defects 6
Desc	cription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos
Miscelland Phot	eous General tograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure		EL EL EL EL EL EL EL EL EL EL
Miscellan Phot	eous General tograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure		<image/>



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Continuous	1 - 2.6	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Visible	Continuous	4.5 - 7	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Missing	Continuous	4.9 - 6.5	Structural	0	6	4	0	0	2	Surface Damage Aggregate Missing	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Missing	Point	5.7	Structural	0	9	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Aggregate Missing	Point	6.3	Structural	0	11	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Roughness Increased	Continuous	8 - 10.8	Structural	0	12- 12	1	0	0	2	Surface Damage Roughness Increased	





Setup ID2023-ST-16Structure ID5-D		Insp	pection date		Aug 27, 202	23	Defects	Rated ≥	:3		0 Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	7
Structure ID	5-D	Peak Envi	ironmental R	ating	2		Peak C/O	&M Rat	ing		0 Rim to Bottom (ft)	9.2	Total ER Defects	2
Description	1	Spatial Type	Distance (ft)	Тур	e Perc	ent	Clock SR	O&M	С	ER	Remarks		Photos	
Miscellaneous Gel Photograph	eneral า	Point	0	Miscella	neous 0		0	0	0	0	View Down Structure			
Miscellaneous Ge Photograph	eneral า	Point	0	Miscella	neous 0		0	0	0	0	Side View of Structure			
Surface Damage Age Visible	ggregate	Point	1	Struct	ural 0		12- 12 2	0	0	1	Surface Damage Aggregate Visible			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Continuous	2.5 - 6	Structural	0	12-6	2	0	0	2	Surface Damage Aggregate Visible	



>TRC

Setup ID 2023-ST-	17	Inspection	n date	Aug 27, 2	2023	De	fects F	Rated	≥3	0	Peak Str	uctural Rating	5	Rim to Invert (ft) - Lowest Outgoing Pipe	8.4
Structure ID 5-E	Peal	c Environme	ental Rating	2		Pea	k C/08	M Ra	ting	0	Rim to	Bottom (ft)	10.2	Total ER Defects	4
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Rema	arks			Photos	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down	Structure			<image/>	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	Side View o	f Structure				





Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Continuous	1.3 - 3.8	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Aggregate Visible	Continuous	3.8 - 6.5	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Missing	Point	4.8	Structural	0	1	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Reinforcement Visible	Point	5	Structural	0	6	5	0	0	2	Surface Damage Reinforcement Visible	



Setup ID	2023-ST	-18	Inspecti	on date	Aug 2	3, 2023		Defect	s Rate	ed ≥3	0	Peak	Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	9.3
Structure ID	5-F	Pe	ak Environi	mental Rating		2	Р	eak C/	0&M	Rating	0	Rim	n to Bottom (ft)	11.6	Total ER Defects	2
Descriptio	on	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks				Photos	
Miscellaneous Photograp	General ph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struct	ture			<image/>	
Miscellaneous Photograp	General ph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure				Lerat Lerat neter=21 Lerat	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	0.7	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Visible	Continuous	2.3 - 8.5	Structural	0	12	2	0	0	2	Surface Damage Aggregate Visible	







Setup ID 202	3-ST-19	Inspe	ection date	Aug 24, 20	23	Defe	ects R	ated ≥	3 0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	8.2
Structure ID	5-M	Peak Envir	onmental Rating	2		Peak	C/0&	M Rati	ing O	Rim to Bottom (ft)	8.2	Total ER Defects	2
Description	Spatial Type	Distance (ft)	Туре	Percent Clock	SR	O&M	С	ER	Remarks			Photos	
Miscellaneous General Photograph	Point	0	Miscellaneous	0	0	0	0	0	View Down Structure				
Miscellaneous General Photograph	Point	0	Miscellaneous	0	0	0	0	0	Side View of Structure			Lateral: damelar=16" diameter=16" j/16	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Continuous	1 - 7.5	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Roughness Increased	Continuous	4.8 - 6.8	Structural	0	2	1	0	0	0	Surface Damage Roughness Increased	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	7.6	Structural	0	12- 12	2	0	0	2	Surface Damage Aggregate Visible	







Setup ID	2023-ST-20		Inspection c	ate	Aug 27, 2023	Defe	cts Rate	ed ≥3		0	0 Peak Structural Rating 4			Rim to Invert (ft) - Lowest Outgoing Pipe	7.9
Structure ID	5-0	Pea	k Environmen [.]	al Rating	1	Peak C	C/O&M	Rating	J	0		Rim to Bottom (ft)	9.8	Total ER Defects	4
De	escription		Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellaneous	General Photog	graph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struc	ture		
Miscellaneous	General Photog	graph	Point	0	Miscellaneous	0		0	0	0	0 Side View of Structure		cture	Times Ti	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks
Surface Damage Aggregate Visible	Point	0.5	Structural	0	12- 12	2	0	0	1	Surface Damage Aggregate Visible
Surface Damage Roughness Increased	Continuous	0.6 - 6.2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased
Surface Damage Aggregate Missing	Point	2.6	Structural	0	6	4	0	0	1	Surface Damage Aggregate Missing
Crack Spiral	Point	5.5	Structural	0	2-4	2	0	0	1	Crack Spiral



Setup ID 2023-ST-21		Inspection	n date	Aug 27, 2023	Defec	cts Rate	d ≥3	0	Peak Struct	ural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	6.9
Structure ID 5-P	Peak	(Environme	ental Rating	2	Peak C	/0&M F	Rating	0	Rim to Bo	ottom (ft)	7.6	Total ER Defects	4
Description	Spatial Type	Distance (ft)	Туре	Percent Clock	SR O	&M C	ER	Re	marks			Photos	
Miscellaneous General Photograph	Point	0	Miscellaneous	5 0	0	0 0	0	View Do	wn Structure			<image/>	
Miscellaneous General Photograph	Point	0	Miscellaneous	s 0	0	0 0	0	Side Viev	v of Structure			- Lateral - Lateral	
Surface Damage Aggregate Missing	Point	2.8	Structural	0 6-7	4	0 0	1	Surfac Aggreg	e Damage ate Missing				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Aggregate Missing	Point	3	Structural	0	12	4	0	0	1	Surface Damage Aggregate Missing	
Surface Damage Aggregate Missing	Point	4.8	Structural	0	12	4	0	0	2	Surface Damage Aggregate Missing	
Crack Longitudinal	Point	5.2	Structural	0	2	2	0	0	1	Crack Longitudinal	















Setup ID	2023-ST-22		Inspection of	late	e Aug 27, 2023 Defects Rated ≥3 0 Peak Structural Rating 4								
Structure ID	B-02	Pea	k Environmen	tal Rating	2	Peak (C/O&M	Rating	g	0		Rim to Bottom (ft)	10
De	escription		Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous	s General Photo	graph	Point	0	Miscellaneous	0		0	0	0	0	View Down Struc	ture
Miscellaneous	Miscellaneous General Photograph		Point	0	Miscellaneous	0		0	0	0	0	Side View of Struc	cture



Rim to Invert (ft) - Lowest Outgoing Pipe	6.5
Total ER Defects	4
Photos	

	Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks
	Surface Damage Roughness Increased	Point	5.5	Structural	0	6	1	0	0	1	Surface Damage Roughness Increased
	Surface Damage Surface Spalling	Point	6.5	Structural	0	12	2	0	0	1	Surface Damage Surface Spalling
	Surface Damage Surface Spalling	Point	7.2	Structural	0	3	2	0	0	1	Surface Damage Surface Spalling
Ра	Surface Damage Aggregate Missing ge 2 of 3 $C = Construction: O&M = 0$	Point Operation and I	9 Maintenance: E	Structural R = Environment	0 al Rating:	11 SR = St	4	0 al Ratin	0	2	Surface Damage Aggregate Missing



Page 3 of 3 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating



Setup ID 2023-ST-23	In	spection da	ate Au	ıg 25, 202	23	Defects F	Rated	l≥3		0	Peak Structural Ratin	ting	5	Rim to Invert (ft) - Lowest Outgoing Pipe	6.9
Structure ID B-1	Peak Er	vironmenta	al Rating	2	Р	eak C/O8	&M Ra	ating		0	Rim to Bottom (ft)	τt)	8.8	Total ER Defects	5
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR O	δM	С	ER		Remarks			Photos	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0 (D	0	0	View	v Down Structure				
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0 (0	0	0	Side	View of Structure				
Surface Damage Roughness Increased	Continuous	0.6 - 2.5	Structural	0	12- 12	1 (0	0	1	Su Roug	Irface Damage ghness Increased				


Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Reinforcement Visible	Point	2.6	Structural	0	12- 12	5	0	0	2	Surface Damage Reinforcement Visible	
Miscellaneous General Photograph	Point	3.6	Miscellaneous	0	12	0	0	0	0	Cut Out Wall	
Crack Multiple	Point	3.8	Structural	0	3-4	3	0	0	2	Crack Multiple	









Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Crack Multiple	Point	5	Structural	0	5-10	3	0	0	2	Crack Multiple	
Surface Damage Aggregate Missing	Point	7.5	Structural	0	3	4	0	0	1	Surface Damage Aggregate Missing	
Deposits Settled Gravel	Point	8.7	O&M	0	12- 12	0	0	0	0	Deposits Settled Gravel	















Setup ID	2023-ST-24	Inspec	ction date	Aug 25,	2023	Defe	ects Ra	ted ≥3		0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	12.9
Structure ID	B-3	Peak Enviror	nmental Rat	ing 1		Peak (C/O&N	/I Ratin	g	0	Rim to Bottom (ft)	14.9	Total ER Defects	6
Des	scription	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks		Photos	
Miscellan Phot	eous General tograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure		Lateral: ciameter=8"1/8 Ciameter=8" Ciameter=8" Ciameter=10"1/4 Ciameter=4":teral ciameter=10"1/4	
Miscellan Phot	eous General tograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure		<image/>	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Surface Damage Roughness Increased	Continuous	0.5 - 3.7	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Aggregate Missing	Point	4.8	Structural	0	12	4	0	0	1	Surface Damage Aggregate Missing	
Surface Damage Aggregate Missing	Point	4.9	Structural	0	6	4	0	0	1	Surface Damage Aggregate Missing	San and a second
Crack Longitudinal	Point	10.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Surface Damage Aggregate Visible	Point	10.5	Structural	0	12-3	2	0	0	1	Surface Damage Aggregate Visible	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Surface Damage Aggregate Visible	Point	13	Structural	0	3	2	0	0	1	Surface Damage Aggregate Visible	



>TRC

Process Structure Inspection Summary Report

Setup ID 2023	-ST-25	Inspec	tion date	Aug	27, 20	23	Defe	ects Ra	ated ≥	3 0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	4.4
Structure ID D	-19	Peak Enviror	nmental Rating		2		Peak	C/0&I	M Rati	ing O	Rim to Bottom (ft)	8.6	Total ER Defects	3
Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks			Photos	
Surface Damage Roughness Increased	Continuou	s 0-8.2	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased				



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure	
Surface Damage Aggregate Missing	Continuous	2.5 - 4.1	Structural	0	6	4	0	0	2	Surface Damage Aggregate Missing	
Surface Damage Roughness Increased	Point	2.9	Structural	0	11	1	0	0	1	Surface Damage Roughness Increased	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Photograph	Point	5	Miscellaneous	0	12	0	0	0	0	Broken Pipe	





>TRC

Process Structure Inspection Summary Report

Setup ID	2023-ST-2	6	Inspection	n date	Aug 27, 2	2023	De	efects	Rated ≥	3	0	Peak Str	uctural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	12
Structure ID	D-20C	Peak	Environme	ental Rating	1		Pea	1k C/08	&M Rati	ing	0	Rim to	Bottom (ft)	13	Total ER Defects	2
Descrip	otion	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Rema	ırks			Photos	
Surface Da Roughness I	amage ncreased	Continuous	0 - 10	Structural	0	12- 12	1	0	0	1	Surface D Roughness	amage Increased				
Miscellaneou Photogr	ıs General raph	Point	0	Miscellaneous	0		0	0	0	0	View Down	Structure				















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	Side View of Structure	
Crack Longitudinal	Continuous	8.7 - 13	Structural	0	12	2	0	0	1	Crack Longitudinal	





Setup ID	2023-ST-27	Ins	spection da	te	Aug 28, 202	23 Defe	cts Rate	ed ≥3		0	Peak Structural	l Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	11.4
Structure ID	D-22	Peak En	vironmenta	l Rating	2	Peak C	C/O&M F	Rating	J	0	Rim to Bottor	m (ft)	16.3	Total ER Defects	3
Descri	ription	Spatial Type	Distance (ft)	Туре	Percent	Clock SR	O&M	С	ER		Remarks			Photos	
Miscellanec	ous General ograph	Point	0	Miscellane	ous 0	0	0	0	0	View	Down Structure			<image/>	



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks	
Surface Damage Roughness Increased	Continuous	0 - 16.3	Structural	0	12- 12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Aggregate Missing	Continuous	8.6 - 13	Structural	0	6	4	0	0	2	Surface Damage Aggregate Missing	















Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	O&M	С	ER	Remarks	
Crack Circumferential	Point	13	Structural	0	12-2	2	0	0	2	Crack Circumferential	



>TRC

Process Structure Inspection Summary Report

Setup ID	2023-ST-28	Ins	pection dat	te	Jan 16, 2024	. [efects R	ated ≥	≥3	0 Peak Structu	ral Rating 5		Rim to Invert (ft) - Lowest Outgoing Pipe	NM		
Structure ID	D-12	Peak Env	ironmental	Rating	2	Pe	ak C/O&	M Rat	ting	0 Rim to Bot	tom (ft)	NM	Total ER Defects	3		
Descr	ription	Spatial Type	Distance (ft)	Туре	Percent Clo	ck SR	O&M	С	ER	Remarks		Photos				
Surface Reinforcem	Damage nent Visible	Continuous	0 - 2	Structural	0 12	5	0	0	2	Surface Damage Reinforcement Visible			<image/>			
Surface Dama Visi	age Aggregate ible	Continuous	2 - 7.5	Structural	0 12 12	2	0	0	2	Surface Damage Aggregate Visible		V16/2024	10:02:20 AM CU313984 MF4 2.0 ft. Image: Augregate Visible 10:03:30 AM CU010984 MF4 Image: Augregate Visible CU010			



Description	Spatial Type	Distance (ft)	Туре	Percent	Clock	SR	0&M	С	ER	Remarks
Surface Damage Aggregate Visible	Point	8	Structural	0	12-2	2	0	0	2	Surface Damage Aggregate Visible



APPENDIX D -SAMPLING AND ANALYSIS PLAN SWMU 1 – OILY WATER SEWER AREA OF CONCERN - 2



SAMPLING AND ANALYSIS PLAN SWMU 1 – OILY WATER SEWER AREA OF CONCERN - 2 HF SINCLAIR PUGET SOUND REFINING LLC

JUNE 17, 2024

SUBMITTED BY:

SUBMITTED TO:



ALL4 LLC 228 East Champion Street Bellingham, WA 98225



HF Sinclair PSR LLC 8505 South Texas Road Anacortes, WA 98221



TABLE OF CONTENTS

Section Name

Page Number

1.	INTRO	ODUCTI	DDUCTION1-1								
2.	SAM	PLING A	ND ANALYSIS PLAN	2-1							
	2.1	PROJEC	T SCHEDULE	2-1							
	2.2	SOIL BO	DRING AND SOIL SAMPLING PROCEDURES	2-1							
		2.2.1	Proposed Soil Boring Locations	2-1							
		2.2.2	Preliminary Activities	2-1							
		2.2.3	Soil Borings and Soil Sampling Procedures	2-2							
		2.2.4	Field Screening Procedures	2-2							
		2.2.5	Soil Sample Collection	2-2							
		2.2.6	Soil Analysis	2-3							
		2.2.7	Decontamination Procedures	2-4							
	2.3	WASTE	MATERIALS HANDLING PROCEDURES	2-5							
	2.4	QUALIT	Y ASSURANCE/QUALITY CONTROL	2-5							
	2.5	HEALTH	HAND SAFETY	2-5							
	2.6	REPOR	TING	2-5							
3.	REFE	RENCES		3-1							

Appendix A - Figures



1. INTRODUCTION

Agreed Order No DE 16298 (AO) dated November 1, 2021, was entered into by the Washington State Department of Ecology (Ecology) and Equilon Enterprises LLC d/b/a Shell Oil Products concerning the Puget Sound Refinery, now known as HF Sinclair Puget Sound Refining LLC (HFSPSR). The HFSPSR is situated two miles east of the city of Anacortes on the southern portion of March Point. The site address is 8505 South Texas Road, Anacortes, Washington 98221. (Figure A-1).

The objective of the AO is to investigate the integrity of the HFSPSR oily water sewer (OWS) system, also referred to as Solid Waste Management Unit 1 (SWMU-1). The OWS was constructed in accordance with the specifications in place in 1953 and consists of underground piping, drain hubs, manholes, hatches, and other access points. The OWS conveys process wastewater to the facility's effluent plant.

An Investigation and Response Plan (IRP) dated June 15, 2022, was prepared in accordance with the requirements in the AO. The IRP provides a framework to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater. The IRP outlined four Phases of major OWS trunk line inspections to be completed by December 31, 2031.

Site characterization will begin in 2024 at Area of Concern-2 (AOC-2) located on B-Street at manhole B-3. The AOC-2 location is shown on Figure A-2.



2. SAMPLING AND ANALYSIS PLAN

The soil conditions at AOC-2 will be investigated per the IRP. Soil samples will be collected from adjacent to the OWS at AOC-2. This sampling and analysis plan (SAP) describes sample collection, handling, and analysis procedures per Table 6.4 of the Washington State Department of Ecology's Guidance for Remediation of Petroleum Sites (Guidance), referenced in Section 3.3 of the IRP.

2.1 **PROJECT SCHEDULE**

The soil sampling will occur in the summer of 2024.

2.2 SOIL BORING AND SOIL SAMPLING PROCEDURES

The following sections describe the soil boring and soil sampling procedures to be applied in the field.

2.2.1 Proposed Soil Boring Locations

Two boreholes will be drilled, and four soil samples will be collected in the vicinity of AOC-2. The soil boring locations are shown on Figure A-2.

2.2.2 Preliminary Activities

Prior to the onset of field activities, all required permit(s) will be obtained from HFSPSR operations. The borehole locations will be marked with white paint and HFSPSR will provide an underground utility map for locations where work will be conducted at least 48 hours prior to the start of work. The boring locations will be cleared to 5 ft. by hydro-excavation prior to initiating drilling.



2.2.3 Soil Borings and Soil Sampling Procedures

A licensed driller will drill the borings and collect soil samples using a Hollow Stem Auger drill rig. The soil will be described according to the Unified Soil Classification System and the description will be recorded on the boring log. The specific soil sample collection depths will be documented on the boring log.

The oily water sewer pipe is approximately 12.6 feet ft below ground surface (bgs) at manhole B-3 (HFSPSR Drawing Number 35-AS-31). The soil borings will be drilled to a minimum depth of 15 ft bgs. The drill rig equipment will be decontaminated prior to drilling and after each soil boring is completed.

2.2.4 Field Screening Procedures

Soil from the sampling interval will be placed in a plastic re-sealable bag, and the tip of a photo-ionization detector (PID) will be inserted into the plastic bag to measure organic vapor concentrations in the headspace. The PID measurement will be recorded on the boring log and in the field notebook. The organic vapor headspace analyses will be conducted using a MiniRAE Model 3000 PID equipped with a 10.6 eV lamp (or equivalent). The PID will be calibrated on a daily basis in accordance with manufacturer's specifications using an isobutylene standard. The calibration gas and concentration will be recorded in the field notebook.

Sheen tests will be conducted using a portion of the soil core and distilled water. Sheen tests will be recorded as either NS – no sheen, SS – slight sheen, MS – moderate sheen, or HS – heavy sheen.

2.2.5 Soil Sample Collection

Soil boring depth intervals which yield field screening indications of petroleum impacts will be collected for laboratory analysis. If field screening does not indicate the presence of petroleum impacts, soil samples will be collected one foot below the depth of the sewer pipe (approximately 14 feet bgs) and at the bottom of the soil boring (15 ft bgs).



If field screening indicates petroleum impacts at 15 feet bgs the soil boring will be advanced at 5-foot intervals. The goal of the soil sampling exercise is to determine the total depth of petroleum impacts (if any are encountered) by collecting a clean soil sample at the bottom of the soil boring.

Soil samples will be collected as discrete samples, preserved in sample containers provided by the lab, and stored on ice in a cooler immediately after collection. If required samples will be stored overnight in a refrigerator, at a secure location. Samples will be transferred to the laboratory following strict chain-of-custody procedures.

2.2.6 Soil Sample Analysis

Soil analyses for contaminants of concern will be performed by ALS Environmental in Everett, Washington. ALS Environmental is a Washington State Department of Ecology accredited laboratory. Soil samples will be submitted to the lab under chain-of-custody and analyzed for the following contaminants of concern per the IRP:

- <u>NWTPH-EPH:</u> Extractable Petroleum Hydrocarbons
- <u>NWTPH-VPH</u>: Volatile Petroleum Hydrocarbons
- <u>EPA Method 8260:</u> Benzene, toluene, ethylbenzene, and total xylenes (BTEX)
- <u>EPA Method 8270 SIM</u>: Polycyclic Aromatic Hydrocarbons (PAHs)
- <u>EPA Method 6020 & 7471</u>: Arsenic, Cadmium, Chromium III, Chromium VI, Lead, Nickel, Mercury, and Zinc

2.2.7 Groundwater Monitoring Well Installation

If significant indications of soil contamination are encountered through field screening during drilling operations, a groundwater monitoring well will be installed in the most impacted soil boring. If contamination is encountered in both soil borings, east and west of AOC-2, the monitoring well will be installed in the west boring, down-gradient of the oily sewer piping. The monitoring well will be installed with a well screen that starts above the sewer pipe (10 feet bgs) and extends to a depth below the sewer pipe where contamination is no longer observed. The final monitoring well installation parameters will be based on information gathered in the field.



The monitoring well will be constructed with machine-slotted, 2-inch diameter PVC pipe. Monitoring well construction will be in accordance with Washington State Resource Protection Well standards according to WAC 173-160. The groundwater monitoring well construction will be documented in a well construction diagram. The information recorded will consist of the well depth, the length and depth of the well screen, the type of materials used in well construction, the Ecology well tag number, and the name of the licensed driller who installed the well. The well will be installed with a flush mount well monument so as not to impede vehicle traffic patterns at the site.

If soil contamination is not observed during the subsurface investigation, then no groundwater monitoring well will be installed.

2.2.8 Groundwater Sample Analysis

If a groundwater well is installed, the monitoring well will be developed, and a groundwater sample will be collected. Groundwater samples will be analyzed for the following contaminants of concern per the IRP:

- <u>NWTPH-EPH:</u> Extractable Petroleum Hydrocarbons
- <u>NWTPH-VPH:</u> Volatile Petroleum Hydrocarbons
- <u>EPA Method 8260:</u> Benzene, toluene, ethylbenzene, and total xylenes (BTEX)
- <u>EPA Method 8270 SIM</u>: Polycyclic Aromatic Hydrocarbons (PAHs)
- <u>EPA Method 6020 & 7471</u>: Arsenic, Cadmium, Chromium III, Chromium VI, Lead, Nickel, Mercury, and Zinc

Groundwater analyses for contaminants of concern will be performed by ALS Environmental in Everett, Washington. ALS Environmental is a Washington State Department of Ecology accredited laboratory.

2.2.9 Decontamination Procedures

All sampling equipment will be decontaminated prior to and between each sampling event to reduce the potential for cross-contamination. Decontamination will be conducted using Alconox detergent followed by a distilled water rinse.



2.3 WASTE MATERIALS HANDLING PROCEDURES

Soil cuttings generated from hydro-excavation and drilling will be stored on-site in a drum or roll-off box. The soil will be removed from the site and transported under manifest to a client- and regulatoryapproved facility for recycling or disposal.

2.4 QUALITY ASSURANCE/QUALITY CONTROL

All soil characterization, sampling, and screening will be conducted by competent and trained personnel. Samples will be collected using decontaminated stainless-steel sampling implements and placed into laboratory-provided sample containers. The PID will be calibrated daily in accordance with manufacturer's specifications using a hexane or isobutylene standard.

Duplicate soil and/or groundwater samples will be collected and analyzed during this investigation. Each sample will have an adhesive plastic or waterproof label affixed to the container. Sample labels will include the project name, unique sample identification, and the sample date and time. Each cooler transported to the lab will include a trip blank and temperature blank provided by the lab. Samples will be stored on ice in a cooler and transported to the lab following proper shipping and chain-of-custody protocols. The analytical data will be reviewed to ensure it meets the laboratory-provided QA/QC such as surrogate recoveries for each sample, method blank results, duplicate analyses, matrix spike or method blank analyses.

2.5 HEALTH AND SAFETY

ALL4 personnel will adhere to both the HFSPSR safe-work practices as well as company safety policies. All work will be properly permitted, and workers will be trained on hazard identification and mitigation.

2.6 REPORTING

Following the completion of the site investigation, a report will be prepared documenting the investigation results. The report will include a summary of all work performed at the site including a soil sample location map, soil borelogs, soil data summary tables, the groundwater monitoring well



construction diagram, (if a well is installed), groundwater data summary tables (if a groundwater sample is collected), and a cross-section. The information will be included in the 2024 annual progress report due April 1, 2025.

If a release to soil is confirmed at a concentration that exceeds the MTCA Method C levels (developed in accordance with WAC 173-340-745) or a release to groundwater that exceeds the MTCA Method A cleanup levels (Table 740-1 in WAC 173-340-720) the release will be reported to Ecology within 90 days of discovery.

Soil and/or groundwater sample results will be uploaded to the State Environmental Information Management System (EIM) within 60 days after receiving the validated data.



3. **REFERENCES**

- HollyFrontier Puget Sound Refinery. June 15, 2022. Investigation and Response Plan SWMU 1 Oily Water Sewer.
- Washington State Department of Ecology (Ecology). November 1, 2021. Agreed Order for Interim Action Oily Water Sewer (SWMU-1). No. DE 16298.
- Washington State Department of Ecology (Ecology). June 2016. Guidance for Remediation of Petroleum Contaminated Sites. Publication No. 10-09-057.
- Washington State Department of Ecology (Ecology). 2024. Model Toxics Control Act Cleanup Regulation Chapter 173-340 WAC. Publication No. 94-06.
- Washington State Department of Ecology (Ecology). December 2008. Minimum Standards for Construction and Maintenance of Wells WAC 173-160-400.

APPENDIX A -	
FIGURES	





APPENDIX E -HFSPSR AOC-2 SOIL BORING LOGS

Hollow Stem Boring Log

Project: OWS AOC-2 (B-Street) Client: HFSPSR Boring Number: B-1/W-130 Location: 5 ft east of manhole B-3 Date Completed: 12/2/2024 Sheet: 1 of 1 Drilled by: Brian S. - Cascade Logged by: M.Roberts and O.Costa - ALL4 First Encountered Water: 12 ft Total Depth: 20 ft

Depth	Description	Blow	Scre	ening Re	sults	Sample
		Count	Depth	PID	Sheen	
			(ft)	(ppm)		
	(cleared top 8 ft with vac truck/hand auger)	Dames and				
Surface	~8-inches of asphalt	Moore Split				
	4-inches pit run gravel	Spoon Sampler				
1.00 to 0.50 ft	Crough situ cand brown firm maint	_	11	0.1	cc*	
1.00 10 9.50 11	Gravery, sitty, sand, brown, inni, moist.	_	1 2'	0.1	55°	
		_	2 2'	0.1	55 55*	
			4'	0.1	55 55*	
		3-3-2	5'	0.1	SS*	
			6'	0.1	SS*	
10.00 to 13.50 ft	Silty coarse sand with gravel, brown, soft, wet.	10' to 11.5'	7'	0.2	SS*	
		2-1-1	8'	0.1	SS*	
		_				
			9'	0.1	SS	
13.50 to 16.00 ft	Silty sand with clay, gray, firm, moist.	12.5' to 14'				
		2-2-3	10'	0.1	NS	
46.00 + 46.50 ()	Charles the second second from sector		11'	0.1	NS	
16.00 to 16.50 ft	Silty clay with gravel, gray, firm, moist.	<u>15' to 16.5'</u>	121	0.2	66	
		5-7-10	13	0.2	55	1/1 ft
17 50 to 18 50 ft	Silty clay with gravel gray firm wet		14	0.0	1015	1410
17.50 10 10.50 11		7-10-11	15'	0.2	MS	
			16'	0.1	SS	16 ft
		_				
18.50 to 20.50 ft	Silty clay with gravel, gray, firm, moist.	<u>19' to 20.5'</u>	18'	0.2	SS	
		4-9-10	19'	0.2	SS	
			20'	0.2	NS	20 ft
		_				
		_				
		_				
		_				
		_				
	Soil Sample Collection Depth	_				
* indicates a weat	hered sheen	_				
	ALL4 LLC	•	-	-	-	<u> </u>
	_					
	www.all4inc.com					

NS = No Sheen; VSS = Very Slight Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

Hollow Stem Boring Log

Project: OWS AOC-2 (B-Street) Client: HFSPSR Boring Number: B-2/W-131 Location: 5 ft west of manhole B-3 Date Completed: 12/3/2024 Sheet: 1 of 1 Drilled by: Brian S. - Cascade Logged by: M.Roberts and O.Costa - ALL4 First Encountered Water: 11 ft Total Depth: 20 ft

Depth	Description	Blow	Scree	Sample		
		Count	Depth	PID	Sheen	
			(ft)	(ppm)		
	<u>(cleared top 8 ft with vac truck/hand auger)</u>	Dames and				
Surface	~8-inches of asphalt	Moore Split				
	4-inches pit run gravel	spoon sumpler				
1.00 to 2.00 ft	Gravely, silty, brown, hard, moist.		1'	0.1	SS*	
			2'	0.1	SS*	
2.00 to 8.50 ft	Silty clay with gravel, brown, firm, moist.		3'	0.1	SS*	
			4'	0.1	NS	
			5'	0.1	SS*	
			6 [.]	0.1	SS*	
9 E0 to 0 E0	Cilturand with clay brown with grange mottling firm	0' to 0 5'	/ 0'	0.2	55°	
8.50 10 9.50	moist	2-3-4	0	0.1	33	
	moist.	2-J-4	9'	0.1	SS	
10.00 + 11.00 (eth and the state of the state of the state		4.01		CC *	
10.00 to 11.00 ft	Silty sand with minor gravel, brown, soft, moist.	<u>10 to 11.5</u>	10	0.0	55* 55*	
		2-2-3	11	0.0	33	
11.00 to 15.00 ft	Silty sand with minor gravel, brown, soft, wet.	<u>11.5' to 13'</u>				
		3-3-8	12'	0.0	NS	
			13'	0.0	NS	
		<u>13' to 14.5'</u>		_		
15.00 to 16.50	Silty sand with minor gravel, brown, soft, moist.	6-6-7	14'	0.1	NS	1 A £+
			15'	0.1	NS	14 11
17.50 to 20.50 ft	Silty sand with clay, brown, firm, moist.	8-8-10	16'	0.1	NS	
						16 ft
		<u>17.5' to 19'</u>	18'	0.1	NS	
		6-6-6	19'	0.1	NS	
		5-7-9	20'	0.1	NS	
	Soil Sample Collection Depth					
* indicates a weat	hered sheen					
	ALL4 LLC					
	www.all4inc.com					

NS = No Sheen; VSS = Very Slight Sheen; SS = Slight Sheen; MS = Moderate Sheen; HS = Heavy Sheen

APPENDIX F -HFSPSR AOC-2 WELL CONSTRUCTION DIAGRAMS

		V	Vell De	esign S	pecifica	itions	
		Elevation	ns (feet):	Тс	op of Casing:		
		Mean Sea Lev	el (MSL)	Grour	d Elevation:		
	8	Coor	dinates:				
	8	Coordinate	System:				
	2	Type of	f Casing:	PVC			
		Casing Di	iameter:	2"			
		Scre	en Slot:	0.01"			
		Scree	en Style:	Machine c	ut		
	01 01	Sai	nd Pack:	10/20 Cold	orado Silica		
	crete	Benton	ite Seal:	Medium chi	р		
	Depths in	Gro	ut Type:	N/A		Weight:	N/A
	Feet Below Ground	Bore Hole Di	iameter:	8.25"			
	Surface	I	Drill Rig:	cm-85			
		Dr	illed by:	Brian - Cas	cade		
		Log	gged by:	Matt Robe	rts/Olana Cost	a - ALL4	
	2	Completio	on Date:	12/3/2024			
	0	Data of Moasu	romont	D-T-W	Water Level	Field pH	Field EC
		12/13/20	124	11.85		7.69	0.2735
		1/22/202	25	11.81		7.25	0.293
_	10						
		Con	nments:				
	20						
	20.3						
			Project:	HFSPSR OV	VS B-Street		
	20.3	1.	ocation	5 feet east	of manhole P	.3	
Not to Scale		-			or mannole B	5	
228 Fa	ALL4 LLC	1			W-130		
Be	ellingham, WA 98225 (360) 752-9571		Ecology W	ell ID:	BPW-874	1	

					V	Vell De	esign S	pecifica	itions	
					Elevation	ns (feet):	Тс	op of Casing:		
					Mean Sea Lev	el (MSL)	Grour	d Elevation:		
					Coor	dinates:				
					Coordinate	System:				
					Type of	f Casing:	PVC			
					Casing Di	ameter:	2"			
			a		Scre	en Slot:	0.01"			
(4 (4) 4)			urfac		Scree	en Style:	Machine C	ut		
			e to S		Sa	nd Pack:	10/20 Colo	orado Silica		
			ncrete		Benton	ite Seal:	Medium Chi	р		
			Col	Depths in Feet Below	Gro	ut Type:	N/A		Weight:	N/A
				Ground	Bore Hole Di	ameter:	8.25"			
				Surface	I	Drill Rig:	cm-85			
	ŀ				Dr	illed by:	Brian - Cas	cade		
					Log	gged by:	Matt Robe	rts/Olana Cost	a - ALL4	
				2	Completio	on Date:	12/3/2024			
	E						D T W			
	į			8	Date of Measu	irement	(ft. bgs)	(ft. MSL)	Field pH	(mS/cm)
					12/13/20)24	11.81		6.88	0.2832
				-	1/22/202	25	15.4		7.37	0.260
	Ξ			10						
				L	Cor	nments:	I			
	\equiv			-						
	Ξ			-						
	=			20						
				20.3						
				20.3		Project:	HFSPSR OV	VS B-Street		
Not to	0 S(cale			L	ocation:	5 feet wes	t of manhole B	-3	
		228	J East C	ALL4 LLC Champion Street #101				W -131		
			Belling (30	gham, WA 98225 60) 752-9571		Ecology W	ell ID:	BPW-87	5	
APPENDIX G -SOIL LABORATORY ANALYTICAL DATA REPORTS



December 20, 2024

Mr. Matt Roberts ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225

Dear Mr. Roberts.

On December 4th, 5 samples were received by our laboratory and assigned our laboratory project number EV24120018. The project was identified as your HFS OWS AOC-2. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott Laboratory Director

Page 1 of 20 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

PHONE 425-356-2600 FAX 425-356-2626

www.alsglobal.com

ALS Group USA, Corp dba ALS Environmental



CLIENT:	ALL4 LLC 228 E. Champion \$ Bellingham, WA 98	LL4 LLC 28 E. Champion St, Suite 101 ellingham, WA 98225		DATE: ALS JOB#: ALS SAMPLE#:	:: 12/20/2024 #: EV24120018 #: EV24120018-01		
CLIENT CONTACT:	Matt Roberts		D	DATE RECEIVED:			
CLIENT PROJECT:	HFS OWS AOC-2		COL	LECTION DATE:	12/2/202	24 1:05:00 F	M
CLIENT SAMPLE ID	B-1-14ft - 120224		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			PEPOPTING				
	METHOD		LIMITS	FACTOR		DATE	BY
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	24	1	MG/KG	12/18/2024	FAI
>C10-C12 Alinhatics	NWEPH	11	12	1	MG/KG	12/18/2024	FAI
>C12-C16 Aliphatics	NWEPH	U U	12	1	MG/KG	12/18/2024	FAI
>C16-C21 Aliphatics	NWEPH	U U	12	1	MG/KG	12/18/2024	FAI
>C21-C34 Aliphatics	NWEPH	38	12	1	MG/KG	12/18/2024	FAI
>C8-C10 Aromatics	NWEPH	11	24	1	MG/KG	12/18/2024	FAI
>C10-C12 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C12-C16 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C16-C21 Aromatics		U	12	1	MG/KG	12/18/2024	FAL
>C21-C31 Aromatics		U	12	1	MG/KG	12/18/2024	FAL
Hovana		U	12	1		12/10/2024	
1 2 Dichloroothana	EPA 8260	U	10	1		12/09/2024	
Ponzono	EPA 9260	U	50	1		12/09/2024	
Toluono	EPA-0200	U	5.0	1		12/09/2024	DLC
	EPA-0200	U	10	1		12/09/2024	DLC
T,2-Dibromoetnane	EPA-8260	U	5.0	1		12/09/2024	
	EPA-0200	U	10	1		12/09/2024	DLC
ni,p-Aylene	EPA-8260	U	20	1		12/09/2024	DLC
0-Xylene	EPA-0200	U	10	1	UG/KG	12/09/2024	DLC
	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	D5
	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	D5
Acenaphtnylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

Page 2 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT:	ALL4 LLC 228 E. Champion S Bellingham, WA 982 Matt Roberts HFS OWS AOC-2	DATE: St, Suite 101 ALS JOB#: 3225 ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:		12/20/2024 EV24120018 EV24120018-01 12/04/2024 12/2/2024 1:05:00 PM			
CLIENT SAMPLE ID	B-1-14ft - 120224		WDOE AC	CCREDITATION:	C601		
		SAMPLE	E DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS / DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
ndeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC
Mercury	EPA-7471	0.032	0.020	1	MG/KG	12/04/2024	RAL
Chromium (III)	Calc-Cr3	38	0.50	1	MG/KG	12/17/2024	CLC
Arsenic	EPA-6020	3.2	0.20	1	MG/KG	12/11/2024	RAL
Cadmium	EPA-6020	0.11	0.10	1	MG/KG	12/11/2024	RAL
Chromium	EPA-6020	38	0.10	1	MG/KG	12/11/2024	RAL
Lead	EPA-6020	3.7	0.10	1	MG/KG	12/11/2024	RAL
Nickel	EPA-6020	52	0.10	1	MG/KG	12/11/2024	RAL
Zinc	EPA-6020	52	0.50	1	MG/KG	12/11/2024	RAL
SURROGATE	METHOD	%REC				ANALYSIS / DATE	ANALYSIS BY
C25	NWEPH	66.9				12/18/2024	FAL
o-Terphenyl	NWEPH	81.3				12/18/2024	FAL
1,2-Dichloroethane-d4	EPA-8260	117				12/09/2024	DLC
Toluene-d8	EPA-8260	93.8				12/09/2024	DLC
Terphenyl-d14	EPA-8270 SIM	111				12/10/2024	DS

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

Page 3 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com RIGHT SOLUTIONS RIGHT PARTNER



		CERTIFIC	ATE OF ANALYSIS						
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2 B-1-16ft - 120224		DA COLI WDOE AC DATA RESULTS	DATE: ALS JOB#: ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:			12/20/2024 EV24120018 EV24120018-02 12/04/2024 12/2/2024 1:00:00 PM C601		
			REPORTING	DILUTION		ANALYSIS ANALYSIS			
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY		
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C6-C8 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aliphatics	NWEPH	U	24	1	MG/KG	12/18/2024	FAL		
>C10-C12 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C12-C16 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C16-C21 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C21-C34 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C8-C10 Aromatics	NWEPH	U	24	1	MG/KG	12/18/2024	FAL		
>C10-C12 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C12-C16 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C16-C21 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
>C21-C34 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL		
Hexane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
Benzene	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC		
Toluene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC		
Ethylbenzene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
m,p-Xylene	EPA-8260	U	20	1	UG/KG	12/09/2024	DLC		
o-Xylene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
- Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		

Page 4 of 20

ALS Group USA, Corp dba ALS Environmental

20

20

PHONE 425-356-2600 FAX 425-356-2626 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

U

U

UG/KG

UG/KG

12/10/2024

12/10/2024

DS

DS

1

1

EPA-8270 SIM

EPA-8270 SIM

Benzo[B]Fluoranthene

Benzo[K]Fluoranthene

www.alsglobal.com



4 LLC E. Champion Si ingham, WA 982 t Roberts S OWS AOC-2 -16ft - 120224	t, Suite 101 225 SAMPLE	D/ COLI WDOE AC	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: _ECTION DATE:	12/20/20 EV24120 EV24120 12/04/20)24 0018 0018-02)24		
t Roberts S OWS AOC-2 -16ft - 120224	SAMPLE	D/ COLI WDOE AC	ATE RECEIVED: _ECTION DATE:	12/04/20)24		
S OWS AOC-2 -16ft - 120224	SAMPLE	COLI WDOE AC	LECTION DATE:	12/2/202			
-16ft - 120224	SAMPLE	WDOE AC		12/2/202	12/2/2024 1:00:00 PM		
	SAMPLE		CREDITATION:	C601	C601		
		E DATA RESULTS					
METHOD		REPORTING LIMITS	DILUTION				
METHOD EPA-8270 SIM	RESULIS	20	1		12/10/2024		
EPA-8270 SIM	U	20	1		12/10/2024	DS	
EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC	
EPA-7471	0.041	0.020	1	MG/KG	12/04/2024	RAL	
Calc-Cr3	44	0.50	1	MG/KG	12/17/2024	CLC	
EPA-6020	6.2	0.20	1	MG/KG	12/11/2024	RAL	
EPA-6020	0.16	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	44	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	5.2	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	52	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	71	0.50	1	MG/KG	12/11/2024	RAL	
METHOD	** DC O				ANALYSIS DATE	ANALYSIS	
METHOD	%REC				40/40/0004	EAL	
NWEPH	70.4				12/18/2024	FAL	
	73.0				12/18/2024	FAL	
	114				12/09/2024		
EPA-8260	90.7				12/09/2024	DLC	
	EPA-6020 EPA-6020 EPA-6020 EPA-6020 EPA-6020 EPA-6020 METHOD NWEPH NWEPH EPA-8260 EPA-8260	EPA-6020 6.2 EPA-6020 0.16 EPA-6020 44 EPA-6020 5.2 EPA-6020 52 EPA-6020 71 METHOD %REC NWEPH 70.4 NWEPH 73.6 EPA-8260 114 EPA-8260 96.7	EPA-6020 6.2 0.20 EPA-6020 0.16 0.10 EPA-6020 44 0.10 EPA-6020 5.2 0.10 EPA-6020 52 0.10 EPA-6020 71 0.50 METHOD %REC NWEPH 70.4 NWEPH 73.6 EPA-8260 114 EPA-8260 96.7	EPA-6020 6.2 0.20 1 EPA-6020 0.16 0.10 1 EPA-6020 44 0.10 1 EPA-6020 5.2 0.10 1 EPA-6020 52 0.10 1 EPA-6020 52 0.10 1 EPA-6020 71 0.50 1 METHOD %REC NWEPH 70.4 NWEPH 73.6 EPA-8260 114 EPA-8260 96.7	EPA-6020 6.2 0.20 1 MG/KG EPA-6020 0.16 0.10 1 MG/KG EPA-6020 44 0.10 1 MG/KG EPA-6020 5.2 0.10 1 MG/KG EPA-6020 5.2 0.10 1 MG/KG EPA-6020 52 0.10 1 MG/KG EPA-6020 71 0.50 1 MG/KG METHOD %REC NWEPH 70.4 NWEPH 73.6 EPA-8260 114 EPA-8260 96.7 14	EPA-6020 6.2 0.20 1 MG/KG 12/11/2024 EPA-6020 0.16 0.10 1 MG/KG 12/11/2024 EPA-6020 44 0.10 1 MG/KG 12/11/2024 EPA-6020 5.2 0.10 1 MG/KG 12/11/2024 EPA-6020 5.2 0.10 1 MG/KG 12/11/2024 EPA-6020 52 0.10 1 MG/KG 12/11/2024 EPA-6020 71 0.50 1 MG/KG 12/11/2024 METHOD %REC DATE DATE NWEPH 70.4 12/18/2024 12/18/2024 12/18/2024 NWEPH 73.6 12/19/2024 12/09/2024 EPA-8260 114 12/09/2024 12/09/2024	

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

Page 5 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



		CERTIFIC	ATE OF ANALYSIS						
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion S Bellingham, WA 98 Matt Roberts HFS OWS AOC-2 B-1-20ft - 120224	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2 B-1-20ft - 120224		DATE: ALS JOB#: ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:			12/20/2024 EV24120018 EV24120018-03 12/04/2024 12/2/2024 1:15:00 PM C601		
			DATA NEGOLIS						
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY		
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C6-C8 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE		
>C8-C10 Aliphatics	NWEPH	U	26	1	MG/KG	12/18/2024	FAL		
>C10-C12 Aliphatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C12-C16 Aliphatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C16-C21 Aliphatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C21-C34 Aliphatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C8-C10 Aromatics	NWEPH	U	26	1	MG/KG	12/18/2024	FAL		
>C10-C12 Aromatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C12-C16 Aromatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C16-C21 Aromatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
>C21-C34 Aromatics	NWEPH	U	13	1	MG/KG	12/18/2024	FAL		
Hexane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
Benzene	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC		
Toluene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC		
Ethylbenzene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
m,p-Xylene	EPA-8260	U	20	1	UG/KG	12/09/2024	DLC		
o-Xylene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC		
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS		

Page 6 of 20

20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

U

1

12/10/2024

DS

UG/KG

EPA-8270 SIM

Benzo[K]Fluoranthene

www.alsglobal.com



		CERTIFIC	CATE OF ANALYSIS					
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion S Bellingham, WA 982 Matt Roberts HFS OWS AOC-2 B-1-20ft - 120224	t, Suite 101 225	DATE: ite 101 ALS JOB#: ALS SAMPLE#: DATE RECEIVED: COLLECTION DATE: WDOE ACCREDITATION:			12/20/2024 EV24120018 EV24120018-03 12/04/2024 12/2/2024 1:15:00 PM C601		
		SAMPLI	E DATA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A	ANALYSIS BY	
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS	
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC	
Mercury	EPA-7471	0.049	0.020	1	MG/KG	12/04/2024	RAL	
Chromium (III)	Calc-Cr3	52	0.50	1	MG/KG	12/17/2024	CLC	
Arsenic	EPA-6020	5.3	0.20	1	MG/KG	12/11/2024	RAL	
Cadmium	EPA-6020	0.47	0.10	1	MG/KG	12/11/2024	RAL	
Chromium	EPA-6020	52	0.10	1	MG/KG	12/11/2024	RAL	
Lead	EPA-6020	5.6	0.10	1	MG/KG	12/11/2024	RAL	
Nickel	EPA-6020	120	0.10	1	MG/KG	12/11/2024	RAL	
Zinc	EPA-6020	77	0.50	1	MG/KG	12/11/2024	RAL	
		~~~~				ANALYSIS A		
SURROGATE	METHOD	%REC				27112		
C25	NWEPH	62.1				12/18/2024	FAL	
p-Terphenyl	NWEPH	72.9				12/18/2024	FAL	
1,2-Dichloroethane-d4	EPA-8260	118				12/09/2024	DLC	
Toluene-d8	EPA-8260	95.0				12/09/2024	DLC	
Terphenyl-d14	EPA-8270 SIM	106				12/10/2024	DS	

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

Page 7 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2 B-2-14ft - 120324		D/ COLI WDOE AC	12/20/2024 EV24120018 EV24120018-04 12/04/2024 12/3/2024 9:55:00 AM C601			
			DATARESOLIS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	23	1	MG/KG	12/18/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C8-C10 Aromatics	NWEPH	U	23	1	MG/KG	12/18/2024	FAL
>C10-C12 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C12-C16 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C16-C21 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
>C21-C34 Aromatics	NWEPH	U	12	1	MG/KG	12/18/2024	FAL
Hexane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC
Toluene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	12/09/2024	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
- Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

#### Page 8 of 20

ALS Group USA, Corp dba ALS Environmental

20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

U

EPA-8270 SIM

1

UG/KG

12/10/2024

DS

Benzo[K]Fluoranthene

#### www.alsglobal.com



		<b>UERTIFIC</b>	ATE OF ANALTSIS				
CLIENT:	ALL4 LLC 228 E. Champion \$ Bellingham, WA 98	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts		DATE: 12/20/2 ALS JOB#: EV2412 ALS SAMPLE#: EV2412			
CLIENT CONTACT:	Matt Roberts		D	ATE RECEIVED:	12/04/2024		
CLIENT PROJECT:	HFS OWS AOC-2		COL	DLLECTION DATE: 12		12/3/2024 9:55:00 AM	
CLIENT SAMPLE ID	B-2-14ft - 120324		WDOE AG	CCREDITATION:	C601		
		SAMPLE	E DATA RESULTS				
	METHOD		REPORTING LIMITS	DILUTION FACTOR		ANALYSIS /	ANALYSIS BY
ANALIIE Benzo[A]Pvrene	EPA-8270 SIM	RESULIS	20	1		12/10/2024	DS
Indeno[1 2 3-Cd]Pvrene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Dibenz[A.H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC
Mercury	EPA-7471	0.083	0.020	1	MG/KG	12/04/2024	RAL
Chromium (III)	Calc-Cr3	34	0.50	1	MG/KG	12/17/2024	CLC
Arsenic	EPA-6020	2.7	0.20	1	MG/KG	12/11/2024	RAL
Cadmium	EPA-6020	U	0.10	1	MG/KG	12/11/2024	RAL
Chromium	EPA-6020	34	0.10	1	MG/KG	12/11/2024	RAL
Lead	EPA-6020	2.2	0.10	1	MG/KG	12/11/2024	RAL
Nickel	EPA-6020	66	0.10	1	MG/KG	12/11/2024	RAL
Zinc	EPA-6020	35	0.50	1	MG/KG	12/11/2024	RAL
SUBBOOATE	METHOD	W DEC				ANALYSIS /	ANALYSIS BY
SURRUGATE		%REC				12/18/2024	EAL
n Torphonyl		74.0				12/18/2024	
1.2 Dichloroothano d4		114				12/10/2024	
	EPA-8260	95.1				12/09/2024	
Terphenyl-d14	EPA-8270 SIM	84.4				12/10/2024	DS

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

Page 9 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	ALL4 LLC 228 E. Champion S Bellingham, WA 98	St, Suite 101 3225		DATE: ALS JOB#: ALS SAMPLE# [.]	E: 12/20/2024 #: EV24120018 #: EV24120018-05		
CLIENT CONTACT:	Matt Roberts		D	ATE RECEIVED:	12/04/20	)24	
CLIENT PROJECT:	HFS OWS AOC-2		COLI	ECTION DATE:	12/3/2024 10:05:00 AM		
CLIENT SAMPLE ID	B-2-16ft - 120324		WDOF AC		C601		
	B 2 TOIL 120021	SAMPLE			0001		
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C10-C12 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C12-C13 Aromatics	NWVPH	U	5.0	1	MG/KG	12/12/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	23	1	MG/KG	12/18/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C8-C10 Aromatics	NWEPH	U	23	1	MG/KG	12/18/2024	FAL
>C10-C12 Aromatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C12-C16 Aromatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C16-C21 Aromatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
>C21-C34 Aromatics	NWEPH	U	11	1	MG/KG	12/18/2024	FAL
Hexane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC
Toluene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	12/09/2024	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	12/09/2024	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	12/09/2024	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS

Page 10 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

U

EPA-8270 SIM

20

1

UG/KG

12/11/2024

DS

Benzo[K]Fluoranthene



ALL4 LLC 228 E. Champion S Bellingham, WA 98	L4 LLC 8 E. Champion St, Suite 101 ellingham, WA 98225 att Roberts		DATE: ALS JOB#: ALS SAMPLE#:		12/20/2024 EV24120018 EV24120018-05		
Matt Roberts		D,	ATE RECEIVED:	12/04/2024			
HFS OWS AOC-2		COL	LECTION DATE:	12/3/2024 10:05:00 AM			
B-2-16ft - 120324		WDOE AC	CCREDITATION:	C601			
	SAMPLE	E DATA RESULTS					
METHOD		REPORTING LIMITS	DILUTION FACTOR		ANALYSIS DATE	ANALYSIS BY	
EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS	
EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS	
EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS	
EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS	
EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC	
EPA-7471	U	0.020	1	MG/KG	12/04/2024	RAL	
Calc-Cr3	30	0.50	1	MG/KG	12/17/2024	CLC	
EPA-6020	2.5	0.20	1	MG/KG	12/11/2024	RAL	
EPA-6020	U	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	30	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	2.1	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	67	0.10	1	MG/KG	12/11/2024	RAL	
EPA-6020	32	0.50	1	MG/KG	12/11/2024	RAL	
METHOD	W DEO				ANALYSIS DATE	ANALYSIS BY	
METHOD	%REC				40/40/0004	EAL	
NWEPH	75.8				12/18/2024	FAL	
	//.6				12/18/2024	FAL	
	117				12/09/2024		
EPA-0200 EPA-8270 SIM	93.9 108				12/09/2024	DLC	
	ALL4 LLC 228 E. Champion S Bellingham, WA 98 Matt Roberts HFS OWS AOC-2 B-2-16ft - 120324	ALL4 LLC         228 E. Champion St, Suite 101         Bellingham, WA 98225         Matt Roberts         HFS OWS AOC-2         B-2-16ft - 120324         SAMPLE         METHOD RESULTS         EPA-8270 SIM       U         EPA-7196       U         EPA-7471       U         Calc-Cr3       30         EPA-6020       2.5         EPA-6020       U         EPA-6020       2.1         EPA-6020       32         METHOD       %REC         NWEPH       75.8         NWEPH       77.6         EPA-8260       117         EPA-8260       33.9         EPA-8270 SIM       108	ALL4 LLC         228 E. Champion St, Suite 101         Bellingham, WA 98225         Matt Roberts       D.         HFS OWS AOC-2       COL         B-2-16ft - 120324       WDOE AC <b>SAMPLE DATA RESULTS REPORTING</b> EPA-8270 SIM       U       20         EPA-7196       U       5.0         EPA-7196       U       5.0         EPA-6020       2.5       0.20         EPA-6020       10       10         EPA-6020       21       0.10         EPA-6020       67       0.10         EPA-6020       32       0.50         METHOD       %REC       NWEPH         NWEPH       77.6       EPA-8260	ALL4 LLC       DATE:         228 E. Champion St, Suite 101       ALS JOB#:         Bellingham, WA 98225       ALS SAMPLE#:         Matt Roberts       DATE RECEIVED:         HFS OWS AOC-2       COLLECTION DATE:         B-2-16ft - 120324       WDOE ACCREDITATION: <b>EPA-8270 SIM</b> U       20         EPA-8270 SIM       U       20         EPA-707       U       0.020         EPA-7196       U       5.0         EPA-711       U       0.020         EPA-6020       2.5       0.20         EPA-6020       2.5       0.20         EPA-6020       2.1       0.10         EPA-6020       30       0.10         EPA-6020       32       0.50         EPA-6020       32       0.50         MWEPH       75.8         NWEPH       77.6         EPA-8270       93.9         EPA-8260       93.9         EPA-8270       93.9	ALL4       LLC       DATE:       12/20/20         228       E. Champion St, Suite 101       ALS JOB#:       EV2412         Bellingham, WA 98225       ALS SAMPLE#:       EV2412         Matt Roberts       DATE RECEIVED:       12/04/20         HFS OWS AOC-2       COLLECTION DATE:       12/3/202         B-2-16ft - 120324       WDOE ACCREDITATION:       C601 <b>SAMPLE DATA RESULTS REPORTING DILUTION PACTOR</b> EPA-8270 SIM       U       20       1       UG/KG         EPA-8270 SIM       U       20       1       UG/KG         EPA-8270 SIM       U       20       1       UG/KG         EPA-7196       U       5.0       1       MG/KG         EPA-7196       U       0.020       1       MG/KG         EPA-6020       2.5       0.20       1       MG/KG         EPA-6020       2.5       0.20       1       MG/KG         EPA-6020       30       0.10       1       MG/KG         EPA-6020       32       0.50       1       MG/KG         EPA-6020       32       0.50       1       MG/KG         EPA-6020       32	ALL4       LLC       DATE:       12/20/2024         228 E. Champion St, Suite 101       ALS JOB#:       EV24120018         Bellingham, WA 98225       ALS SAMPLE#:       EV24120018-05         Matt Roberts       DATE RECEIVED:       12/04/2024         HFS OWS AOC-2       COLLECTION DATE:       12/04/2024         B-2-16ft - 120324       WDOE ACCREDITATION:       C601 <b>SAMPLE DATA RESULTS METHOD RESULTS</b> METHOD       RESULTS       UINTS       DATE         EPA-8270 SIM       U       20       1       UG/KG       12/11/2024         EPA-7196       U       5.0       1       MG/KG       12/10/2024         EPA-7171       U       0.020       1       MG/KG       12/11/2024         EPA-6020       2.5       0.20       1       MG/KG       12/11/2024         EPA-6020       30       0.10       1       MG/KG	

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

Page 11 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

www.alsglobal.com



ALL4 LLC	
228 E. Champion St, Suite 101	
Bellingham, WA 98225	WDOE ACCF
Matt Roberts	
HFS OWS AOC-2	
	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2

ALS SDG#: REDITATION:

DATE:

12/20/2024 EV24120018 C601

#### LABORATORY BLANK RESULTS

#### MBLK-R502886 - Batch R502886 - Soil by NWVPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING	ANALYSIS DATE	ANALYSIS BY
				LIMITS	40/40/0004	
C5-C6 Aliphatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C8-C10 Aromatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C10-C12 Aromatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE
>C12-C13 Aromatics	NWVPH	U	MG/KG	5.0	12/12/2024	OSE

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBLK-R502826 - Batch R502826 - Soil by NWEPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	MG/KG	23	12/18/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C8-C10 Aromatics	NWEPH	U	MG/KG	23	12/18/2024	FAL
>C10-C12 Aromatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C12-C16 Aromatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C16-C21 Aromatics	NWEPH	U	MG/KG	11	12/18/2024	FAL
>C21-C34 Aromatics	NWEPH	U	MG/KG	11	12/18/2024	FAL

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-120924S - Batch 221631 - Soil by EPA-8260

REPORTING		ANALYSIS	ANALYSIS
RESULTS UNITS LIMITS	YTE METHOD RESULTS	DATE	BY
U UG/KG 10	ne EPA-8260 U	12/09/2024	DLC
U UG/KG 10	ichloroethane EPA-8260 U	12/09/2024	DLC
U UG/KG 5.0	ene EPA-8260 U	12/09/2024	DLC
U UG/KG 10	ene EPA-8260 U	12/09/2024	DLC
U UG/KG 5.0	ibromoethane EPA-8260 U	12/09/2024	DLC
U UG/KG 10	penzene EPA-8260 U	12/09/2024	DLC
U UG/KG 20	Kylene EPA-8260 U	12/09/2024	DLC
U UG/KG 10	ene EPA-8260 U	12/09/2024	DLC
U         UG/KG         5.0           U         UG/KG         10           U         UG/KG         20           U         UG/KG         10	ibromoethane         EPA-8260         U           penzene         EPA-8260         U           kylene         EPA-8260         U           ene         EPA-8260         U	12/09/2024 12/09/2024 12/09/2024 12/09/2024	DLC DLC DLC DLC

U - Analyte analyzed for but not detected at level above reporting limit.

Page 12 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

# www.alsglobal.com



CLIENT:	ALL4 LLC
	228 E. Champion St, Suite 101
	Bellingham, WA 98225
CLIENT CONTACT:	Matt Roberts
CLIENT PROJECT:	HFS OWS AOC-2

DATE: ALS SDG#: WDOE ACCREDITATION:

12/20/2024 EV24120018 C601

#### LABORATORY BLANK RESULTS

#### MB-120424S - Batch 221590 - Soil by EPA-8270 SIM

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Naphthalene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Acenaphthylene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Acenaphthene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Fluorene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Phenanthrene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Anthracene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Fluoranthene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Pyrene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Chrysene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/KG	20	12/06/2024	DS

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBLK-R502117 - Batch R502117 - Soil by EPA-7196

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chromium (VI)	EPA-7196	U	MG/KG	5.0	12/10/2024	MJC

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBLK-R502551 - Batch R502551 - Soil by EPA-7471

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Mercury	EPA-7471	U	MG/KG	0.020	12/04/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-121124S - Batch 221885 - Soil by EPA-6020

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Arsenic	EPA-6020	U	MG/KG	0.20	12/11/2024	RAL
Cadmium	EPA-6020	U	MG/KG	0.10	12/11/2024	RAL
Chromium	EPA-6020	U	MG/KG	0.10	12/11/2024	RAL

#### Page 13 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



CLIENT: CLIENT CONTACT: CLIENT PROJECT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2	DATE: ALS SDG#: WDOE ACCREDITATION:	12/20/2024 EV24120018 C601			
LABORATORY BLANK RESULTS						

MB-121124S - Batch 221885 - Soil by EPA-6020									
Lead	EPA-6020	U	MG/KG	0.10	12/11/2024	RAL			
Nickel	EPA-6020	U	MG/KG	0.10	12/11/2024	RAL			
Zinc	EPA-6020	U	MG/KG	0.88	12/11/2024	RAL			

U - Analyte analyzed for but not detected at level above reporting limit.

Page 14 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



#### CLIENT:

**CLIENT CONTACT:** 

CLIENT PROJECT:

ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2

DATE: ALS SDG#: WDOE ACCREDITATION:

12/20/2024 EV24120018 C601

#### LABORATORY CONTROL SAMPLE RESULTS

#### ALS Test Batch ID: R502826 - Soil by NWEPH

	···· <b>,</b>				LI	MITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
>C8-C10 Aliphatics - BS	NWEPH	33.5			16.2	56.2	12/18/2024	FAL
>C8-C10 Aliphatics - BSD	NWEPH	34.6	3		16.2	56.2	12/18/2024	FAL
>C10-C12 Aliphatics - BS	NWEPH	52.2			11.9	100	12/18/2024	FAL
>C10-C12 Aliphatics - BSD	NWEPH	52.8	1		11.9	100	12/18/2024	FAL
>C12-C16 Aliphatics - BS	NWEPH	68.0			33.1	96.5	12/18/2024	FAL
>C12-C16 Aliphatics - BSD	NWEPH	66.0	3		33.1	96.5	12/18/2024	FAL
>C16-C21 Aliphatics - BS	NWEPH	78.2			30.2	109	12/18/2024	FAL
>C16-C21 Aliphatics - BSD	NWEPH	76.0	3		30.2	109	12/18/2024	FAL
>C21-C34 Aliphatics - BS	NWEPH	101			27.5	135	12/18/2024	FAL
>C21-C34 Aliphatics - BSD	NWEPH	98.0	3		27.5	135	12/18/2024	FAL
>C8-C10 Aromatics - BS	NWEPH	49.1			9.07	92	12/18/2024	FAL
>C8-C10 Aromatics - BSD	NWEPH	49.7	1		9.07	92	12/18/2024	FAL
>C10-C12 Aromatics - BS	NWEPH	72.2			11.6	139	12/18/2024	FAL
>C10-C12 Aromatics - BSD	NWEPH	75.6	5		11.6	139	12/18/2024	FAL
>C12-C16 Aromatics - BS	NWEPH	85.4			34.3	135	12/18/2024	FAL
>C12-C16 Aromatics - BSD	NWEPH	89.8	5		34.3	135	12/18/2024	FAL
>C16-C21 Aromatics - BS	NWEPH	88.6			47.5	130	12/18/2024	FAL
>C16-C21 Aromatics - BSD	NWEPH	94.6	7		47.5	130	12/18/2024	FAL
>C21-C34 Aromatics - BS	NWEPH	80.8			36.6	126	12/18/2024	FAL
>C21-C34 Aromatics - BSD	NWEPH	89.8	11		36.6	126	12/18/2024	FAL

#### ALS Test Batch ID: 221631 - Soil by EPA-8260

	· · · · · · · · · · · ·				LIN	IITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Hexane - BS	EPA-8260	92.5			50	150	12/09/2024	DLC
Hexane - BSD	EPA-8260	93.1	1		50	150	12/09/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	91.5			50	150	12/09/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	95.4	4		50	150	12/09/2024	DLC
Benzene - BS	EPA-8260	95.6			75	138	12/09/2024	DLC
Benzene - BSD	EPA-8260	98.6	3		75	138	12/09/2024	DLC
Toluene - BS	EPA-8260	97.5			71.6	122.1	12/09/2024	DLC
Toluene - BSD	EPA-8260	101	4		71.6	122.1	12/09/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	95.7			50	150	12/09/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	100	5		50	150	12/09/2024	DLC
Ethylbenzene - BS	EPA-8260	99.3			50	150	12/09/2024	DLC
Ethylbenzene - BSD	EPA-8260	102	3		50	150	12/09/2024	DLC
m,p-Xylene - BS	EPA-8260	97.8			50	150	12/09/2024	DLC
m,p-Xylene - BSD	EPA-8260	100	3		50	150	12/09/2024	DLC
o-Xylene - BS	EPA-8260	97.9			50	150	12/09/2024	DLC

Page 15 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

## www.alsglobal.com



DATE:

12/20/2024

C601

EV24120018

#### ALL4 LLC CLIENT: 228 E. Champion St, Suite 101 ALS SDG#: Bellingham, WA 98225 WDOE ACCREDITATION: **CLIENT CONTACT:** Matt Roberts CLIENT PROJECT: HFS OWS AOC-2

LABORATORY CONTROL SAMPLE RESULTS LIMITS ANALYSIS ANALYSIS BY %REC RPD QUAL DATE SPIKED COMPOUND METHOD MIN MAX o-Xylene - BSD EPA-8260 102 4 50 150 12/09/2024 DLC

#### ALS Test Batch ID: 221590 - Soil by EPA-8270 SIM

SPIKE COMPOUNDMETHODRPA 207 SIM60.9NoNAXDATENaphtheler- SSEPA-3270 SIM60.9201501206/20240S2-Methynaphthalene - BSDEPA-3270 SIM66.8201501206/20240S2-Methynaphthalene - BSDEPA-3270 SIM66.8201501206/20240S1-Methynaphthalene - BSDEPA-3270 SIM66.12201501206/20240S1-Methynaphthalene - BSDEPA-3270 SIM65.1201501206/20240SAcenaphthyene - BSDEPA-3270 SIM65.721501206/20240SAcenaphthelene - BSDEPA-3270 SIM67.541071206/20240SAcenaphthelene - BSDEPA-3270 SIM67.541071206/20240SAcenaphthelene - BSDEPA-3270 SIM67.54201501206/20240SFluorene - BSDEPA-3270 SIM67.52201501206/20240SFluorene - BSDEPA-3270 SIM67.52201501206/20240SPhenanthrene - BSDEPA-3270 SIM67.52201501206/20240SPhenanthrene - BSDEPA-3270 SIM67.521501206/20240SPhenanthrene - BSDEPA-3270 SIM67.521501206/20240SFluorenthene - BSDEPA-3270 SIM67.521501206/20240SFluorenthene - BSD <th></th> <th>-</th> <th></th> <th></th> <th></th> <th>LI</th> <th>MITS</th> <th>ANALYSIS</th> <th>ANALYSIS BY</th>		-				LI	MITS	ANALYSIS	ANALYSIS BY
Naphthalene - BSEPA-8270 SIM60.9201501206/2024DSNaphthalene - BSDEPA-8270 SIM66.63201501206/2024DS2-Methynaphthalene - BSDEPA-8270 SIM66.63201501206/2024DS1-Methynaphthalene - BSDEPA-8270 SIM66.7201501206/2024DSAcenaphthylene - BSDEPA-8270 SIM65.8201501206/2024DSAcenaphthylene - BSDEPA-8270 SIM65.8201501206/2024DSAcenaphthene - BSDEPA-8270 SIM67.741071206/2024DSAcenaphthene - BSDEPA-8270 SIM67.741071206/2024DSAcenaphthene - BSDEPA-8270 SIM67.7201501206/2024DSFluorene - BSDEPA-8270 SIM67.7201501206/2024DSPhenathtene - BSDEPA-8270 SIM67.7201501206/2024DSPhenathtene - BSDEPA-8270 SIM67.7201501206/2024DSAnthracene - BSDEPA-8270 SIM67.7201501206/2024DSAnthracene - BSDEPA-8270 SIM67.7201501206/2024DSFluorenthere - BSDEPA-8270 SIM67.7201501206/2024DSFluorenthere - BSDEPA-8270 SIM67.7201501206/2024DSFluorenthere - BSDEPA-8270 SIM67.7 <th>SPIKED COMPOUND</th> <th>METHOD</th> <th>%REC</th> <th>RPD</th> <th>QUAL</th> <th>MIN</th> <th>MAX</th> <th>DATE</th> <th></th>	SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Naphthalene - BSDEPA-827 SM62.53201501206/2024DS2-Methynaphthalene - BSDEPA-827 SM68.6201501206/2024DS1-Methynaphthalene - BSDEPA-827 SM67.6201501206/2024DS1-Methynaphthalene - BSDEPA-827 SM67.6201501206/2024DSAcenaphthylene - BSDEPA-827 SM67.6201501206/2024DSAcenaphthylene - BSDEPA-827 SM67.6201501206/2024DSAcenaphthene - BSDEPA-827 SM67.6411071206/2024DSAcenaphthene - BSDEPA-827 SM67.6411071206/2024DSFluorene - BSEPA-827 SM67.7201501206/2024DSFluorene - BSDEPA-827 SM67.7201501206/2024DSPhenanthrene - BSDEPA-827 SM67.7201501206/2024DSPhenanthrene - BSDEPA-827 SM67.7201501206/2024DSFluorenthene - BSDEPA-827 SM67.7201501206/	Naphthalene - BS	EPA-8270 SIM	60.9			20	150	12/06/2024	DS
2-Methy/naphthalene - BSEPA-8270 SIM66.63201501206/2024DS2-Methy/naphthalene - BSDEPA-8270 SIM67.6201501206/2024DS1-Methy/naphthalene - BSDEPA-8270 SIM65.4201501206/2024DSAcenaphti/ene - BSDEPA-8270 SIM65.4201501206/2024DSAcenaphti/ene - BSDEPA-8270 SIM65.4201501206/2024DSAcenaphti/ene - BSDEPA-8270 SIM65.4411071206/2024DSAcenaphti/ene - BSDEPA-8270 SIM67.1201501206/2024DSFluorene - BSDEPA-8270 SIM65.1201501206/2024DSPhenanthrene - BSDEPA-8270 SIM65.1201501206/2024DSPhenanthrene - BSDEPA-8270 SIM65.2201501206/2024DSPhenanthrene - BSDEPA-8270 SIM65.2201501206/2024DSFluorene - BSDEPA-8270 SIM65.2201501206/2024DSPhenanthrene - BSDEPA-8270 SIM65.2201501206/2024DSProme - BSDEPA-8270 SIM65.2201501206/2024DSProme - BSDEPA-8270 SIM65.321501206/2024DSProme - BSDEPA-8270 SIM65.321501206/2024DSProme - BSDEPA-8270 SIM65.3220	Naphthalene - BSD	EPA-8270 SIM	62.5	3		20	150	12/06/2024	DS
2-Methynaphthalene - BSD       FPA-8270 SM       67.6       20       150       1206/2024       DS         1-Methynaphthalene - BSD       FPA-8270 SM       65.1       20       150       1206/2024       DS         Acenaphthylene - BS       FPA-8270 SM       65.1       20       150       1206/2024       DS         Acenaphthylene - BS       FPA-8270 SM       68.4       20       150       1206/2024       DS         Acenaphthene - BS       FPA-8270 SM       67.7       41       107       1206/2024       DS         Acenaphthene - BS       FPA-8270 SM       67.7       20       150       1206/2024       DS         Fluorene - BS       FPA-8270 SM       67.1       20       150       1206/2024       DS         Fluorene - BS       FPA-8270 SM       67.1       20       150       1206/2024       DS         Phenanthrene - BS       FPA-8270 SM       67.2       3       20       150       1206/2024       DS         Anthracene - BSD       FPA-8270 SM       67.2       3       20       150       1206/2024       DS         Fluoranthene - BSD       FPA-8270 SM       67.2       3       20       150       1206/2024       DS	2-Methylnaphthalene - BS	EPA-8270 SIM	66.8			20	150	12/06/2024	DS
1-Methylnaphthalene - BS       EPA-8270 SIM       67.6       20       150       1206/2024       DS         1-Methylnaphthalene - BSD       EPA-8270 SIM       68.4       4       20       150       1206/2024       DS         Acenaphtlylene - BSD       EPA-8270 SIM       68.4       4       20       150       1206/2024       DS         Acenaphtlylene - BSD       EPA-8270 SIM       67.7       4       107       1206/2024       DS         Acenaphtlylene - BSD       EPA-8270 SIM       67.7       4       107       1206/2024       DS         Fluorene - BSD       EPA-8270 SIM       67.1       20       150       1206/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       67.2       20       150       1206/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       65.8       2       20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       67.2       3       20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       67.2       3       20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       67.2       3       20	2-Methylnaphthalene - BSD	EPA-8270 SIM	68.6	3		20	150	12/06/2024	DS
1-Methylnaphthalene - BSD       EPA-8270 SIM       63.1       2       150       1206/2024       DS         Acenaphthylene - BS       EPA-8270 SIM       68.4       4       20       150       1206/2024       DS         Acenaphthylene - BS       EPA-8270 SIM       64.7       41       107       1206/2024       DS         Acenaphthene - BSD       EPA-8270 SIM       67.5       4       41       107       1206/2024       DS         Fluorene - BS       EPA-8270 SIM       67.1       20       150       1206/2024       DS         Fluorene - BS       EPA-8270 SIM       69.1       3       20       150       1206/2024       DS         Phenanthrene - BS       EPA-8270 SIM       65.8       2       20       150       1206/2024       DS         Anthracene - BS       EPA-8270 SIM       67.2       3       20       150       1206/2024       DS       DS         Fluoranthrene - BS       EPA-8270 SIM       67.2       3       20       150       1206/2024       DS         Fluoranthrene - BS       EPA-8270 SIM       67.2       3       20       150       1206/2024       DS         Fluoranthrene - BS       EPA-8270 SIM       67.2	1-Methylnaphthalene - BS	EPA-8270 SIM	67.6			20	150	12/06/2024	DS
Acenaphthylene - BS       EPA-8270 SIM       65.8       20       150       1206/2024       DS         Acenaphthylene - BSD       EPA-8270 SIM       64.4       4       07       1206/2024       DS         Acenaphthene - BSD       EPA-8270 SIM       67.5       4       41       107       1206/2024       DS         Acenaphthene - BSD       EPA-8270 SIM       67.1       20       150       1206/2024       DS         Fluorene - BS       EPA-8270 SIM       63.1       20       150       1206/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       63.2       20       150       1206/2024       DS         Phenanthrene - BS       EPA-8270 SIM       65.8       2       20       150       1206/2024       DS         Anthracene - BS       EPA-8270 SIM       65.7       20       150       1206/2024       DS         Fluoranthene - BS       EPA-8270 SIM       63.7       20       150       1206/2024       DS         Fluoranthene - BS       EPA-8270 SIM       63.7       2       150       1206/2024       DS         Fluoranthene - BS       EPA-8270 SIM       63.7       2       150       1206/2024       DS         Flu	1-Methylnaphthalene - BSD	EPA-8270 SIM	69.1	2		20	150	12/06/2024	DS
Acenaphtlylene - BSD       EPA-8270 SIM       68.4       4       20       150       1206/2024       DSI         Acenaphthene - BS       EPA-8270 SIM       67.7       41       107       1206/2024       DSI         Acenaphthene - BSD       EPA-8270 SIM       67.1       1206/2024       DSI         Fluorene - BSD       EPA-8270 SIM       61.1       3       20       150       1206/2024       DSI         Fluorene - BSD       EPA-8270 SIM       64.2       20       150       1206/2024       DSI         Phenanthrene - BSD       EPA-8270 SIM       64.2       20       150       1206/2024       DSI         Anthracene - BSD       EPA-8270 SIM       65.0       20       150       1206/2024       DSI         Anthracene - BSD       EPA-8270 SIM       67.2       3       20       150       1206/2024       DSI         Fluoranthene - BSD       EPA-8270 SIM       67.2       3       20       150       1206/2024       DSI         Fluoranthene - BSD       EPA-8270 SIM       67.2       3       20       150       1206/2024       DSI         Fluoranthene - BSD       EPA-8270 SIM       61.3       2       160       1206/2024       DSI </td <td>Acenaphthylene - BS</td> <td>EPA-8270 SIM</td> <td>65.8</td> <td></td> <td></td> <td>20</td> <td>150</td> <td>12/06/2024</td> <td>DS</td>	Acenaphthylene - BS	EPA-8270 SIM	65.8			20	150	12/06/2024	DS
Acenaphthene - BS       EPA-8270 SIM       64.7       41       107       12/06/2024       DS         Acenaphthene - BSD       EPA-8270 SIM       67.5       4       41       107       12/06/2024       DS         Fluorene - BS       EPA-8270 SIM       67.1       20       150       12/06/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       64.2       20       150       12/06/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       65.8       2       20       150       12/06/2024       DS         Anthracene - BSD       EPA-8270 SIM       65.2       20       150       12/06/2024       DS         Anthracene - BSD       EPA-8270 SIM       65.2       20       150       12/06/2024       DS         Fluoranthene - BS       EPA-8270 SIM       65.2       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       65.2       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       65.2       20       150       12/06/2024       DS         Benzo/A/Anthracene - BSD       EPA-8270 SIM       65.3       2       20       150       12/06/2024       DS </td <td>Acenaphthylene - BSD</td> <td>EPA-8270 SIM</td> <td>68.4</td> <td>4</td> <td></td> <td>20</td> <td>150</td> <td>12/06/2024</td> <td>DS</td>	Acenaphthylene - BSD	EPA-8270 SIM	68.4	4		20	150	12/06/2024	DS
Acenaphthene - BSD       EPA-8270 SM       67.5       4       11       107       12/06/2024       DS         Fluorene - BS       EPA-8270 SM       67.1       20       150       12/06/2024       DS         Fluorene - BSD       EPA-8270 SM       64.1       20       150       12/06/2024       DS         Phenanthrene - BSD       EPA-8270 SM       65.8       2       20       150       12/06/2024       DS         Anthracene - BSD       EPA-8270 SM       65.0       20       150       12/06/2024       DS         Anthracene - BSD       EPA-8270 SM       65.0       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SM       67.2       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SM       62.2       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SM       63.2       2       18       136       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SM       63.2       2       150       12/06/2024       DS         Chysene - BSD       EPA-8270 SM       63.4       2       2       150       12/06/2024       DS	Acenaphthene - BS	EPA-8270 SIM	64.7			41	107	12/06/2024	DS
Fluorene - BSEPA-8270 SIM67.1201501206/2024DSFluorene - BSDEPA-8270 SIM69.13201501206/2024DSPhenanthrene - BSDEPA-8270 SIM65.82201501206/2024DSAnthracene - BSEPA-8270 SIM65.9201501206/2024DSAnthracene - BSDEPA-8270 SIM67.23201501206/2024DSFluoranthene - BSEPA-8270 SIM62.7201501206/2024DSFluoranthene - BSEPA-8270 SIM62.7201501206/2024DSFluoranthene - BSEPA-8270 SIM62.7201501206/2024DSPyrene - BSEPA-8270 SIM61.321361206/2024DSPyrene - BSEPA-8270 SIM61.321361206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM61.32201501206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM61.32201501206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM63.82201501206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM63.82201501206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM63.72201501206/2024DSBenzo(A)Anthracene - BSDEPA-8270 SIM64.72201501206/2024DS <td>Acenaphthene - BSD</td> <td>EPA-8270 SIM</td> <td>67.5</td> <td>4</td> <td></td> <td>41</td> <td>107</td> <td>12/06/2024</td> <td>DS</td>	Acenaphthene - BSD	EPA-8270 SIM	67.5	4		41	107	12/06/2024	DS
Fluorene - BSDEPA-8270 SIM69.132015012/06/2024DSPhenanthrene - BSEPA-8270 SIM65.822015012/06/2024DSAnthracene - BSDEPA-8270 SIM67.232015012/06/2024DSAnthracene - BSDEPA-8270 SIM67.232015012/06/2024DSFluoranthene - BSDEPA-8270 SIM67.232015012/06/2024DSFluoranthene - BSDEPA-8270 SIM67.222015012/06/2024DSFluoranthene - BSDEPA-8270 SIM67.222015012/06/2024DSPyrene - BSDEPA-8270 SIM60.21813612/06/2024DSPyrene - BSDEPA-8270 SIM63.82015012/06/2024DSBenzo[A]Anthracene - BSDEPA-8270 SIM63.82015012/06/2024DSChysene - BSDEPA-8270 SIM63.82015012/06/2024DSBenzo[A]Fluoranthene - BSDEPA-8270 SIM63.62015012/06/2024DSBenzo[A]Fluoranthene - BSDEPA-8270 SIM63.72015012/06/2024DSBenzo[A]Fluoranthene - BSDEPA-8270 SIM63.62015012/06/2024DSBenzo[A]Fluoranthene - BSDEPA-8270 SIM63.72015012/06/2024DSBenzo[A]Fluoranthene - BSDEPA-8270 SIM63.62015012/06/2024<	Fluorene - BS	EPA-8270 SIM	67.1			20	150	12/06/2024	DS
Phenanthrene - BS       EPA-8270 SIM       64.2       20       150       1206/2024       DS         Phenanthrene - BSD       EPA-8270 SIM       65.8       2       20       150       1206/2024       DS         Anthracene - BS       EPA-8270 SIM       65.0       20       150       1206/2024       DS         Anthracene - BS       EPA-8270 SIM       62.7       20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       64.2       2       20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       64.2       2       20       150       1206/2024       DS         Pyrene - BS       EPA-8270 SIM       61.3       2       20       150       1206/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       61.3       2       20       150       1206/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       1206/2024       DS         Chrysene - BSD       EPA-8270 SIM       63.4       20       150       1206/2024       DS         Benzo[A]Fluoranthene - BSD       EPA-8270 SIM       63.4       20       150 <td< td=""><td>Fluorene - BSD</td><td>EPA-8270 SIM</td><td>69.1</td><td>3</td><td></td><td>20</td><td>150</td><td>12/06/2024</td><td>DS</td></td<>	Fluorene - BSD	EPA-8270 SIM	69.1	3		20	150	12/06/2024	DS
Phenanthrene - BSD       EPA-8270 SIM <b>65.</b> 20       150       1206/2024       DS         Anthracene - BS       EPA-8270 SIM <b>67.2 3</b> 20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM <b>67.2 3</b> 20       150       1206/2024       DS         Fluoranthene - BSD       EPA-8270 SIM <b>62.7</b> 20       150       1206/2024       DS         Pyrene - BSD       EPA-8270 SIM <b>61.2</b> 20       150       1206/2024       DS         Pyrene - BSD       EPA-8270 SIM <b>61.2</b> 2       18       136       1206/2024       DS         Pyrene - BSD       EPA-8270 SIM <b>61.3 2</b> 18       136       1206/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM <b>63.8</b> 20       150       1206/2024       DS         Chysene - BSD       EPA-8270 SIM <b>63.8</b> 20       150       1206/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>63.7 2</b> 150       1206/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>63.6</b> 20       150	Phenanthrene - BS	EPA-8270 SIM	64.2			20	150	12/06/2024	DS
Anthracene - BSEPA-8270 SIM65.02015012/06/2024DSAnthracene - BSDEPA-8270 SIM62.72015012/06/2024DSFluoranthene - BSOEPA-8270 SIM64.222015012/06/2024DSPyrene - BSDEPA-8270 SIM60.21813612/06/2024DSPyrene - BSDEPA-8270 SIM61.321813612/06/2024DSBenzo[A]Anthracene - BSDEPA-8270 SIM61.322015012/06/2024DSBenzo[A]Anthracene - BSDEPA-8270 SIM61.322015012/06/2024DSBenzo[A]Anthracene - BSDEPA-8270 SIM63.82015012/06/2024DSChysene - BSDEPA-8270 SIM63.82015012/06/2024DSBenzo[B]Fluoranthene - BSDEPA-8270 SIM63.72015012/06/2024DSBenzo[B]Fluoranthene - BSDEPA-8270 SIM63.72015012/06/2024DSBenzo[K]Fluoranthene - BSDEPA-8270 SIM63.72015012/06/202	Phenanthrene - BSD	EPA-8270 SIM	65.8	2		20	150	12/06/2024	DS
Anthracene - BSD       EPA-8270 SIM       67.2       3       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       62.7       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       64.2       2       20       150       12/06/2024       DS         Pyrene - BS       EPA-8270 SIM       61.3       2       18       136       12/06/2024       DS         Pyrene - BSD       EPA-8270 SIM       61.3       2       18       136       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BS       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       64.7       2       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       64.7       2       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       64.7	Anthracene - BS	EPA-8270 SIM	65.0			20	150	12/06/2024	DS
Fluoranthene - BS       EPA-8270 SIM       62.7       20       150       12/06/2024       DS         Fluoranthene - BSD       EPA-8270 SIM       64.2       2       20       150       12/06/2024       DS         Pyrene - BS       EPA-8270 SIM       61.3       2       18       136       12/06/2024       DS         Pyrene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       63.7       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       64.7       20       150       12/06/2024       DS	Anthracene - BSD	EPA-8270 SIM	67.2	3		20	150	12/06/2024	DS
Fluoranthene - BSD       EPA-8270 SIM       64.2       2       20       150       12/06/2024       DS         Pyrene - BS       EPA-8270 SIM       61.3       2       18       136       12/06/2024       DS         Pyrene - BSD       EPA-8270 SIM       61.3       2       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[A]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[A]Fluoranthene - BSD       EPA-8270 SIM       63.7       4       0       150       12	Fluoranthene - BS	EPA-8270 SIM	62.7			20	150	12/06/2024	DS
Pyrene - BS       EPA-8270 SIM       60.2       18       136       12/06/2024       DS         Pyrene - BSD       EPA-8270 SIM       61.3       2       18       136       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       65.3       2       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       64.7       2       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       65.4       0       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       55.4       0       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       62.1       0       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM	Fluoranthene - BSD	EPA-8270 SIM	64.2	2		20	150	12/06/2024	DS
Pyrene - BSD       EPA-8270 SIM <b>61.3 2</b> 18       136       12/06/2024       DS         Benzo[A]Anthracene - BS       EPA-8270 SIM <b>63.8</b> 20       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM <b>65.3 2</b> 20       150       12/06/2024       DS         Chrysene - BS       EPA-8270 SIM <b>63.8</b> 20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BS       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyr	Pyrene - BS	EPA-8270 SIM	60.2			18	136	12/06/2024	DS
Benzo[A]Anthracene - BS       EPA-8270 SIM       63.8       20       150       12/06/2024       DS         Benzo[A]Anthracene - BSD       EPA-8270 SIM       65.3       2       20       150       12/06/2024       DS         Chrysene - BS       EPA-8270 SIM       63.8       2       20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       64.7       2       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       55.4       0       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       62.1       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SI	Pyrene - BSD	EPA-8270 SIM	61.3	2		18	136	12/06/2024	DS
Benzo[A]Anthracene - BSD       EPA-8270 SIM <b>65.3 2</b> 150       12/06/2024       DS         Chrysene - BS       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS	Benzo[A]Anthracene - BS	EPA-8270 SIM	63.8			20	150	12/06/2024	DS
Chrysene - BS       EPA-8270 SIM <b>63.8</b> 20       150       12/06/2024       DS         Chrysene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,	Benzo[A]Anthracene - BSD	EPA-8270 SIM	65.3	2		20	150	12/06/2024	DS
Chrysene - BSD       EPA-8270 SIM <b>64.9 2</b> 150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270	Chrysene - BS	EPA-8270 SIM	63.8			20	150	12/06/2024	DS
Benzo[B]Fluoranthene - BS       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Benzo[B]Fluoranthene - BSD       EPA-8270 SIM <b>64.7 2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.9 3</b> 20       150       12/06/2024       DS <td>Chrysene - BSD</td> <td>EPA-8270 SIM</td> <td>64.9</td> <td>2</td> <td></td> <td>20</td> <td>150</td> <td>12/06/2024</td> <td>DS</td>	Chrysene - BSD	EPA-8270 SIM	64.9	2		20	150	12/06/2024	DS
Benzo[B]Fluoranthene - BSD       EPA-8270 SIM       64.7       2       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       55.4       0       20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM       55.4       0       20       150       12/06/2024       DS         Benzo[A]Pyrene - BS       EPA-8270 SIM       62.1       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.9       3       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS      <	Benzo[B]Fluoranthene - BS	EPA-8270 SIM	63.6			20	150	12/06/2024	DS
Benzo[K]Fluoranthene - BS       EPA-8270 SIM <b>55.2</b> 20       150       12/06/2024       DS         Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BS       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>62.3</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>62.3</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.0 3</b> 20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM <b>64.0 3</b> 20       150       12/06/2024       DS         Benzo[G,	Benzo[B]Fluoranthene - BSD	EPA-8270 SIM	64.7	2		20	150	12/06/2024	DS
Benzo[K]Fluoranthene - BSD       EPA-8270 SIM <b>55.4 0</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>62.1</b> 20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM <b>64.7 4</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>62.3</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.0 3</b> 20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM <b>67.3</b> 20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM <b>67.3</b> 20       150       12/06/2024       DS	Benzo[K]Fluoranthene - BS	EPA-8270 SIM	55.2			20	150	12/06/2024	DS
Benzo[A]Pyrene - BS       EPA-8270 SIM       62.1       20       150       12/06/2024       DS         Benzo[A]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       62.3       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM       67.3       20       150       12/06/2024       DS	Benzo[K]Fluoranthene - BSD	EPA-8270 SIM	55.4	0		20	150	12/06/2024	DS
Benzo[A]Pyrene - BSD       EPA-8270 SIM       64.7       4       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       63.6       20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       62.3       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM       67.3       20       150       12/06/2024       DS	Benzo[A]Pyrene - BS	EPA-8270 SIM	62.1			20	150	12/06/2024	DS
Indeno[1,2,3-Cd]Pyrene - BS       EPA-8270 SIM <b>63.6</b> 20       150       12/06/2024       DS         Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM <b>64.9 2</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>62.3</b> 20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM <b>64.0 3</b> 20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM <b>67.3</b> 20       150       12/06/2024       DS	Benzo[A]Pyrene - BSD	EPA-8270 SIM	64.7	4		20	150	12/06/2024	DS
Indeno[1,2,3-Cd]Pyrene - BSD       EPA-8270 SIM       64.9       2       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       62.3       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM       67.3       20       150       12/06/2024       DS	Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270 SIM	63.6			20	150	12/06/2024	DS
Dibenz[A,H]Anthracene - BS       EPA-8270 SIM       62.3       20       150       12/06/2024       DS         Dibenz[A,H]Anthracene - BSD       EPA-8270 SIM       64.0       3       20       150       12/06/2024       DS         Benzo[G,H,I]Perylene - BS       EPA-8270 SIM       67.3       20       150       12/06/2024       DS	Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270 SIM	64.9	2		20	150	12/06/2024	DS
Dibenz[A,H]Anthracene - BSD         EPA-8270 SIM         64.0         3         20         150         12/06/2024         DS           Benzo[G,H,I]Perylene - BS         EPA-8270 SIM         67.3         20         150         12/06/2024         DS	Dibenz[A,H]Anthracene - BS	EPA-8270 SIM	62.3			20	150	12/06/2024	DS
Benzo[G,H,I]Perylene - BS         EPA-8270 SIM         67.3         20         150         12/06/2024         DS	Dibenz[A,H]Anthracene - BSD	EPA-8270 SIM	64.0	3		20	150	12/06/2024	DS
	Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	67.3			20	150	12/06/2024	DS

Page 16 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental



CLIENT:	ALL4 LLC	DATE:	12/20/2024
	228 E. Champion St, Suite 101	ALS SDG#:	EV24120018
	Bellingham, WA 98225	WDOE ACCREDITATION:	C601
CLIENT CONTACT: CLIENT PROJECT:	Matt Roberts HFS OWS AOC-2		

					LIM	ITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	68.1	1		20	150	12/06/2024	DS

#### ALS Test Batch ID: R502117 - Soil by EPA-7196

				LIM	ITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Chromium (VI) - BS	EPA-7196	99.0		91	114	12/10/2024	MJC
Chromium (VI) - BSD	EPA-7196	103	4	91	114	12/10/2024	MJC

#### ALS Test Batch ID: R502551 - Soil by EPA-7471

					LIMIT	S	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD (	QUAL	MIN	MAX	DATE	
Mercury - BS	EPA-7471	102			81.8	117	12/04/2024	RAL
Mercury - BSD	EPA-7471	101	1		81.8	117	12/04/2024	RAL

#### ALS Test Batch ID: 221885 - Soil by EPA-6020

	1				LIM	ITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Arsenic - BS	EPA-6020	99.9			80	120	12/11/2024	RAL
Arsenic - BSD	EPA-6020	100	1		80	120	12/11/2024	RAL
Cadmium - BS	EPA-6020	103			80	120	12/11/2024	RAL
Cadmium - BSD	EPA-6020	104	1		80	120	12/11/2024	RAL
Chromium - BS	EPA-6020	99.1			80	120	12/11/2024	RAL
Chromium - BSD	EPA-6020	99.7	1		80	120	12/11/2024	RAL
Lead - BS	EPA-6020	98.0			80	120	12/11/2024	RAL
Lead - BSD	EPA-6020	98.6	1		80	120	12/11/2024	RAL
Nickel - BS	EPA-6020	104			80	120	12/11/2024	RAL
Nickel - BSD	EPA-6020	105	1		80	120	12/11/2024	RAL
Zinc - BS	EPA-6020	107			80	119	12/11/2024	RAL
Zinc - BSD	EPA-6020	104	2		80	119	12/11/2024	RAL

Page 17 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



12/20/2024 EV24120018

C601

CLIENT:	ALL4 LLC	DATE:
	228 E. Champion St, Suite 101	ALS SDG#:
	Bellingham, WA 98225	WDOE ACCREDITATION:
CLIENT CONTACT:	Matt Roberts	
CLIENT PROJECT:	HFS OWS AOC-2	

#### MATRIX SPIKE RESULTS

ALS Test Batch ID: 221590 - Soil Parent Sample: B-2-14ft - 120324

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	MIN	LIMITS Max	RPD	ANALYSIS DATE	ANALYSIS BY
Naphthalene - MS	EPA-8270 SIM	120			813	0	976	20	150		12/10/2024	DS
Naphthalene - MS	EPA-8270 SIM	120			813	0	976	20	150		12/10/2024	DS
Naphthalene - MSD	EPA-8270 SIM	113	6		813	0	920	20	150	30	12/11/2024	DS
Naphthalene - MSD	EPA-8270 SIM	113	6		813	0	920	20	150	30	12/11/2024	DS
2-Methylnaphthalene - MS	EPA-8270 SIM	123			813	0	1000	20	150		12/10/2024	DS
2-Methylnaphthalene - MS	EPA-8270 SIM	123			813	0	1000	20	150		12/10/2024	DS
2-Methylnaphthalene - MSD	EPA-8270 SIM	115	7		813	0	937	20	150	30	12/11/2024	DS
2-Methylnaphthalene - MSD	EPA-8270 SIM	115	7		813	0	937	20	150	30	12/11/2024	DS
1-Methylnaphthalene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
1-Methylnaphthalene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
1-Methylnaphthalene - MSD	EPA-8270 SIM	116	6		813	0	947	20	150	30	12/11/2024	DS
1-Methylnaphthalene - MSD	EPA-8270 SIM	116	6		813	0	947	20	150	30	12/11/2024	DS
Acenaphthylene - MS	EPA-8270 SIM	129			813	0	1050	20	150		12/10/2024	DS
Acenaphthylene - MS	EPA-8270 SIM	129			813	0	1050	20	150		12/10/2024	DS
Acenaphthylene - MSD	EPA-8270 SIM	121	6		813	0	981	20	150	30	12/11/2024	DS
Acenaphthylene - MSD	EPA-8270 SIM	121	6		813	0	981	20	150	30	12/11/2024	DS
Acenaphthene - MS	EPA-8270 SIM	126		SQ2	813	0	1020 SQ2	41	107		12/10/2024	DS
Acenaphthene - MS	EPA-8270 SIM	126		SQ2	813	0	1020 SQ2	41	107		12/10/2024	DS
Acenaphthene - MSD	EPA-8270 SIM	118	7	SQ2	813	0	958 SQ2	41	107	13	12/11/2024	DS
Acenaphthene - MSD	EPA-8270 SIM	118	7	SQ2	813	0	958 SQ2	41	107	13	12/11/2024	DS
Fluorene - MS	EPA-8270 SIM	127			813	0	1030	20	150		12/10/2024	DS
Fluorene - MS	EPA-8270 SIM	127			813	0	1030	20	150		12/10/2024	DS
Fluorene - MSD	EPA-8270 SIM	120	6		813	0	972	20	150	30	12/11/2024	DS
Fluorene - MSD	EPA-8270 SIM	120	6		813	0	972	20	150	30	12/11/2024	DS
Phenanthrene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
Phenanthrene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
Phenanthrene - MSD	EPA-8270 SIM	119	4		813	0	968	20	150	30	12/11/2024	DS
Phenanthrene - MSD	EPA-8270 SIM	119	4		813	0	968	20	150	30	12/11/2024	DS
Anthracene - MS	EPA-8270 SIM	131			813	0	1070	20	150		12/10/2024	DS
Anthracene - MS	EPA-8270 SIM	131			813	0	1070	20	150		12/10/2024	DS
Anthracene - MSD	EPA-8270 SIM	125	5		813	0	1020	20	150	30	12/11/2024	DS
Anthracene - MSD	EPA-8270 SIM	125	5		813	0	1020	20	150	30	12/11/2024	DS
Fluoranthene - MS	EPA-8270 SIM	135			813	0	1100	20	150		12/10/2024	DS
Fluoranthene - MS	EPA-8270 SIM	135			813	0	1100	20	150		12/10/2024	DS
Fluoranthene - MSD	EPA-8270 SIM	129	5		813	0	1050	20	150	30	12/11/2024	DS
Fluoranthene - MSD	EPA-8270 SIM	129	5		813	0	1050	20	150	30	12/11/2024	DS
Pyrene - MS	EPA-8270 SIM	132			813	0	1070	18	136		12/10/2024	DS
Pyrene - MS	EPA-8270 SIM	132			813	0	1070	18	136		12/10/2024	DS

Page 18 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

## www.alsglobal.com



MATRIX SPIKE RESULTS

#### CLIENT:

ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts

DATE: ALS SDG#: WDOE ACCREDITATION:

12/20/2024 EV24120018 C601

CLIENT CONTACT: CLIENT PROJECT:

HFS OWS AOC-2

				•••••		PARENT SAMPLE			LIMITS		ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ADDED	RESULT	074	MIN	MAX	RPD	DATE	50
Pyrene - MSD	EPA-8270 SIM	120	10		813	0	974	18	136	18	12/11/2024	DS
Pyrene - MSD	EPA-8270 SIM	120	10		813	0	974	18	136	18	12/11/2024	DS
Benzo[A]Anthracene - MS	EPA-8270 SIM	128			813	0	1040	20	150		12/10/2024	DS
Benzo[A]Anthracene - MS	EPA-8270 SIM	128	_		813	0	1040	20	150		12/10/2024	DS
Benzo[A]Anthracene - MSD	EPA-8270 SIM	121	6		813	0	985	20	150	30	12/11/2024	DS
Benzo[A]Anthracene - MSD	EPA-8270 SIM	121	6		813	0	985	20	150	30	12/11/2024	DS
Chrysene - MS	EPA-8270 SIM	137			813	0	1110	20	150		12/10/2024	DS
Chrysene - MS	EPA-8270 SIM	137			813	0	1110	20	150		12/10/2024	DS
Chrysene - MSD	EPA-8270 SIM	127	8		813	0	1030	20	150	30	12/11/2024	DS
Chrysene - MSD	EPA-8270 SIM	127	8		813	0	1030	20	150	30	12/11/2024	DS
Benzo[B]Fluoranthene - MS	EPA-8270 SIM	130			813	0	1060	20	150		12/10/2024	DS
Benzo[B]Fluoranthene - MS	EPA-8270 SIM	130			813	0	1060	20	150		12/10/2024	DS
Benzo[B]Fluoranthene - MSD	EPA-8270 SIM	123	6		813	0	998	20	150	30	12/11/2024	DS
Benzo[B]Fluoranthene - MSD	EPA-8270 SIM	123	6		813	0	998	20	150	30	12/11/2024	DS
Benzo[K]Fluoranthene - MS	EPA-8270 SIM	157		SQ2	813	0	1280 SQ2	20	150		12/10/2024	DS
Benzo[K]Fluoranthene - MS	EPA-8270 SIM	157		SQ2	813	0	1280 SQ2	20	150		12/10/2024	DS
Benzo[K]Fluoranthene - MSD	EPA-8270 SIM	142	10		813	0	1150	20	150	30	12/11/2024	DS
Benzo[K]Fluoranthene - MSD	EPA-8270 SIM	142	10		813	0	1150	20	150	30	12/11/2024	DS
Benzo[A]Pyrene - MS	EPA-8270 SIM	135			813	0	1100	20	150		12/10/2024	DS
Benzo[A]Pyrene - MS	EPA-8270 SIM	135			813	0	1100	20	150		12/10/2024	DS
Benzo[A]Pyrene - MSD	EPA-8270 SIM	125	8		813	0	1020	20	150	30	12/11/2024	DS
Benzo[A]Pyrene - MSD	EPA-8270 SIM	125	8		813	0	1020	20	150	30	12/11/2024	DS
Indeno[1,2,3-Cd]Pyrene - MS	EPA-8270 SIM	131			813	0	1070	20	150		12/10/2024	DS
Indeno[1,2,3-Cd]Pyrene - MS	EPA-8270 SIM	131			813	0	1070	20	150		12/10/2024	DS
Indeno[1,2,3-Cd]Pyrene - MSD	EPA-8270 SIM	126	4		813	0	1020	20	150	30	12/11/2024	DS
Indeno[1,2,3-Cd]Pyrene - MSD	EPA-8270 SIM	126	4		813	0	1020	20	150	30	12/11/2024	DS
Dibenz[A,H]Anthracene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
Dibenz[A,H]Anthracene - MS	EPA-8270 SIM	124			813	0	1010	20	150		12/10/2024	DS
Dibenz[A,H]Anthracene - MSD	EPA-8270 SIM	120	3		813	0	973	20	150	30	12/11/2024	DS
Dibenz[A,H]Anthracene - MSD	EPA-8270 SIM	120	3		813	0	973	20	150	30	12/11/2024	DS
BenzolG.H.IIPervlene - MS	EPA-8270 SIM	122			813	0	992	20	150		12/10/2024	DS
Benzo[G.H.I]Pervlene - MS	EPA-8270 SIM	122			813	0	992	20	150		12/10/2024	DS
Benzo[G.H.]]Pervlene - MSD	EPA-8270 SIM	119	2		813	0	970	20	150	30	12/11/2024	DS
BenzolG H I]Pervlene - MSD	EPA-8270 SIM	119	2		813	0	970	20	150	30	12/11/2024	DS
	2		-		010		0.0	_0		50	,	20
					SPIKE	SAMPLE	CALC		LIMITS		ANALYSIS	ANALYSIS BY
SURROGATE	METHOD	%REC	RPD	QUAL	ADDED	RESULT	RESULT*	MIN	MAX	RPD	DATE	
Terphenyl-d14 - MS	EPA-8270 SIM	140		DS1	813	0	140 DS1	58	132		12/10/2024	DS
Terphenyl-d14 - MS	EPA-8270 SIM	140		DS1	813	0	140 DS1	58	132		12/10/2024	DS

Page 19 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

Environmental 🐊

www.alsglobal.com



CLIENT:	ALL4 LLC	DATE:
	228 E. Champion St, Suite 101	ALS SDG#:
	Bellingham, WA 98225	WDOE ACCREDITATION:
CLIENT CONTACT:	Matt Roberts	
CLIENT PROJECT:	HFS OWS AOC-2	
	MATRI	X SPIKE RESULTS

DS1 - Surrogate outside of control limits due to matrix effect.

SQ2 - Spike outside of control limits due to matrix effect.

*Calc Result = (Sample Result - Parent Sample Result)

APPROVED BY

12/20/2024 EV24120018

C601

Carl Nott Laboratory Director

Page 20 of 20

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

Environmental 🏬

www.alsglobal.com

Image: Specify: Character:       Image: Specify: Character:       Image: Specify: Specify	INWTPH-GX   INWTPH-GX BTEX by EPA 8021 BTEX by EPA 8260 T Organic, Metals & Inorganic Freels & Hydrocarbon Am Netals & Inorganic Norganic Netals & Inorganic Netals & Inorg	$\frac{US}{482-2} = \frac{AAAL}{UC}$ $\frac{UC}{484-45} = \frac{AAAL}{12} = \frac{AAAL}{12}$	PROJECT ID: HES DIUS         REPORT TO COMPANY: ALLA UC PROJECT: Mait Calu         ADDRESS: ZZB E. CL         PHONE: 3LO -757 - 93         E-MAIL: WARDER: Mait Calu         PHONE: 3LO -757 - 93         E-MAIL: WARDER: Mait Calu         PHONE: 3LO -757 - 93         E-MAIL: WARDER: CL         Immode to the formation: ATTENTION:         ADDRESS:         2. E-1 - 14 Ft - 1202         3. E-1 - 20 Ft - 1202         5. E-2 - 14 Ft - 1202         5. E-2 - 14 Ft - 1202         5. E-2 - 14 Ft - 1202         6.         7.         8.         9.         9.         9.         SPECIAL INSTRUCTIONS A         SIGNATURES (Name, Con         1. Relinquished By: Mathere: AFRET         Received By: AFRET         2. Relinquished By: AFRET
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

*Turnaround	
request	
less	
than	
standard	
may	
i,	

Hush Charge

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



3 1

SAMPLE	RECEIVING	CHECKLIST

		I CALCALIST			
Client: AN 4 LLC Project: HFC CINS	AACEA	ALS Job #:	24/200 el 4	18	
			<u>↓/_~~_</u> ] =		<u> </u>
		Login Time:	30		
		Login By: <u>BW</u>			
Type of Shipping Container:	Cooler Box Other:	Shipped Via: Fe UI F State Fa State State State F State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State State Stat	edEx Ground dEx Express S ternal Courier S Courier and Delivered		
How Many?	Were custody seals on the outside of	f the shipping container?	Yes	No N/A	
	Was CoC filled out properly? (ir	Name: ink.signed_dated_etc.\			
·	Di	d all bottles have labels?			
	Did all bottle labels a	nd tags agree with CoC?			
	Did all bottles a	ceived within hold time?			
	Was sufficient amount of sample s	sent for tests requested?			
	Was correct preserva	ation added to samples?			
	Wetchem test containers marka	ded to subcontract bin?			
	Short hold time test container	's delivered to analysts?			
Pubbles in second and the	, VOA via	ils checked for bubbles?			
bubbles in sample number(s	):		-k	- q p	
	Low kits:	5035A kits received?			
		5035A kits returned?			
Low kits: High kits: _					
Temperature upon receipt:	On io	ce? 🖉 🗌 Y N	Thermometer	ID: 187	
Other discrepancies:		• • •			
Was client contacted? \ Outcome of call:	Who was called? By	whom?	_ Date:	 	
			**		
ALS Environmental – Everett 8620 Holly Dr. STE 100 Everett, WA 98012 (425) 356 - 2600			Docu	ment ID: EVT-PM-F Version	२СРТ n 1.1
			的是一些事实的是一种和自己的问题。		(M2Nerninenne

## APPENDIX H -SOIL MTCA TPH METHOD C WORKSHEETS

Measured Soil TPH Concent	Date:04/10/23Site Name:HF Sinclair OWS D StSample Name:B-1-23 6'tration, mg/kg:51.01					
	Summary of Calculation Result	S				
Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measu	red Soil Conc		
		conc (g,g)	HI or Risk	Pass or Fail		
	Method B: Unrestricted Land Use		1	1		
<u>Soil Direct Contact</u>	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass		
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass		
Ingestion and Dermal Contact:	Method C: Industrial Land Use		1	1		
Human Health	TPH Soil Cleanup Level (@ HI = 1)	24,000	2.1E-03	Pass		
	Cancer Risk (1)		5.1E-09	Pass		
	Soil Concentration Protective of Target TPH Groundwater	Concentration	1			
<u>Soil Leaching</u> Protection of Groundwater Quality	Protective TPH Soil Concentration, mg/kg =     170      Pass					
	Target TPH Groundwater Concentration (μg/L)       500     Method A Potable Groundwater					
Remark:	Petroleum fractionated data (EPH/VPH) and individual compour potable drinking water cleanup level of 340 μg/L (see Worksheet default Method A value of 500 μg/L. As a result, the Method A de is selected as the target groundwater concentration to develop a potable groundwater.	nds tested in groundw t B2.1A). This level is t efault potable ground t TPH concentration ir	ater generated a below the most re water cleanup le n soil that is prote	n Method B estrictive vel of 500 μg/L ective of		
Notes: (1) Known or suspected carcino and must meet compliance with s chemicals and pathways at the sit	<b>genic chemicals</b> that contribute to unacceptable cancer risk wit coil cleanup standards both on an individual basis and and when e. <i>See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B</i> (	thin the petroleum m accounting for cumu (Potable Water Ingest	ixture are evalua Ilative risk from <i>ion)</i> .	ated separately multiple		

	Date:04/10/23Site Name:HF Sinclair OWS D StSample Name:B-2-23 6'					
Measured Soil TPH Concer	itration, mg/kg: 1,576.01			_		
	Summery of Calculation Result					
		<u>,</u>				
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc		
		Conc (mg/kg)	HI or Risk	Pass or Fail		
	Method B: Unrestricted Land Use					
<u>Soil Direct Contact</u>	TPH Soil Cleanup Level (@ HI =1)	2,600	6.1E-01	Pass		
Protection of Soil Incidental	Cancer Risk (1)		2.8E-06	Fail		
Ingestion and Dermal Contact:	Method C: Industrial Land Use					
Human Health	TPH Soil Cleanup Level (@ HI = 1)	33,000	4.8E-02	Pass		
	Cancer Risk (1)		1.3E-07	Pass		
	Soil Concentration Protective of Target TPH Groundwater Concentration					
	Protective TPH Soil Concentration, mg/kg =	170		Fail		
<u>Soil Leaching</u>						
Quanty	Target TPH Groundwater Concentration (µg/L)					
	500 Method A Potable Groundwater					
Remark	: Petroleum fractionated data (EPH/VPH) and individual compound potable drinking water cleanup level of 340 μg/L (see Worksheet I Method A value of 500 μg/L. As a result, the Method A default pot selected as the target groundwater concentration to develop a TP groundwater.	ls tested in groundwat 32.1A). This level is be able groundwater cle H concentration in so	ter generated a l low the most res anup level of 50 il that is protecti	Чethod B trictive default ) μg/L is ve of potable		
Notes: (1) Known or suspected carcing and must meet compliance with	<b>genic chemicals</b> that contribute to unacceptable cancer risk with soil cleanup standards both on an individual basis and and when a	in the petroleum mix accounting for cumul	ture are evaluat ative risk from rr	ed separately nultiple		

Measured Soil TPH Concen	Date:04/13/23Site Name:HF Sinclair OWS D StSample Name:B-3-23 5'tration, mg/kg:100.72			
	Summary of Calculation Results	5		
		Protective TPH	With Measu	red Soil Conc
Exposure Pathway	Method/Goal	Conc (mg/kg)	HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use			
Soil Direct Contact	TPH Soil Cleanup Level (@ HI =1)	1,000	1.0E-01	Pass
Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	Cancer Risk (1)		7.0E-07	Pass
	Method C: Industrial Land Use			L
	TPH Soil Cleanup Level (@ HI = 1)	18,000	5.6E-03	Pass
	Cancer Risk (1)		6.7E-08	Pass
	Soil Concentration Protective of Target TPH Groundwater C	oncentration	_	
	Protective TPH Soil Concentration, mg/kg =	170		Pass
<u>Soil Leaching</u>	1			
Protection of Groundwater				
Quanty	Target TPH Groundwater Concentration (μg/L)			
	500 Method A Potable Groundwater			
Remark:	Petroleum fractionated data (EPH/VPH) and individual compound potable drinking water cleanup level of 340 $\mu$ g/L (see Worksheet I Method A value of 500 $\mu$ g/L. As a result, the Method A default pot selected as the target groundwater concentration to develop a TP groundwater.	ls tested in groundwar 82.1A). This level is be able groundwater clea H concentration in soi	ter generated a N low the most rest anup level of 500 I that is protectiv	1ethod Β trictive default μg/L is re of potable
Notes: (1) Known or suspected carcino and must meet compliance with s chemicals and pathways at the site	<b>genic chemicals</b> that contribute to unacceptable cancer risk with oil cleanup standards both on an individual basis and and when a e. See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Pr	in the petroleum mixi ccounting for cumula otable Water Ingestion	ture are evaluate tive risk from mi 1).	d separately ultiple

7490 through ~7494).

Measured Soil TPH Concent	Date: 04/13/23 Site Name: HF Sinclair OWS D St Sample Name: B-4-23 5.5' ration, mg/kg: 159.01			
	Summary of Calculation Results	5		
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc
			HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use			
Soil Direct Contact	TPH Soil Cleanup Level (@ HI =1)	1,200	1.3E-01	Pass
Protection of Soil Incidental	Cancer Risk (1)		6.8E-07	Pass
Ingestion and Dermal Contact:	Method C: Industrial Land Use			
Human Health	TPH Soil Cleanup Level (@ HI = 1)	23,000	7.0E-03	Pass
	Cancer Risk (1)		3.9E-08	Pass
	Soil Concentration Protective of Target TPH Groundwater Co	oncentration		
Soil Leaching	Protective TPH Soil Concentration, mg/kg =	170		Pass
Protection of Groundwater				
Quality .	T			
	Target TPH Groundwater Concentration ( $\mu g/L$ )500Method A Potable Groundwater			
Remark:	Petroleum fractionated data (EPH/VPH) and individual compound potable drinking water cleanup level of 340 μg/L (see Worksheet I Method A value of 500 μg/L. As a result, the Method A default pot selected as the target groundwater concentration to develop a TP groundwater.	ls tested in groundwa B2.1A). This level is be able groundwater cle H concentration in so	ter generated a N low the most res anup level of 500 il that is protectiv	1ethod B trictive default ) µg/L is /e of potable
Notes: (1) Known or suspected carcinog and must meet compliance with so chemicals and pathways at the site	<b>Tenic chemicals</b> that contribute to unacceptable cancer risk with bil cleanup standards both on an individual basis and and when a See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Page 1)	in the petroleum mix ccounting for cumula otable Water Ingestio	ture are evaluate itive risk from m ŋ).	d separately ultiple

7490 through ~7494).

Measured Soil TPH Concen	Date:         12/02/24           Site Name:         OWS AOC-2 B-Street           Sample Name:         B-1-14 ft-120224           tration, mg/kg:         83.13			
	Summary of Calculation Result	S		
Exposure Pathway	Method/Goal	Protective TPH Conc (ma/ka)	With Measu	red Soil Conc
			HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use		T	
Soil Direct Contact	TPH Soil Cleanup Level (@ HI =1)	2,200	3.7E-02	Pass
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass
Ingestion and Dermal Contact:	Method C: Industrial Land Use			
Human Health	TPH Soil Cleanup Level (@ HI = 1)	40,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
	Soil Concentration Protective of Target TPH Groundwater	Concentration		
Soil Leaching	Protective TPH Soil Concentration, mg/kg =	830		Pass
Protection of Groundwater				
Quality	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark	Petroleum fractionated data (EPH/VPH) and individual compour potable drinking water cleanup level of 340 μg/L (see Worksheet default Method A value of 500 μg/L. As a result, the Method A de is selected as the target groundwater concentration to develop a potable groundwater.	nds tested in groundw t B2.1A). This level is b efault potable ground t TPH concentration ir	ater generated a velow the most re water cleanup le a soil that is prote	i Method B estrictive vel of 500 μg/L ective of
Notes: (1) Known or suspected carcinc and must meet compliance with s chemicals and pathways at the sit	<b>Genic chemicals</b> that contribute to unacceptable cancer risk wi soil cleanup standards both on an individual basis and and wher e. See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B	thin the petroleum m accounting for cumu (Potable Water Ingest	ixture are evalua Ilative risk from <i>ion)</i> .	ated separately multiple

	Date: 12/02/24			
	Site Name: OWS AOC-2 B-Street			
	Sample Name: B-1-16 ft-120224			
Measured Soil TPH Conce	ntration, mg/kg: 51.13			
	Summary of Calculation Result	is		
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc
		Conc (mg/kg)	HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use		<u> </u>	
Soil Direct Contact	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass
Ingestion and Dermal Contact: Human Health	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	24,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
	Soil Concentration Protective of Target TPH Groundwater	Concentration		
	Protective TPH Soil Concentration, mg/kg =	300		Pass
<u>Soil Leaching</u>				
Quality	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Rema	rk: Petroleum fractionated data (EPH/VPH) and individual compo	unds tested in ground	water generated	d a Method B
	potable drinking water cleanup level of 340 µg/L (see Workshe	et B2.1A). This level is	s below the mos	t restrictive
	default Method A value of 500 $\mu$ g/L. As a result, the Method A $\alpha$	default potable groun	dwater cleanup	level of 500
	$\mu$ g/L is selected as the target groundwater concentration to dev	elop a TPH concentre	ation in soil that	t is protective
	of potable groundwater.			

(1) Known or suspected carcinogenic chemicals that contribute to unacceptable cancer risk within the petroleum mixture are evaluated separately and must meet compliance with soil cleanup standards both on an individual basis and and when accounting for cumulative risk from multiple chemicals and pathways at the site. *See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Potable Water Ingestion).* 

	Date: 12/02/24			
	Site Name: OWS AOC-2 B-Street			
	Sample Name: B-1-20 ft-120224			
Measured Soil TPH Conce	ntration, mg/kg: 51.13			
	Summary of Calculation Result	is		
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc
		Conc (mg/kg)	HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use		<u> </u>	
<u>Soil Direct Contact</u>	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass
Ingestion and Dermal Contact:	Method C: Industrial Land Use			
luman Health	TPH Soil Cleanup Level (@ HI = 1)	24,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
	Soil Concentration Protective of Target TPH Groundwater	Concentration		
	Protective TPH Soil Concentration, mg/kg =	300		Pass
<u>Soil Leaching</u>				
Quality	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Rema	rk: Petroleum fractionated data (EPH/VPH) and individual compo	unds tested in ground	water generated	d a Method B
	potable drinking water cleanup level of 340 µg/L (see Workshe	et B2.1A). This level is	s below the most	t restrictive
	default Method A value of 500 μg/L. As a result, the Method A α	default potable groun	dwater cleanup	level of 500
	$\mu$ g/L is selected as the target groundwater concentration to dev	elop a TPH concentre	ation in soil that	t is protective
	of potable groundwater.			

separately and must meet compliance with soil cleanup standards both on an individual basis and and when accounting for cumulative risk from multiple chemicals and pathways at the site. See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Potable Water Ingestion).

	Date: 12/02/24			
	Site Name: OWS AOC-2 B-Street			
	Sample Name: B-2-14 ft-120224			
Measured Soil TPH Conce	ntration, mg/kg: 51.13			
	Summary of Calculation Result	ts		
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc
		Conc (mg/kg)	HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use		<u> </u>	<u> </u>
<u>Soil Direct Contact</u>	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass
Ingestion and Dermal Contact: Human Health	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	24,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
	Soil Concentration Protective of Target TPH Groundwater	Concentration	,	· · · · · · · · · · · · · · · · · · ·
	Protective TPH Soil Concentration, mg/kg =	300		Pass
<u>Soil Leaching</u>				
Protection of Groundwater				
Quality	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Rema	rk: Petroleum fractionated data (EPH/VPH) and individual compo	unds tested in ground	water generated	d a Method B
	potable drinking water cleanup level of 340 µg/L (see Workshe	et B2.1A). This level is	s below the mos	t restrictive
	default Method A value of 500 $\mu$ g/L. As a result, the Method A $\alpha$	default potable groun	dwater cleanup	level of 500
	$\mu$ g/L is selected as the target groundwater concentration to dev	elop a TPH concentro	ation in soil that	t is protective
	of potable groundwater.			

(1) Known or suspected carcinogenic chemicals that contribute to unacceptable cancer risk within the petroleum mixture are evaluated separately and must meet compliance with soil cleanup standards both on an individual basis and and when accounting for cumulative risk from multiple chemicals and pathways at the site. *See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Potable Water Ingestion).* 

	Date: 12/02/24			
	Site Name: OWS AOC-2 B-Street			
	Sample Name: B-2-16 ft-120224			
Measured Soil TPH Conce	ntration, mg/kg: 51.13			
	Summary of Calculation Result	ts		
Exposure Pathway	Method/Goal	Protective TPH	With Measu	red Soil Conc
		Conc (mg/kg)	HI or Risk	Pass or Fail
	Method B: Unrestricted Land Use		<u> </u>	<u> </u>
<u>Soil Direct Contact</u>	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
Protection of Soil Incidental	Cancer Risk (1)		1.1E-07	Pass
Ingestion and Dermal Contact: Human Health	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	24,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
	Soil Concentration Protective of Target TPH Groundwater	Concentration		
	Protective TPH Soil Concentration, mg/kg =	300		Pass
<u>Soil Leaching</u>				
Protection of Groundwater				
Quality	Target TPH Groundwater Concentration (µg/L)			*****
	500 Method A Potable Groundwater			
Rema	rk: Petroleum fractionated data (EPH/VPH) and individual compo	unds tested in ground	water generated	d a Method B
	potable drinking water cleanup level of 340 µg/L (see Workshe	et B2.1A). This level is	; below the most	t restrictive
	default Method A value of 500 μg/L. As a result, the Method A α	default potable groun	dwater cleanup	level of 500
	$\mu$ g/L is selected as the target groundwater concentration to dev	velop a TPH concentra	ation in soil that	t is protective
	of potable groundwater.			

(1) Known or suspected carcinogenic chemicals that contribute to unacceptable cancer risk within the petroleum mixture are evaluated separately and must meet compliance with soil cleanup standards both on an individual basis and and when accounting for cumulative risk from multiple chemicals and pathways at the site. *See Worksheets: A2.1B and A3.1B (Soil Direct Contact); B2.1B (Potable Water Ingestion).* 

# APPENDIX I -GROUNDWATER LABORATORY ANALYTICAL DATA REPORTS



December 31, 2024

Mr. Matt Roberts ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225

Dear Mr. Roberts,

On December 13th, 4 samples were received by our laboratory and assigned our laboratory project number EV24120097. The project was identified as your HFS OWS AOC-2. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

Page 1 of 19

www.alsglobal.com



CLIENT:	ALL4 LLC 228 E. Champion 3 Bellingham, WA 98	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225		DATE: ALS JOB#: ALS SAMPLE#:	12/31/20 EV2412 EV2412	)24 0097 0097-01	
CLIENT CONTACT:	CT: Matt Roberts DATE RECEIVED:		12/13/20	)24			
CLIENT PROJECT:	HFS OWS AOC-2		COL	LECTION DATE:	12/13/20	024 9:55:00	AM
CLIENT SAMPLE ID	W-131		WDOE AG	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING			ΔΝΔΙ ΥSIS	
	METHOD		LIMITS	FACTOR		DATE	BY
C5-C6 Aliphatics	NWVPH	U	50	1	UNITS UG/L	12/18/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C12-C13 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	79	1	UG/L	12/27/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C8-C10 Aromatics	NWEPH	U	79	1	UG/L	12/27/2024	FAL
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
Hexane	EPA-8260	U	6.8	1	UG/L	12/17/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/17/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/17/2024	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Bis(2-Chloroethyl)Ether	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobenzene	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobutadiene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Phenol	EPA-8270 SIM	U	0.050	1	UG/L	12/16/2024	DS
2-Chlorophenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2,4-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,6-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
4-Chloro-3-Methylphenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,6-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,5-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS

Page 2 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental


CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225			DATE: ALS JOB#: ALS SAMPLE#:		12/31/2024 EV24120097 EV24120097-01		
CLIENT CONTACT:	Matt Roberts		D	ATE RECEIVED:	12/13/20	)24		
CLIENT PROJECT:	HFS OWS AOC-2		COL	LECTION DATE:	12/13/20	)24 9:55:00	AM	
CLIENT SAMPLE ID	W-131		WDOE AC	CCREDITATION:	C601			
		SAMPLE	DATA RESULTS					
ΔΝΔΙ ΥΤΕ	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR		ANALYSIS DATE	ANALYSIS BY	
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Dibenzofuran	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
2,3,4,6-Tetrachlorophenol	EPA-8270 SIM	U	0.040	1	UG/L	12/16/2024	DS	
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Pentachlorophenol	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS	
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Carbazole	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS	
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Butylbenzylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Bis(2-Ethylhexyl)Phthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Di-N-Octylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Total PAH	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Chromium (VI) (Dissolved)	EPA-7196	U	10	1	UG/L	12/13/2024	MJC	
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	12/13/2024	RAL	
Chromium (III) (Dissolved)	Calc-Cr3	U	2.0	1	UG/L	12/30/2024	CLC	
Arsenic (Dissolved)	EPA-200.8	5.1	1.0	1	UG/L	12/17/2024	RAL	
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL	
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/17/2024	RAL	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL	
Nickel (Dissolved)	EPA-200.8	2.0	2.0	1	UG/L	12/17/2024	RAL	
Zinc (Dissolved)	EPA-200.8	U	2.5	1	UG/L	12/17/2024	RAL	
SURROGATE	METHOD	%REC				ANALYSIS DATE	ANALYSIS BY	
C25	NWEPH	72.3				12/27/2024	FAI	
p-Terphenyl	NWEPH	85.0				12/27/2024	FAI	
Toluene-d8	EPA-8260	104				12/17/2024	DLC	
2.4.6-Tribromophenol	EPA-8270 SIM	94.8				12/16/2024	DS	
, ,,,							_ U	

#### Page 3 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



		CERTIFICA	TE OF ANALYSIS		
CLIENT:	ALL4 LLC		DATE:	12/31/2024	
	228 E. Champion St	t, Suite 101	ALS JOB#:	EV24120097	
	Bellingham, WA 982	225	ALS SAMPLE#:	EV24120097-01	
CLIENT CONTACT:	Matt Roberts		DATE RECEIVED:	12/13/2024	
CLIENT PROJECT:	HFS OWS AOC-2		COLLECTION DATE:	12/13/2024 9:55:00	AM
CLIENT SAMPLE ID	W-131		WDOE ACCREDITATION:	C601	
		SAMPLE D	DATA RESULTS		
SURROGATE	METHOD	%REC		ANALYSIS / DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270 SIM	87.8		12/16/2024	DS

U - Analyte analyzed for but not detected at level above reporting limit.

Page 4 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion S Bellingham, WA 98 Matt Roberts HFS OWS AOC-2 W-130	St, Suite 101 3225 SAMPLE	DA COLI WDOE AC	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CREDITATION:	12/31/20 EV2412 EV2412 12/13/20 12/13/20 C601	)24 0097 0097-02 )24 )24 8:40:00	AM
			REPORTING				
ΔΝΔΙ ΥΤΕ	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C12-C13 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	80	1	UG/L	12/27/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C8-C10 Aromatics	NWEPH	U	80	1	UG/L	12/27/2024	FAL
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
Hexane	EPA-8260	U	6.8	1	UG/L	12/17/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/17/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/17/2024	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Bis(2-Chloroethyl)Ether	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobenzene	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobutadiene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Phenol	EPA-8270 SIM	U	0.050	1	UG/L	12/16/2024	DS
2-Chlorophenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2,4-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,6-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
4-Chloro-3-Methylphenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,6-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS

#### Page 5 of 19

ALS Group USA, Corp dba ALS Environmental

0.020

0.020

PHONE 425-356-2600 FAX 425-356-2626 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208

U

U

UG/L

UG/L

12/16/2024

12/16/2024

DS

DS

1

1

EPA-8270 SIM

EPA-8270 SIM

2,4,5-Trichlorophenol

Acenaphthylene

## www.alsglobal.com



CERTIFICATE OF AN	ALYSIS
	Г

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham WA 08225			DATE: ALS JOB#:	12/31/2024 EV24120097 EV24120097-02			
	Matt Poborte	0220	Л			EV24120097-02		
CLIENT PROJECT:			COL	I ECTION DATE:	12/13/20	)24 )24 8·40·00	ΔΜ	
CLIENT SAMPLE ID	W-130				C601	24 0.40.00		
	VV-130	SAMDIE		SCREDITATION.	0001			
		SAIVIFLE	DATA RESULTS					
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY	
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Dibenzofuran	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
2,3,4,6-Tetrachlorophenol	EPA-8270 SIM	U	0.040	1	UG/L	12/16/2024	DS	
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Pentachlorophenol	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS	
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Carbazole	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS	
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Butylbenzylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Bis(2-Ethylhexyl)Phthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Di-N-Octylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS	
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Total PAH	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS	
Chromium (VI) (Dissolved)	EPA-7196	U	10	1	UG/L	12/13/2024	MJC	
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	12/13/2024	RAL	
Chromium (III) (Dissolved)	Calc-Cr3	U	2.0	1	UG/L	12/30/2024	CLC	
Arsenic (Dissolved)	EPA-200.8	2.4	1.0	1	UG/L	12/17/2024	RAL	
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL	
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/17/2024	RAL	
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL	
Nickel (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/17/2024	RAL	
Zinc (Dissolved)	EPA-200.8	4.4	2.5	1	UG/L	12/17/2024	RAL	
						ANALYSIS	ANALYSIS	
SURROGATE	METHOD	%REC				DATE	BY	
C25	NWEPH	63.0				12/27/2024	FAL	
p-Terphenyl	NWEPH	82.4				12/27/2024	FAL	
Toluene-d8	EPA-8260	103				12/17/2024	DLC	
2,4,6-Tribromophenol	EPA-8270 SIM	92.5				12/16/2024	DS	
Terphenyl-d14	EPA-8270 SIM	86.2				12/16/2024	DS	

#### Page 6 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental



CERTIFICATE OF ANALYSIS								
CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-02					
	Matt Roberts		12/13/2024 12/13/2024					
CLIENT PROJECT.	W-130	WDOE ACCREDITATION:	C601					
	SAN	MPLE DATA RESULTS						

U - Analyte analyzed for but not detected at level above reporting limit.

Page 7 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2 AOC2-DUP-1		D/ COLI WDOE AC	DATE: 12/31/2024 ALS JOB#: EV24120097 ALS SAMPLE#: EV24120097-03 DATE RECEIVED: 12/13/2024 COLLECTION DATE: 12/13/2024 7:00:0 WDOE ACCREDITATION: C601			
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS		ANALYSIS BY
C5-C6 Aliphatics	NW VPH	U	50	1	UG/L	12/18/2024	0SE
>C6-C8 Aliphatics	NW VPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NW VPH	U	50	1	UG/L	12/18/2024	055
>CTO-CT2 Aliphatics	NW VPH	U	50	1	UG/L	12/18/2024	055
>C8-C10 Alomatics	NW VPH	U	50	1	UG/L	12/18/2024	055
>C10-C12 Aromatics	NW VPH	U	50	1	UG/L	12/18/2024	055
>C12-C13 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	USE
>C8-C10 Aliphatics	NWEPH	U	79	1	UG/L	12/27/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C8-C10 Aromatics	NWEPH	U	79	1	UG/L	12/27/2024	FAL
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
Hexane	EPA-8260	U	6.8	1	UG/L	12/17/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/17/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/17/2024	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Bis(2-Chloroethyl)Ether	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobenzene	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobutadiene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Phenol	EPA-8270 SIM	U	0.050	1	UG/L	12/16/2024	DS
2-Chlorophenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2,4-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,6-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
4-Chloro-3-Methylphenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,6-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,5-Trichlorophenol	EPA-8270 SIM	U	0.022	1	UG/L	12/16/2024	DS
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS

Page 8 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

## www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion S Bellingham, WA 98 Matt Roberts HFS OWS AOC-2 AOC2-DUP-1	St, Suite 101 3225 SAMPLE	D, COL WDOE AC DATA RESULTS	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CCREDITATION:	12/31/20 EV2412 EV2412 12/13/20 C601	)24 0097 0097-03 )24 )24 7:00:00	AM
			REPORTING	DILUTION		ANALYSIS	ANALYSIS
ΔΝΔΙ ΥΤΕ	METHOD	<b>RESULTS</b>	LIMITS	FACTOR	UNITS	DATE	BY
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Dibenzofuran	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,3,4,6-Tetrachlorophenol	EPA-8270 SIM	U	0.040	1	UG/L	12/16/2024	DS
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Pentachlorophenol	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Carbazole	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Butylbenzylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Bis(2-Ethylhexyl)Phthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Di-N-Octylphthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Total PAH	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Chromium (VI) (Dissolved)	EPA-7196	U	10	1	UG/L	12/13/2024	MJC
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	12/13/2024	RAL
Chromium (III) (Dissolved)	Calc-Cr3	U	2.0	1	UG/L	12/30/2024	CLC
Arsenic (Dissolved)	EPA-200.8	2.3	1.0	1	UG/L	12/17/2024	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/17/2024	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	12/17/2024	RAL
Nickel (Dissolved)	EPA-200.8	U	2.0	1	UG/L	12/17/2024	RAL
Zinc (Dissolved)	EPA-200.8	U	2.5	1	UG/L	12/17/2024	RAL
SURROGATE	METHOD	%REC				DAIL	
C25	NWEPH	64.3				12/27/2024	FAL
p-Terphenyl	NWEPH	83.4				12/27/2024	FAL
Toluene-d8	EPA-8260	102				12/17/2024	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	82.8				12/16/2024	DS

#### Page 9 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

78.3

12/16/2024

DS

EPA-8270 SIM

Terphenyl-d14



CERTIFICATE OF ANALYSIS									
CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101	DATE: ALS JOB#:	12/31/2024 EV24120097						
	Bellingham, WA 98225	ALS SAMPLE#:	EV24120097-03						
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/13/2024						
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/13/2024 7:00:00 AM						
CLIENT SAMPLE ID	AOC2-DUP-1	WDOE ACCREDITATION:	C601						
	SAMPLE DATA RESULTS								

U - Analyte analyzed for but not detected at level above reporting limit.

Page 10 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT: CLIENT CONTACT: CLIENT PROJECT: CLIENT SAMPLE ID	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2 AOC2-FEB-1		DA COLI WDOE AC	DATE: ALS JOB#: ALS SAMPLE#: ATE RECEIVED: LECTION DATE: CCREDITATION:	12/31/2024 EV24120097 EV24120097-04 12/13/2024 12/13/2024 8:00:00 AM C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
C5-C6 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C10-C12 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C12-C13 Aromatics	NWVPH	U	50	1	UG/L	12/18/2024	OSE
>C8-C10 Aliphatics	NWEPH	U	78	1	UG/L	12/27/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C8-C10 Aromatics	NWEPH	U	78	1	UG/L	12/27/2024	FAL
>C10-C12 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C12-C16 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C16-C21 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
>C21-C34 Aromatics	NWEPH	U	50	1	UG/L	12/27/2024	FAL
Hexane	EPA-8260	U	6.8	1	UG/L	12/17/2024	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/17/2024	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/17/2024	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/17/2024	DLC
Bis(2-Chloroethyl)Ether	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobenzene	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
Hexachlorobutadiene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Phenol	EPA-8270 SIM	U	0.050	1	UG/L	12/16/2024	DS
2-Chlorophenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2,4-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Naphthalene	EPA-8270 SIM	0.080	0.020	1	UG/L	12/16/2024	DS
2,6-Dichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
4-Chloro-3-Methylphenol	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	0.076	0.020	1	UG/L	12/16/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	0.077	0.020	1	UG/L	12/16/2024	DS
2,4,6-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
2,4,5-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Acenaphthylene	EPA-8270 SIM	0.088	0.020	1	UG/L	12/16/2024	DS

Page 11 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626



		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	ALL4_LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225		_	DATE: 12/31/2024 ALS JOB#: EV24120097 ALS SAMPLE#: EV24120097			
CLIENT CONTACT:	Matt Roberts		D/	ATE RECEIVED:	12/13/20	)24	
CLIENT PROJECT:	HFS OWS AOC-2		COLI	LECTION DATE:	12/13/20	)24 8:00:00	AM
CLIENT SAMPLE ID	AOC2-FEB-1		WDOE AC	CCREDITATION:	C601		
		SAMPLE	E DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Acenaphthene	EPA-8270 SIM	0.11	0.020	1	UG/L	12/16/2024	DS
Dibenzofuran	EPA-8270 SIM	0.090	0.020	1	UG/L	12/16/2024	DS
2,3,4,6-Tetrachlorophenol	EPA-8270 SIM	U	0.040	1	UG/L	12/16/2024	DS
Fluorene	EPA-8270 SIM	0.090	0.020	1	UG/L	12/16/2024	DS
Pentachlorophenol	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS
Phenanthrene	EPA-8270 SIM	0.10	0.020	1	UG/L	12/16/2024	DS
Anthracene	EPA-8270 SIM	0.097	0.020	1	UG/L	12/16/2024	DS
Carbazole	EPA-8270 SIM	U	0.50	1	UG/L	12/16/2024	DS
Fluoranthene	EPA-8270 SIM	0.11	0.020	1	UG/L	12/16/2024	DS
Pyrene	EPA-8270 SIM	0.099	0.020	1	UG/L	12/16/2024	DS
Butylbenzylphthalate	EPA-8270 SIM	0	2.0	1	UG/L	12/16/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	0.095	0.020	1	UG/L	12/16/2024	DS
Chrysene	EPA-8270 SIM	0.097	0.020	1	UG/L	12/16/2024	DS
Bis(2-Ethylhexyl)Phthalate	EPA-8270 SIM	U	2.0	1	UG/L	12/16/2024	DS
DI-N-Octylphthalate	EPA-8270 SIM	0	2.0	1	UG/L	12/16/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	0.090	0.020	1	UG/L	12/16/2024	DS
Benzo[K]Fluoranthene	EPA-8270 SIM	0.091	0.020	1	UG/L	12/16/2024	DS
Benzo[A]Pyrene	EPA-8270 SIM	0.085	0.020	1	UG/L	12/16/2024	DS
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	0.086	0.020	1	UG/L	12/16/2024	DS
	EPA-8270 SIM	0.077	0.020	1	UG/L	12/16/2024	DS
BenzolG,H,IJPerviene	EPA-8270 SIM	0.098	0.020	1	UG/L	12/16/2024	DS
	EPA-8270 SIM	1.6	0.020	1	UG/L	12/16/2024	DS MIC
Chromium (VI) (Dissolved)	EPA-7196	U	10	1	UG/L	12/13/2024	
Chromium (III) (Dissolved)	EPA-245.1	U	0.20	1		12/13/2024	RAL
Amonia (Dissolved)		0	2.0	1		12/30/2024	
Arsenic (Dissolved)	EPA-200.6	0	1.0	1		12/17/2024	
Caumum (Dissolved)	EPA-200.6	0	1.0	1		12/17/2024	
Load (Dissolved)	EFA-200.6	U	2.0	1		12/17/2024	
Nickel (Dissolved)	EPA 200.8	0	2.0	1		12/17/2024	
Zinc (Dissolved)	EPA-200.8	0	2.0	1		12/17/2024	RAL
	EFA-200.6	0	2.5	1	UG/L	12/11/2024	KAL
SUDDOCATE	METHOD	0/ DEC				ANALYSIS DATE	ANALYSIS BY
SURRUGATE	WEIHOD	70REU				40/07/000 :	
UZD	NWEPH	٥/.5 74 C				12/27/2024	FAL
p-i erpnenyi		(4.2				12/27/2024	FAL
1 Oluene-do		102				12/17/2024	DLC
	EFA-02/U SIM	01.0 70.0				12/10/2024	00
reiphenyi-ur4	EFA-02/U SIIVI	10.2				12/10/2024	03

#### Page 12 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

### www.alsglobal.com



CERTIFICATE OF ANALYSIS							
CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101	DATE: ALS JOB#:	12/31/2024 EV24120097				
	Bellingham, WA 98225	ALS SAMPLE#:	EV24120097-04				
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/13/2024				
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/13/2024 8:00:00 AM				
CLIENT SAMPLE ID	AOC2-FEB-1	WDOE ACCREDITATION:	C601				
	SAMPLE	E DATA RESULTS					

U - Analyte analyzed for but not detected at level above reporting limit.

Page 13 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



12/31/2024

C601

EV24120097

CLIENT:	ALL4 LLC	DATE:
	228 E. Champion St, Suite 101	ALS SDG#:
	Bellingham, WA 98225	WDOE ACCREDITATION:
CLIENT CONTACT:	Matt Roberts	
CLIENT PROJECT:	HFS OWS AOC-2	

#### LABORATORY BLANK RESULTS

## MBLK-R503540 - Batch R503540 - Water by NWVPH

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
C5-C6 Aliphatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C6-C8 Aliphatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C8-C10 Aliphatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C10-C12 Aliphatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C8-C10 Aromatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C10-C12 Aromatics	NWVPH	U	UG/L	50	12/18/2024	OSE
>C12-C13 Aromatics	NWVPH	U	UG/L	50	12/18/2024	OSE

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBLK-R503497 - Batch R503497 - Water by NWEPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	UG/L	78	12/27/2024	FAL
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C8-C10 Aromatics	NWEPH	U	UG/L	78	12/27/2024	FAL
>C10-C12 Aromatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C12-C16 Aromatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C16-C21 Aromatics	NWEPH	U	UG/L	50	12/27/2024	FAL
>C21-C34 Aromatics	NWEPH	U	UG/L	50	12/27/2024	FAL

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-121624W - Batch 221940 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Hexane	EPA-8260	U	UG/L	6.8	12/16/2024	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	12/16/2024	DLC
Benzene	EPA-8260	U	UG/L	2.0	12/16/2024	DLC
Toluene	EPA-8260	U	UG/L	2.0	12/16/2024	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	12/16/2024	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	12/16/2024	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	12/16/2024	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	12/16/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

Environmental 🐊

Page 14 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



ALL4 LLC
228 E. Champion St, Suite 101
Bellingham, WA 98225
Matt Roberts
HFS OWS AOC-2

DATE: ALS SDG#: WDOE ACCREDITATION:

12/31/2024 EV24120097 C601

### LABORATORY BLANK RESULTS

## MB-121624W - Batch 222149 - Water by EPA-8270 SIM

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Bis(2-Chloroethyl)Ether	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
Hexachlorobenzene	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
Hexachlorobutadiene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Phenol	EPA-8270 SIM	U	UG/L	0.050	12/16/2024	DS
2-Chlorophenol	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
2,4-Dichlorophenol	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
2,6-Dichlorophenol	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
4-Chloro-3-Methylphenol	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
2,4,6-Trichlorophenol	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
2,4,5-Trichlorophenol	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Dibenzofuran	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
2,3,4,6-Tetrachlorophenol	EPA-8270 SIM	U	UG/L	0.040	12/16/2024	DS
Fluorene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Pentachlorophenol	EPA-8270 SIM	U	UG/L	0.50	12/16/2024	DS
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Anthracene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Carbazole	EPA-8270 SIM	U	UG/L	0.50	12/16/2024	DS
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Pyrene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Butylbenzylphthalate	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Chrysene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Bis(2-Ethylhexyl)Phthalate	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
Di-N-Octylphthalate	EPA-8270 SIM	U	UG/L	2.0	12/16/2024	DS
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS
Total PAH	EPA-8270 SIM	U	UG/L	0.020	12/16/2024	DS

U - Analyte analyzed for but not detected at level above reporting limit.

#### Page 15 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com RIGHT SOLUTIONS BIGHT PARTNER



CLIENT: ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 CLIENT CONTACT: Matt Roberts CLIENT PROJECT: HFS OWS AOC-2	DATE: ALS SDG#: WDOE ACCREDITATION:	12/31/2024 EV24120097 C601
--------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------	----------------------------------

#### LABORATORY BLANK RESULTS

## MBLK-R502536 - Batch R502536 - Water by EPA-7196

				REPORTING	ANALYSIS	ANALYSIS
ANALYTE	METHOD	RESULTS	UNITS	LIMITS	DATE	BY
Chromium (VI) (Dissolved)	EPA-7196	U	UG/L	10	12/13/2024	MJC

U - Analyte analyzed for but not detected at level above reporting limit.

#### MBLK-R503225 - Batch R503225 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.20	12/13/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-121724W - Batch 222039 - Water by EPA-200.8

ΔΝΔΙ ΥΤΕ	METHOD	<b>BESULTS</b>	UNITS	REPORTING		ANALYSIS
Arsenic (Dissolved)	EPA-200.8			1.0	12/17/2024	RAI
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	12/17/2024	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	12/17/2024	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	1.0	12/17/2024	RAL
Nickel (Dissolved)	EPA-200.8	U	UG/L	2.0	12/17/2024	RAL
Zinc (Dissolved)	EPA-200.8	U	UG/L	2.5	12/17/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

Page 16 of 19

PHONE 425-356-2600 FAX 425-356-2626

____

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com



## ALL4 LLC CLIENT: **CLIENT CONTACT:** CLIENT PROJECT:

228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2

## DATE: ALS SDG#: WDOE ACCREDITATION:

12/31/2024 EV24120097 C601

#### LABORATORY CONTROL SAMPLE RESULTS

## ALS Test Batch ID: R503497 - Water by NWEPH

	 			LIN	LIMITS		ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
>C8-C10 Aliphatics - BS	NWEPH	27.8		5	150	12/27/2024	FAL
>C10-C12 Aliphatics - BS	NWEPH	44.3		12.8	95.6	12/27/2024	FAL
>C12-C16 Aliphatics - BS	NWEPH	62.1		21.9	106	12/27/2024	FAL
>C16-C21 Aliphatics - BS	NWEPH	70.2		20.7	113	12/27/2024	FAL
>C21-C34 Aliphatics - BS	NWEPH	87.2		24.7	117	12/27/2024	FAL
>C8-C10 Aromatics - BS	NWEPH	35.7		5	93.4	12/27/2024	FAL
>C10-C12 Aromatics - BS	NWEPH	57.3		40.3	116	12/27/2024	FAL
>C12-C16 Aromatics - BS	NWEPH	58.9		17.5	138	12/27/2024	FAL
>C16-C21 Aromatics - BS	NWEPH	87.8		55	132	12/27/2024	FAL
>C21-C34 Aromatics - BS	NWEPH	81.6		47.7	120	12/27/2024	FAL

### ALS Test Batch ID: 221940 - Water by EPA-8260

						115	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Hexane - BS	EPA-8260	136			50	150	12/16/2024	DLC
Hexane - BSD	EPA-8260	132	3		50	150	12/16/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	100			50	150	12/16/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	100	0		50	150	12/16/2024	DLC
Benzene - BS	EPA-8260	107			74.7	143	12/16/2024	DLC
Benzene - BSD	EPA-8260	106	1		74.7	143	12/16/2024	DLC
Toluene - BS	EPA-8260	113			71.7	139	12/16/2024	DLC
Toluene - BSD	EPA-8260	112	1		71.7	139	12/16/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	101			50	150	12/16/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	105	4		50	150	12/16/2024	DLC
Ethylbenzene - BS	EPA-8260	110			50	150	12/16/2024	DLC
Ethylbenzene - BSD	EPA-8260	113	3		50	150	12/16/2024	DLC
m,p-Xylene - BS	EPA-8260	108			50	150	12/16/2024	DLC
m,p-Xylene - BSD	EPA-8260	111	3		50	150	12/16/2024	DLC
o-Xylene - BS	EPA-8260	108			50	150	12/16/2024	DLC
o-Xylene - BSD	EPA-8260	112	3		50	150	12/16/2024	DLC

#### ALS Test Batch ID: 222149 - Water by EPA-8270 SIM

	-			LIN	ITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Bis(2-Chloroethyl)Ether - BS	EPA-8270 SIM	60.0		20	150	12/16/2024	DS
Bis(2-Chloroethyl)Ether - BSD	EPA-8270 SIM	63.3	5	20	150	12/16/2024	DS
Hexachlorobenzene - BS	EPA-8270 SIM	79.4		20	150	12/16/2024	DS
Hexachlorobenzene - BSD	EPA-8270 SIM	84.5	6	20	150	12/16/2024	DS
Naphthalene - BS	EPA-8270 SIM	22.5	LCS05	36	118	12/16/2024	DS

Page 17 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



## CLIENT:

CLIENT CONTACT:

CLIENT PROJECT:

ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225 Matt Roberts HFS OWS AOC-2

DATE: ALS SDG#: WDOE ACCREDITATION:

12/31/2024 EV24120097 C601

	LABO	ORATO	RY CONTROL SA	MPLE RESULTS		
				LIMITS		
SPIKED COMPOUND	METHOD	%BEC	RPD QUAL	 MIN /	ANALYSIS AX DATE	ANALYSIS BY
Naphthalene - BSD	EPA-8270 SIM	29.5	27 DUP05	36	118 12/16/2024	DS
2-Methylnaphthalene - BS	EPA-8270 SIM	22.5		20	150 12/16/2024	DS
2-Methylnaphthalene - BSD	EPA-8270 SIM	30.0	28	20	150 12/16/2024	DS
1-Methylnaphthalene - BS	EPA-8270 SIM	23.9		20	150 12/16/2024	DS
1-Methylnaphthalene - BSD	EPA-8270 SIM	31.2	27	20	150 12/16/2024	DS
Acenaphthylene - BS	EPA-8270 SIM	45.0		20	150 12/16/2024	DS
Acenaphthylene - BSD	EPA-8270 SIM	51.5	14	20	150 12/16/2024	DS
Acenaphthene - BS	EPA-8270 SIM	39.3		37	125 12/16/2024	DS
Acenaphthene - BSD	EPA-8270 SIM	45.1	14	37	125 12/16/2024	DS
Dibenzofuran - BS	EPA-8270 SIM	50.3		20	150 12/16/2024	DS
Dibenzofuran - BSD	EPA-8270 SIM	56.3	11	20	150 12/16/2024	DS
Fluorene - BS	EPA-8270 SIM	58.0		20	150 12/16/2024	DS
Fluorene - BSD	EPA-8270 SIM	62.2	7	20	150 12/16/2024	DS
Pentachlorophenol - BS	EPA-8270 SIM	120		14	142 12/16/2024	DS
Pentachlorophenol - BSD	EPA-8270 SIM	122	1	14	142 12/16/2024	DS
Phenanthrene - BS	EPA-8270 SIM	77.2		20	150 12/16/2024	DS
Phenanthrene - BSD	EPA-8270 SIM	82.7	7	20	150 12/16/2024	DS
Anthracene - BS	EPA-8270 SIM	78.1		20	150 12/16/2024	DS
Anthracene - BSD	EPA-8270 SIM	83.8	7	20	150 12/16/2024	DS
Carbazole - BS	EPA-8270 SIM	123		20	150 12/16/2024	DS
Carbazole - BSD	EPA-8270 SIM	121	2	20	150 12/16/2024	DS
Fluoranthene - BS	EPA-8270 SIM	80.2		20	150 12/16/2024	DS
Fluoranthene - BSD	EPA-8270 SIM	86.3	7	20	150 12/16/2024	DS
Pyrene - BS	EPA-8270 SIM	70.4		59	156 12/16/2024	DS
Pyrene - BSD	EPA-8270 SIM	75.9	8	59	156 12/16/2024	DS
Benzo[A]Anthracene - BS	EPA-8270 SIM	75.7		20	150 12/16/2024	DS
Benzo[A]Anthracene - BSD	EPA-8270 SIM	82.5	9	20	150 12/16/2024	DS
Chrysene - BS	EPA-8270 SIM	79.0		20	150 12/16/2024	DS
Chrysene - BSD	EPA-8270 SIM	83.7	6	20	150 12/16/2024	DS
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270 SIM	80.3		20	150 12/16/2024	DS
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270 SIM	85.9	7	20	150 12/16/2024	DS
Benzo[B]Fluoranthene - BS	EPA-8270 SIM	75.3		20	150 12/16/2024	DS
Benzo[B]Fluoranthene - BSD	EPA-8270 SIM	85.1	12	20	150 12/16/2024	DS
Benzo[K]Fluoranthene - BS	EPA-8270 SIM	74.9		20	150 12/16/2024	DS
Benzo[K]Fluoranthene - BSD	EPA-8270 SIM	78.2	4	20	150 12/16/2024	DS
Benzo[A]Pyrene - BS	EPA-8270 SIM	80.2		20	150 12/16/2024	DS
Benzo[A]Pyrene - BSD	EPA-8270 SIM	87.3	8	20	150 12/16/2024	DS
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270 SIM	88.3		20	150 12/16/2024	DS
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270 SIM	92.1	4	20	150 12/16/2024	DS
Dibenz[A,H]Anthracene - BS	EPA-8270 SIM	82.8		20	150 12/16/2024	DS

Page 18 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Group USA, Corp dba ALS Environmental

## www.alsglobal.com



#### ALL4 LLC CLIENT: 228 E. Champion St, Suite 101 Bellingham, WA 98225 **CLIENT CONTACT:** Matt Roberts CLIENT PROJECT: HFS OWS AOC-2

DATE: ALS SDG#: WDOE ACCREDITATION: C601

. .. . . . .

12/31/2024 EV24120097

LABORATORY CONTROL SAMPLE RESULTS							
				LIN	NITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUAL	MIN	MAX	DATE	
Dibenz[A,H]Anthracene - BSD	EPA-8270 SIM	86.1	4	20	150	12/16/2024	DS
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	87.9		43	140	12/16/2024	DS
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	91.1	3	43	140	12/16/2024	DS

DUP05 - LCS/LCSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria. LCS05 - The LCS and/or LCSD recovery was outside of control limits due to Sporadic Marginal failure. No corrective action taken.

#### ALS Test Batch ID: R502536 - Water by EPA-7196

					LIMIT	S	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QL	UAL	MIN	MAX	DATE	
Chromium (VI) (Dissolved) - BS	EPA-7196	99.0			91	114	12/13/2024	MJC
Chromium (VI) (Dissolved) - BSD	EPA-7196	99.0	0		91	114	12/13/2024	MJC

#### ALS Test Batch ID: R503225 - Water by EPA-245.1

					LIN	AITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	MIN	MAX	DATE	
Mercury (Dissolved) - BS	EPA-245.1	104			80.6	118	12/13/2024	RAL
Mercury (Dissolved) - BSD	EPA-245.1	106	2		80.6	118	12/13/2024	RAL

#### ALS Test Batch ID: 222039 - Water by EPA-200.8

				LI	MITS	ANALYSIS	ANALYSIS BY
SPIKED COMPOUND	METHOD	%REC	RPD QUA	MIN	MAX	DATE	
Arsenic (Dissolved) - BS	EPA-200.8	96.2		89.1	110	12/17/2024	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	96.8	1	89.1	110	12/17/2024	RAL
Cadmium (Dissolved) - BS	EPA-200.8	102		89.4	110	12/17/2024	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	103	1	89.4	110	12/17/2024	RAL
Chromium (Dissolved) - BS	EPA-200.8	98.3		86.2	107	12/17/2024	RAL
Chromium (Dissolved) - BSD	EPA-200.8	99.8	2	86.2	107	12/17/2024	RAL
Lead (Dissolved) - BS	EPA-200.8	95.4		87.5	107	12/17/2024	RAL
Lead (Dissolved) - BSD	EPA-200.8	97.4	2	87.5	107	12/17/2024	RAL
Nickel (Dissolved) - BS	EPA-200.8	96.3		85.4	109	12/17/2024	RAL
Nickel (Dissolved) - BSD	EPA-200.8	96.4	0	85.4	109	12/17/2024	RAL
Zinc (Dissolved) - BS	EPA-200.8	99.6		88.2	111	12/17/2024	RAL
Zinc (Dissolved) - BSD	EPA-200.8	101	1	88.2	111	12/17/2024	RAL

APPROVED BY

Carl Nott Laboratory Director

Page 19 of 19

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental

www.alsglobal.com

SIGNATURES (Name, Company, Date, Time): 1. Relinquished By: <u>Olana Coster, Ality</u> , 12/13/24, Bonding Br. Ollana Coster, Ality, 12/13/24,	SPECIAL INSTRUCTIONS dissolved metals: As, Cd, Cr, Cr III	10.	<u>.</u>		7:	0	5	4. AUC2-FEB-1 V 0800 V 4	3. AOC2-OUP-1 0700 3	2. W-130 0840 2	1. W-131 12/04/24 0955 GW 1	SAMPLE I.D. DATE TIME TYPE LAB	ADDRESS:	ATTENTION:	COMPANY:	E-MAIL: involvents @ all tinc. cum	PHONE: 360 - 767 - 967 PO. # 004 531 - 0012	Bellingham, WA 98225	ADDRESS: 228 E Chumpion Street Suite 101	MANAGER: Matt Roberts	COMPANY: ALLY LLC	PROJECT ID: HAS OWS AOC-2		Fax (425) 356-2600 Fax (425) 356-2626 http://www.alsolobal.com	8620 Holly Drive, Suite 100
Oldern .	CrVI											NWTPH	H-HCID								_	ANAL		borat	Ch
and	26							1				NWTPH	H-GX		_							SISA		ory	ain
4	N							×	×	×	×	BTEX b	y EPA 8	021	]	BTE	EX by	EPA 8	3260≥	₹.		REO		A	0
URN	Ha	_	_	_		_						MTBE b	by EPA 8	8021	]	MT	BE by	EPA 8	8260			UES		aly	C
AROL	Ni -	-	_	-	-	-		-		-	_	Haloger	nated Vo	olatiles	by E	PA 8	260		_	_		TED		Sis/	ust
IND F		-	-	-	-	-	-				_	FDB / F	Organic	Com		ds by	EPA a	8260	-					R	bo
REQL	*							×	×	×	X	EDB/E	DC by E	PA 82	.00 0	oilt /		tor	)	-				eq	Y
JESTI	id											Semivol	latile Org	ganic (	Comp	oounc	is by	EPA 8	270		-			ue	
ED in	NOT							×	×	×	×	Polycycl	lic Aroma	atic Hy	/droca	arbon	is (PAH	H) by E	EPA 82	70 SIN	A			st	
Bus	D L											PCB by	EPA 808	82 🗆		Pes	ticide	s by E	PA 80	81 🗆					
	eld								_			Metals-1	MTCA-5		RCR	A-8[	F	Pri Pol		TAL	ב		Date		
	D _							×.	×.	×	×.	Metals (	Other (Sp	pecify	Se	2e	ins	str	ich	on	S		12		
°*	E.	_										TCLP-M	letals 🗌	VO		Sem	ni-Vol (	D P	est 🗌	Herb	os 🗆		131:		
	·'	_	_	-				X	×	×	$\times$	Hex	iane		_	_						OT	14	r	7
		_		-	-	_	>	~	×	X	×	EP	'H	_								南	Pag	•	ALS
	-	-	-	_	_	-		×	~	~	×	VP	'H									(Spe		EV	Job#
A		-	-		_	-	-	-	-		-		_			_				-	_	eify	-	241	
	-	-	-		-	_				_			_			_					_			200	(Labo
	-	-			-	-	_		-	-	-							_			_		Qf	97	oraton
		-	-	-	-	_	-		-	-		NUMB	ER OF	CON	ITAI	NER	S				-				/ Use O
												RECEIN	VED IN	GO	OD (	CON	DITI	ON?	-	-	-				nly)

*Turnaround
request
less
than
standard
may
incur
Rush
Charges

ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES



S	AMPLE RECEIVING CHECKLIST		
ALL IL	ELDI	12000-	
Client: All 9	ALS Job #:	120097	
Project: HSOWS ACC-2	Login Date:	124	
	Login Time:	1	
	Login By: OU		
Type of Shipping Container: Cooler	Shipped Via: Fed Fed UPS Exten ALS	lEx Ground lEx Express S ernal Courier G Courier nd Delivered	
Were custody se How Many? Where?	als on the outside of the shipping container?	Yes <u>No</u>	N/A
Was CoC fill	ed out properly? (in ink, signed, dated, etc.)	A D	
	Did all bottles have labels? Did all bottle labels and tags agree with CoC?		
	Were samples received within hold time?		Ē
Was sufficient	Did all bottles arrive in good condition?		
	Was correct preservation added to samples?		
Subcontra Wetchem tr	ct test containers added to subcontract bin? est containers marked with applicable tests?		
Short hol	d time test containers delivered to analysts?	A D	ä
Bubbles in sample number(s): None	VOA vials checked for bubbles?		
	5035A kits received?		6
	Low kits: High kits: 5035A kits returned?		T
Low kits: High kits:			0
Temperature upon receipt: Dob_°C	On ice?	Thermometer ID;	39
Other discrepancies:			
Was client contacted? Who was called?	By whom?	_ Date:	-
	1		

ALS Environmental – Everett 8620 Holly Dr. STE 100 Everett, WA 98012 (425) 356 - 2600

Document ID: EVT-PM-RCPT Version 1.1

17 1925

法教教室 的现在分词 医子宫 医结果的 化化化化化化化化化化化化化化化



#100 8620 Holly Drive Everett, WA 98208, USA T: +1 425 356 2600 F: +1 425 356 2626

February 11, 2025

Matt Roberts ALL4 LLC 228 E. Champion St Suite 101 Bellingham, WA 98225

Work Order: **EV25010121** 

Laboratory Results for: HFS OWS AOC-2

Dear Matt Roberts,

ALS Environmental received 4 sample(s) on Jan 22, 2025 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

//CN//

Generated By: PRESTON.MEDLEY Carl Nott Laboratory Director

alsglobal.com

EV25010121-04

All4-DUP-1

22-Jan-2025 11:35

Client: Project: Work Order:	ALL4 LLC HFS OWS AOC-2 EV25010121				SAMPLE SUM	MARY
Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
EV25010121-01	W-130	Water		22-Jan-2025 09:40	22-Jan-2025 11:35	
EV25010121-02	W-131	Water		22-Jan-2025 10:45	22-Jan-2025 11:35	
EV25010121-03	All4-FEB-1	Water		22-Jan-2025 08:40	22-Jan-2025 11:35	

22-Jan-2025 09:00

Water

## Page 2 of 45

**CASE NARRATIVE** 

Client: ALL4 LLC Project: HFS OWS AOC-2 Work Order: EV25010121

#### GCMS Semivolatile Organics by Method EPA-8270 SIM

#### Batch ID: 223304

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

#### GCMS Volatile Organics by Method EPA-8260

#### Batch ID: 223356

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

#### Metals by Method Calc-Cr3

#### Batch ID: R506309

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## Metals by Method EPA-7470

#### Batch ID: R506307

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

#### Metals by Method EPA-6020

#### Batch ID: 223218

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

#### Subcontracted by Method MISC

#### Batch ID: R506314

• Analysis of these samples for Volatile Petroleum Hydrocarbons was subcontracted to OnSite Environmental, Redmond, WA. Please see the attached from OnSite.

## Batch ID: R506312

#### Sample ID: W-130 (EV25010121-01)

• Analysis of these samples for Extractable Petroleum Hydrocarbons was subcontracted to Alliance Technical Group, Seattle, WA. Please see the attached from Alliance.

#### Wet Chemistry by Method EPA-7196

#### Batch ID: R504792

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client:	ALL4 LLC
Project:	HFS OWS AOC-2
Sample ID:	W-130
Collection Date:	22-Jan-2025 09:40

## ANALYTICAL REPORT

WorkOrder:EV25010121 Lab ID:EV25010121-01 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILE ORGANICS BY EPA-8260	D	Method:EPA-8260		Prep:SW5030 /	24-Jan-2025	Analyst: DLC
1,2-Dibromoethane	ND		0.010	UG/L	1	24-Jan-2025 17:02
1,2-Dichloroethane	ND		2.0	UG/L	1	24-Jan-2025 17:02
Benzene	ND		2.0	UG/L	1	24-Jan-2025 17:02
Ethylbenzene	ND		2.0	UG/L	1	24-Jan-2025 17:02
Hexane	ND		6.8	UG/L	1	24-Jan-2025 17:02
m,p-Xylene	ND		4.0	UG/L	1	24-Jan-2025 17:02
o-Xylene	ND		2.0	UG/L	1	24-Jan-2025 17:02
Toluene	ND		2.0	UG/L	1	24-Jan-2025 17:02
Surr: Toluene-d8	101		80-120	%REC	1	24-Jan-2025 17:02
SEMI-VOLATILE ORGANICS BY EPA	4-8270 М	ethod:EPA-8270 SIM		Prep:SW3510 /	22-Jan-2025	Analyst: DS
Naphthalene	ND		0.020	UG/L	1	23-Jan-2025 19:10
2-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 19:10
1-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Acenaphthylene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Acenaphthene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Fluorene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Phenanthrene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Benzo[A]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Chrysene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Benzo[B]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Benzo[K]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Benzo[A]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Indeno[1,2,3-Cd]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Dibenz[A,H]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Benzo[G,H,I]Perylene	ND		0.020	UG/L	1	23-Jan-2025 19:10
Surr: Terphenyl-d14	104		50-147	%REC	1	23-Jan-2025 19:10
CHROMIUM (III) BY CALCULATION	Meth	od:Calc-Cr3 (dissolved)				Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA (DISSOLVED)	-200.8Metho	od:EPA-6020 (dissolved)		Prep:EPA 3010	/ 23-Jan-2025	Analyst: RAL
Arsenic	2.2		1.0	UG/L	1	23-Jan-2025 16:54
Cadmium	ND		1.0	UG/L	1	23-Jan-2025 16:54
Chromium	ND		2.0	UG/L	1	23-Jan-2025 16:54
Lead	ND		1.0	UG/L	1	23-Jan-2025 16:54
Nickel	ND		2.0	UG/L	1	23-Jan-2025 16:54
Zinc	ND		25	UG/I	1	23-Jan-2025 16:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Page 4 of 45

Client:	ALL4 LLC	ANALYTICAL REPORT				
Project:	HFS OWS AOC-2	WorkOrder:EV25010121				
Sample ID:	W-130	Lab ID:EV25010121-01				
Collection Date:	22-Jan-2025 09:40	Matrix:Water				
ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
CV MERCURY ANALYSI (DISSOLVED)	S BY EPA-245.1 Method:EPA-7470 (dissolved)		Prep:EPA 3010		Analyst: RAL	
Mercury	ND	0.20	UG/L	1	24-Jan-2025 13:00	
HEXCHROME BY EPA-7	196 (DISSOLVED) Method:EPA-7196 (dissolved)				Analyst: EBS	

	,					· ···· j - ··
Chromium (VI)	ND		10	UG/L	1	22-Jan-2025 15:14
ENVIRONMENTAL ANALYSIS		Method:MISC				Analyst: OSE
Miscellaneous Analysis	See Attached			UG/L	1	28-Jan-2025 12:00
Miscellaneous Analysis	See Attached			UG/L	1	03-Feb-2025 09:00

Client:	ALL4 LLC
Project:	HFS OWS AOC-2
Sample ID:	W-131
Collection Date:	22-Jan-2025 10:45

## ANALYTICAL REPORT

WorkOrder:EV25010121 Lab ID:EV25010121-02 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILE ORGANICS BY EI	PA-8260D	Method:EPA-8260		Prep:SW5030 /	24-Jan-2025	Analyst: DLC
1,2-Dibromoethane	ND		0.010	UG/L	1	24-Jan-2025 17:35
1,2-Dichloroethane	ND		2.0	UG/L	1	24-Jan-2025 17:35
Benzene	ND		2.0	UG/L	1	24-Jan-2025 17:35
Ethylbenzene	ND		2.0	UG/L	1	24-Jan-2025 17:35
Hexane	ND		6.8	UG/L	1	24-Jan-2025 17:35
m,p-Xylene	ND		4.0	UG/L	1	24-Jan-2025 17:35
o-Xylene	ND		2.0	UG/L	1	24-Jan-2025 17:35
Toluene	ND		2.0	UG/L	1	24-Jan-2025 17:35
Surr: Toluene-d8	99.5		80-120	%REC	1	24-Jan-2025 17:35
SEMI-VOLATILE ORGANICS SIM	BY EPA-8270 M	lethod:EPA-8270 SIM		Prep:SW3510 /	22-Jan-2025	Analyst: DS
Naphthalene	ND		0.020	UG/L	1	23-Jan-2025 19:36
2-Methylnaphthalene	0.12		0.020	UG/L	1	23-Jan-2025 19:36
1-Methylnaphthalene	0.076		0.020	UG/L	1	23-Jan-2025 19:36
Acenaphthylene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Acenaphthene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Fluorene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Phenanthrene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Benzo[A]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Chrysene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Benzo[B]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Benzo[K]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Benzo[A]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Indeno[1,2,3-Cd]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Dibenz[A,H]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Benzo[G,H,I]Perylene	ND		0.020	UG/L	1	23-Jan-2025 19:36
Surr: Terphenyl-d14	122		50-147	%REC	1	23-Jan-2025 19:36
CHROMIUM (III) BY CALCUL	ATION Meth	od:Calc-Cr3 (dissolved)				Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS (DISSOLVED)	BY EPA-200.8 _{Meth}	od:EPA-6020 (dissolved)		Prep:EPA 3010	/ 23-Jan-2025	Analyst: RAL
Arsenic	4.0		1.0	UG/L	1	23-Jan-2025 16:56
Cadmium	ND		1.0	UG/L	1	23-Jan-2025 16:56
Chromium	ND		2.0	UG/L	1	23-Jan-2025 16:56
Lead	ND		1.0	UG/L	1	23-Jan-2025 16:56
Nickel	ND		2.0	UG/L	1	23-Jan-2025 16:56
Zinc	ND		2.5	UG/L	1	23-Jan-2025 16:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Page 6 of 45

Chromium (VI)

ENVIRONMENTAL ANALYSIS

Miscellaneous Analysis

Miscellaneous Analysis

22-Jan-2025 15:14

28-Jan-2025 12:00

03-Feb-2025 09:00

Analyst: OSE

Client:	ALL4 LLC	ANALYTICAL REPORT			
Project:	HFS OWS AOC-2	WorkOrder:EV25010121			
Sample ID:	W-131	Lab ID:EV25010121-02			
Collection Date:	22-Jan-2025 10:45	Matrix:Water			
ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
CV MERCURY ANALYSIS (DISSOLVED)	S BY EPA-245.1 Method:EPA-7470 (dissolved)		Prep:EPA 3010		Analyst: RAL
Mercury	ND	0.20	UG/L	1	24-Jan-2025 13:00
HEXCHROME BY EPA-7196 (DISSOLVED) Method: EPA-7196 (dissolved) Analyst: EBS					

10

UG/L

UG/L

UG/L

1

1

1

ND

See Attached

See Attached

Method:MISC

Note: Oce Qualifiers r age for a list of qualifiers and their explanation.
----------------------------------------------------------------------------

Client:	ALL4 LLC	ANALYTICAL REPORT
Project:	HFS OWS AOC-2	WorkOrder:EV25010121
Sample ID:	All4-FEB-1	Lab ID:EV25010121-03
Collection Date:	22-Jan-2025 08:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILE ORGANICS BY EPA-8260	D	Method:EPA-8260		Prep:SW5030 / 2	24-Jan-2025	Analyst: DLC
1,2-Dibromoethane	ND		0.010	UG/L	1	24-Jan-2025 18:07
1,2-Dichloroethane	ND		2.0	UG/L	1	24-Jan-2025 18:07
Benzene	ND		2.0	UG/L	1	24-Jan-2025 18:07
Ethylbenzene	ND		2.0	UG/L	1	24-Jan-2025 18:07
Hexane	ND		6.8	UG/L	1	24-Jan-2025 18:07
m,p-Xylene	ND		4.0	UG/L	1	24-Jan-2025 18:07
o-Xylene	ND		2.0	UG/L	1	24-Jan-2025 18:07
Toluene	ND		2.0	UG/L	1	24-Jan-2025 18:07
Surr: Toluene-d8	96.2		80-120	%REC	1	24-Jan-2025 18:07
SEMI-VOLATILE ORGANICS BY EPA SIM	A-8270 M	ethod:EPA-8270 SIM		Prep:SW3510 / 3	22-Jan-2025	Analyst: DS
Naphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:01
2-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:01
1-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Acenaphthylene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Acenaphthene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Fluorene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Phenanthrene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Benzo[A]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Chrysene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Benzo[B]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Benzo[K]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Benzo[A]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Indeno[1,2,3-Cd]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Dibenz[A,H]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Benzo[G,H,I]Perylene	ND		0.020	UG/L	1	23-Jan-2025 20:01
Surr: Terphenyl-d14	129		50-147	%REC	1	23-Jan-2025 20:01
CHROMIUM (III) BY CALCULATION	Meth	od:Calc-Cr3 (dissolved)				Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA (DISSOLVED)	-200.8 _{Meth}	od:EPA-6020 (dissolved)		Prep:EPA 3010	/ 23-Jan-2025	Analyst: RAL
Arsenic	ND		1.0	UG/L	1	23-Jan-2025 16:59
Cadmium	ND		1.0	UG/L	1	23-Jan-2025 16:59
Chromium	ND		2.0	UG/L	1	23-Jan-2025 16:59
Lead	ND		1.0	UG/L	1	23-Jan-2025 16:59
Nickel	ND		2.0	UG/L	1	23-Jan-2025 16:59
Zinc	ND		2.5	UG/L	1	23-Jan-2025 16:59

Page 8 of 45

Client:	ALL4 LLC	ANALYTICAL REPORT				
Project:	HFS OWS AOC-2	WorkOrder:EV25010121				
Sample ID:	All4-FEB-1	Lab ID:EV25010121-03				
Collection Date:	22-Jan-2025 08:40	Matrix:Water				
ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
CV MERCURY ANALYSI	S BY EPA-245.1 Method:EPA-7470 (dissolved)		Prep:EPA 3010		Analyst: RAL	
Mercury	ND	0.20	UG/L	1	24-Jan-2025 13:00	
HEXCHROME BY EPA-7	IEXCHROME BY EPA-7196 (DISSOLVED) Method: EPA-7196 (dissolved) Analyst: EBS					

Chromium (VI)	ND		10	UG/L	1	22-Jan-2025 15:14
ENVIRONMENTAL ANALYSIS		Method:MISC				Analyst: OSE
Miscellaneous Analysis	See Attached			UG/L	1	28-Jan-2025 12:00
Miscellaneous Analysis	See Attached			UG/L	1	03-Feb-2025 09:00

Client:	ALL4 LLC	ANALYTICAL REPORT
Project:	HFS OWS AOC-2	WorkOrder:EV25010121
Sample ID:	All4-DUP-1	Lab ID:EV25010121-04
Collection Date:	22-Jan-2025 09:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILE ORGANICS BY EPA	-8260D	Method:EPA-8260		Prep:SW5030	/ 24-Jan-2025	Analyst: DLC
1,2-Dibromoethane	ND		0.010	UG/L	1	24-Jan-2025 18:39
1,2-Dichloroethane	ND		2.0	UG/L	1	24-Jan-2025 18:39
Benzene	ND		2.0	UG/L	1	24-Jan-2025 18:39
Ethylbenzene	ND		2.0	UG/L	1	24-Jan-2025 18:39
Hexane	ND		6.8	UG/L	1	24-Jan-2025 18:39
m,p-Xylene	ND		4.0	UG/L	1	24-Jan-2025 18:39
o-Xylene	ND		2.0	UG/L	1	24-Jan-2025 18:39
Toluene	ND		2.0	UG/L	1	24-Jan-2025 18:39
Surr: Toluene-d8	101		80-120	%REC	1	24-Jan-2025 18:39
SEMI-VOLATILE ORGANICS BY	Y EPA-8270 M	ethod:EPA-8270 SIM		Prep:SW3510	/ 22-Jan-2025	Analyst: DS
Naphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:27
2-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:27
1-Methylnaphthalene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Acenaphthylene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Acenaphthene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Fluorene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Phenanthrene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Benzo[A]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Chrysene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Benzo[B]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Benzo[K]Fluoranthene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Benzo[A]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Indeno[1,2,3-Cd]Pyrene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Dibenz[A,H]Anthracene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Benzo[G,H,I]Perylene	ND		0.020	UG/L	1	23-Jan-2025 20:27
Surr: Terphenyl-d14	115		50-147	%REC	1	23-Jan-2025 20:27
CHROMIUM (III) BY CALCULAT	ION Meth	od:Calc-Cr3 (dissolved)				Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY (DISSOLVED)	EPA-200.8Metho	od:EPA-6020 (dissolved)		Prep:EPA 301	0 / 23-Jan-2025	Analyst: RAL
Arsenic	2.2		1.0	UG/L	1	23-Jan-2025 17:01
Cadmium	ND		1.0	UG/L	1	23-Jan-2025 17:01
Chromium	ND		2.0	UG/L	1	23-Jan-2025 17:01
Lead	ND		1.0	UG/L	1	23-Jan-2025 17:01
Nickel	ND		2.0	UG/L	1	23-Jan-2025 17:01
Zinc	ND		2.5	UG/L	1	23-Jan-2025 17:01

Page 10 of 45

Chromium (VI)

ENVIRONMENTAL ANALYSIS

Miscellaneous Analysis

Miscellaneous Analysis

22-Jan-2025 15:14

03-Feb-2025 09:00

Analyst: OSE 28-Jan-2025 12:00

UG/L

UG/L

UG/L

1

1

1

10

Client:	ALL4 LLC	ANALYTICAL REPORT					
Project:	HFS OWS AOC-2	WorkOrder:EV25010121					
Sample ID:	All4-DUP-1	Lab ID:EV25010121-04					
Collection Date:	22-Jan-2025 09:00	Matrix:Water					
ANALYSES	RESULT QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED		
CV MERCURY ANALYSIS (DISSOLVED)	S BY EPA-245.1 Method:EPA-7470 (dissolved)		Prep:EPA 3010		Analyst: RAL		
Mercury	ND	0.20	UG/L	1	24-Jan-2025 13:00		
HEXCHROME BY EPA-71	IEXCHROME BY EPA-7196 (DISSOLVED) Method: EPA-7196 (dissolved) Analyst: EBS						

ND

See Attached

See Attached

Method:MISC

Ξ

Client:	ALL4 L	LC					
Project:	HFS OV	VS AOC-2				DATES RE	PORT
WorkOrder:	EV2501	0121					
Sample ID	Client Sam	p ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 223218	(0)	Test Name : IC	P/MS METALS ANAL	YSIS BY EPA-200.8	(DISSOLVED)	Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40		23 Jan 2025 10:00	23 Jan 2025 16:54	1
EV25010121-02	W-131		22 Jan 2025 10:45		23 Jan 2025 10:00	23 Jan 2025 16:56	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40		23 Jan 2025 10:00	23 Jan 2025 16:59	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00		23 Jan 2025 10:00	23 Jan 2025 17:01	1
Batch ID: 223304	(0)	Test Name : SI	EMI-VOLATILE ORGA	NICS BY EPA-8270	SIM	Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40		22 Jan 2025 09:00	23 Jan 2025 19:10	1
EV25010121-02	W-131		22 Jan 2025 10:45		22 Jan 2025 09:00	23 Jan 2025 19:36	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40		22 Jan 2025 09:00	23 Jan 2025 20:01	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00		22 Jan 2025 09:00	23 Jan 2025 20:27	1
Batch ID: 223356	(0)	Test Name : Vo	OLATILE ORGANICS I	BY EPA-8260D		Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40		24 Jan 2025 08:00	24 Jan 2025 17:02	1
EV25010121-02	W-131		22 Jan 2025 10:45		24 Jan 2025 08:00	24 Jan 2025 17:35	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40		24 Jan 2025 08:00	24 Jan 2025 18:07	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00		24 Jan 2025 08:00	24 Jan 2025 18:39	1
Batch ID: R50479	92(0)	Test Name : H	EXCHROME BY EPA-	7196 (DISSOLVED)		Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40			22 Jan 2025 15:14	1
EV25010121-02	W-131		22 Jan 2025 10:45			22 Jan 2025 15:14	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40			22 Jan 2025 15:14	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00			22 Jan 2025 15:14	1
Batch ID: R50630	07(0)	Test Name : C	V MERCURY ANALYS	IS BY EPA-245.1 (D	ISSOLVED)	Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40			24 Jan 2025 13:00	1
EV25010121-02	W-131		22 Jan 2025 10:45			24 Jan 2025 13:00	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40			24 Jan 2025 13:00	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00			24 Jan 2025 13:00	1
Batch ID: R50630	9(0)	Test Name : C	HROMIUM (III) BY CAI	LCULATION		Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40			11 Feb 2025 10:43	1
EV25010121-02	W-131		22 Jan 2025 10:45			11 Feb 2025 10:43	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40			11 Feb 2025 10:43	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00			11 Feb 2025 10:43	1
Batch ID: R50631	2(0)	Test Name : El	NVIRONMENTAL ANA	LYSIS		Matrix: Water	
EV25010121-01	W-130		22 Jan 2025 09:40			03 Feb 2025 09:00	1
EV25010121-02	W-131		22 Jan 2025 10:45			03 Feb 2025 09:00	1
EV25010121-03	All4-FEB-1		22 Jan 2025 08:40			03 Feb 2025 09:00	1
EV25010121-04	All4-DUP-1		22 Jan 2025 09:00			03 Feb 2025 09:00	1

## ALS Everett, US

EV25010121-04 All4-DUP-1

Client:	ALL4 LLC					
Project:	HFS OWS AOO	C-2			DATES RE	PORT
WorkOrder:	EV25010121					
Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R5063	14 ( 0 ) <b>Test Na</b>	me : ENVIRONMENTAL AN	NALYSIS		Matrix: Water	
EV25010121-01	W-130	22 Jan 2025 09:40			28 Jan 2025 12:00	1
EV25010121-02	W-131	22 Jan 2025 10:45			28 Jan 2025 12:00	1
EV25010121-03	All4-FEB-1	22 Jan 2025 08:40			28 Jan 2025 12:00	1

22 Jan 2025 09:00

1

28 Jan 2025 12:00

Client: Project: WorkOrder:	ALL HFS EV2	4 LLC 5 OWS AOC-2 5010121						QC BA	TCH RE	PORT
Batch ID: 223356 (	0)	Ins	strument:	VOC_123	Ме	thod: V	OLATILE O	RGANICS B	Y EPA-826	0D
MBLK S	Sample ID:	MB-012425W	Run ID: VOC	Units: _123_505022	UG/L SeqNo: 80 SPK Ref	Ana 646187	alysis Date: PrepDate: Control	24-Jan-2025 24-Jan-2025 RPD Ref	10:00 DF: 1 RF	2D
Analyte		Result	PQL	SPK Val	Value	%REC	Limit	Value	%RPD Lir	nit Qual
1,2-Dichloroethane		ND	2.0							
Benzene		ND	2.0							
Toluene		ND	2.0							
1,2-Dibromoethane		ND	0.010							
Ethylbenzene		ND	2.0							
m,p-Xylene		ND	4.0							
o-Xylene		ND	2.0							
Hexane		ND	10							
Surr: Toluene-d8		4.997	0	5	0	99.9	80 - 120			
LCS S	Sample ID:	BS-012425W		Units:	UG/L	Ana	alysis Date:	24-Jan-2025	10:33	
Client ID:		l	Run ID: VOC	_123_505022	SeqNo: 80	646188	PrepDate:	24-Jan-2025	DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RF %RPD Lir	PD nit Qual
1,2-Dichloroethane		11.31	2.0	10	0	113	50 - 150			
Benzene		10.95	2.0	10	0	110	74.7 - 143			
Toluene		11.48	2.0	10	0	115	71.7 - 139			
1,2-Dibromoethane		11.21	0.010	10	0	112	50 - 150			
Ethylbenzene		11.18	2.0	10	0	112	50 - 150			
m,p-Xylene		21.81	4.0	20	0	109	50 - 150			
o-Xylene		11.01	2.0	10	0	110	50 - 150			
Hexane		27.78	10	20	0	139	50 - 150			
Surr: Toluene-d8		4.887	0	5	0	97.7	80 - 120			

## ALS Everett, US

# Client:ALL4 LLCProject:HFS OWS AOC-2WorkOrder:EV25010121

## QC BATCH REPORT

Batch ID: 22335	6(0)	In	strument:	VOC_123	М	ethod: \	OLATILE O	RGANICS B	( EPA-8260D
LCSD	Sample ID:	BSD-012425W		Units	: UG/L	An	alysis Date:	24-Jan-2025	11:05
Client ID:			Run ID: VC	C_123_505022	SeqNo: 8	3646189	PrepDate:	24-Jan-2025	DF: <b>1</b>
Analyte		Result	PQ	_ SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
1,2-Dichloroethane	9	11.02	2.	0 10	0	110	50 - 150	11.31	2.55 25
Benzene		10.52	2.	) 10	0	105	74.7 - 143	10.95	4.04 20.
Toluene		11.05	2.	) 10	0	111	71.7 - 139	11.48	5 3.79 20. 5
1,2-Dibromoethane	9	10.96	0.01	) 10	0	110	50 - 150	11.21	2.19 25
Ethylbenzene		10.72	2.	) 10	0	107	50 - 150	11.18	4.17 25
m,p-Xylene		20.96	4.	) 20	0	105	50 - 150	21.81	3.94 25
o-Xylene		10.6	2.	) 10	0	106	50 - 150	11.01	3.74 25
Hexane		23.64	1	) 20	0	118	50 - 150	27.78	16.1 25
Surr: Toluene-d8		4.887		) 5	0	97.7	80 - 120	4.887	0.00557 25
The following samples were analyzed in this batch:									

Client:	ALL4 LLC
Project:	HFS OWS AOC-2
WorkOrder:	EV25010121

## QC BATCH REPORT

Batch ID: 223304 (0)	Insti	rument: S	SVOC_107	Meth	od: S	EMI-VOLAT	ILE ORGAN	ICS BY EPA-8270
MBLK Sample ID:	MB-012225W		Units:	UG/L	Ana	Ilysis Date:	23-Jan-2025	17:27
Client ID:	Ru	in ID: SVOC	_107_504959	SeqNo: 8644	4834	PrepDate: 2	22-Jan-2025	DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value %	6REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Naphthalene	ND	0.020						
2-Methylnaphthalene	ND	0.020						
1-Methylnaphthalene	ND	0.020						
Acenaphthylene	ND	0.020						
Acenaphthene	ND	0.020						
Fluorene	ND	0.020						
Phenanthrene	ND	0.020						
Anthracene	ND	0.020						
Fluoranthene	ND	0.020						
Pyrene	ND	0.020						
Benzo[A]Anthracene	ND	0.020						
Chrysene	ND	0.020						
Benzo[B]Fluoranthene	ND	0.020						
Benzo[K]Fluoranthene	ND	0.020						
Benzo[A]Pyrene	ND	0.020						
Indeno[1,2,3-Cd]Pyrene	ND	0.020						
Dibenz[A,H]Anthracene	ND	0.020						
Benzo[G,H,I]Perylene	ND	0.020						
Surr: Terphenyl-d14	2.437	0	2.5	0	97.5	50 - 147		

## Client:ALL4 LLCProject:HFS OWS AOC-2WorkOrder:EV25010121

## QC BATCH REPORT

Batch ID: 223304 (0)	Ins	strument: S	SVOC_107	Meth	hod:	SEMI-VOLAT SIM	ILE ORGAN	ICS BY EPA-8270
LCS Sample ID:	BS-012225W		Units:	UG/L	An	alysis Date:	23-Jan-2025	17:53
Client ID:		Run ID: SVOC	_107_504959	SeqNo: 864	44835	PrepDate:	22-Jan-2025	DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Naphthalene	2.659	0.020	5	0	53.2	36 - 118		
2-Methylnaphthalene	2.729	0.020	5	0	54.6	20 - 150		
1-Methylnaphthalene	2.784	0.020	5	0	55.7	20 - 150		
Acenaphthylene	3.436	0.020	5	0	68.7	20 - 150		
Acenaphthene	3.195	0.020	5	0	63.9	37 - 125		
Fluorene	3.628	0.020	5	0	72.6	20 - 150		
Phenanthrene	3.996	0.020	5	0	79.9	20 - 150		
Anthracene	4.102	0.020	5	0	82.0	20 - 150		
Fluoranthene	4.771	0.020	5	0	95.4	20 - 150		
Pyrene	4.52	0.020	5	0	90.4	59 - 156		
Benzo[A]Anthracene	4.466	0.020	5	0	89.3	20 - 150		
Chrysene	4.249	0.020	5	0	85.0	20 - 150		
Benzo[B]Fluoranthene	4.324	0.020	5	0	86.5	20 - 150		
Benzo[K]Fluoranthene	3.349	0.020	5	0	67.0	20 - 150		
Benzo[A]Pyrene	4.211	0.020	5	0	84.2	20 - 150		
Indeno[1,2,3-Cd]Pyrene	3.989	0.020	5	0	79.8	20 - 150		
Dibenz[A,H]Anthracene	3.599	0.020	5	0	72.0	20 - 150		
Benzo[G,H,I]Perylene	4.006	0.020	5	0	80.1	43 - 140		
Surr: Terphenyl-d14	2.428	0	2.5	0	97.1	50 - 147		
# Client:ALL4 LLCProject:HFS OWS AOC-2WorkOrder:EV25010121

#### QC BATCH REPORT

Batch ID: 223304 (0)	In	strument:	SVOC_107	M	ethod:	SEMI-VOLAT	TILE ORGAN	CS BY EP	A-8270
LCSD Sample ID:	BSD-012225W		Units:	UG/L	Aı	nalysis Date:	23-Jan-2025	18:19	
Client ID:		Run ID: SVO	C_107_504959	SeqNo: 8	644836	PrepDate:	22-Jan-2025	DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RF %RPD Lir	PD mit Qual
Naphthalene	2.933	0.020	5	0	58.7	36 - 118	2.659	9.8	27
2-Methylnaphthalene	3.052	0.020	5	0	61.0	) 20 - 150	2.729	11.2	30
1-Methylnaphthalene	3.1	0.020	5	0	62.0	20 - 150	2.784	10.8	30
Acenaphthylene	3.669	0.020	5	0	73.4	20 - 150	3.436	6.58	30
Acenaphthene	3.485	0.020	5	0	69.7	37 - 125	3.195	8.7	29
Fluorene	3.821	0.020	5	0	76.4	20 - 150	3.628	5.17	30
Phenanthrene	3.831	0.020	5	0	76.6	8 20 - 150	3.996	4.21	30
Anthracene	3.883	0.020	5	0	77.7	20 - 150	4.102	5.48	30
Fluoranthene	4.69	0.020	5	0	93.8	3 20 - 150	4.771	1.7	30
Pyrene	4.13	0.020	5	0	82.6	59 - 156	4.52	9.03	22
Benzo[A]Anthracene	4.166	0.020	5	0	83.3	3 20 - 150	4.466	6.96	30
Chrysene	3.956	0.020	5	0	79.1	20 - 150	4.249	7.13	30
Benzo[B]Fluoranthene	4.021	0.020	5	0	80.4	20 - 150	4.324	7.25	30
Benzo[K]Fluoranthene	3.098	0.020	5	0	62.0	20 - 150	3.349	7.79	30
Benzo[A]Pyrene	3.863	0.020	5	0	77.3	8 20 - 150	4.211	8.61	30
Indeno[1,2,3-Cd]Pyrene	3.603	0.020	5	0	72.1	20 - 150	3.989	10.2	30
Dibenz[A,H]Anthracene	3.224	0.020	5	0	64.5	5 20 - 150	3.599	11	30
Benzo[G,H,I]Perylene	3.643	0.020	5	0	72.9	9 43 - 140	4.006	9.51	21
Surr: Terphenyl-d14	2.195	0	2.5	0	87.8	3 50 - 147	2.428	10.1	25
The following samples were analyze	ed in this batch:								

## Client:ALL4 LLCProject:HFS OWS AOC-2WorkOrder:EV25010121

#### QC BATCH REPORT

Batch ID: R5047	792(0)	Instrume	ent:	Manual Entry I	I M	ethod:	HEXCHROM (DISSOLVED	E BY EPA-71 ))	196 (DISSOLVED)
MBLK	Sample ID:	MBLK-R504792		Units:	UG/L	Ar	alysis Date:	22-Jan-2025	5 15:14
Client ID:		Run ID	Man II_50	ual Entry 04792	SeqNo: 8	3641402	PrepDate:		DF: <b>1</b>
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium (VI)		ND	10						
LCS	Sample ID:	LCS-R504792		Units:	UG/L	Ar	alysis Date:	22-Jan-2025	5 15:14
Client ID:		Run ID	: Man II_50	ual Entry 04792	SeqNo: 8	3641401	PrepDate:		DF: <b>1</b>
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium (VI)		102	10	100	0	102	91 - 114		
LCSD	Sample ID:	LCSD-R504792		Units:	UG/L	Ar	alysis Date:	22-Jan-2025	5 15:14
Client ID:		Run ID	Man	ual Entry 04792	SeqNo: 8	3641400	PrepDate:		DF: <b>1</b>
Analyte		Result	- PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium (VI)		102	10	100	0	102	91 - 114	102	2 0 7.8
The following sampl	es were analyze	ed in this batch:							

Client:	ALL4 LLC
Project:	HFS OWS AOC-2
WorkOrder:	EV25010121

Batch ID:	223218 ( 0 )	In	strument:	ICPMS_130	Me	ethod:	ICP/MS MET (DISSOLVED	ALS ANALYS )) (DISSOLVE	SIS BY EPA-2 ED)	00.8
MBLK	Sample ID:	MB-012325W		Units:	UG/L	Ar	alysis Date:	23-Jan-2025	16:16	
Client ID:			Run ID: ICPN	AS_130_504965	SeqNo: 8	647029	PrepDate:	23-Jan-2025	DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	Qual
Arsenic		ND	1.0							
Cadmium		ND	1.0							
Chromium		ND	2.0							
Lead		ND	1.0							
Nickel		ND	2.0							
Zinc		ND	2.5							
LCS	Sample ID:	BS-012325W		Units:	UG/L	Ar	alysis Date:	23-Jan-2025	17:58	
Client ID:			Run ID: ICPN	MS_130_504965	SeqNo: 8	647042	PrepDate:	23-Jan-2025	DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	Qual
Arsenic		126.3	1.0	125	0	101	89.1 - 110			
Cadmium		136.8	1.0	125	0	109	89.4 - 110			
Chromium		125.9	2.0	125	0	101	86.2 - 107			
Lead		128.3	1.0	125	0	103	87.5 - 107			
Nickel		129.1	2.0	125	0	103	85.4 - 109			
Zinc		133.6	2.5	125	0	107	88.2 - 111			
LCSD	Sample ID:	BSD-012325W		Units:	UG/L	Ar	alysis Date:	23-Jan-2025	16:23	
Client ID:			Run ID: ICPN	AS_130_504965	SeqNo: 8	647030	PrepDate:	23-Jan-2025	DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit	Qual
Arsenic		118.3	1.0	125	0	94.6	89.1 - 110	126.3	6.58 10	
Cadmium		124.6	1.0	125	0	99.7	89.4 - 110	136.8	9.35 2.7	R
Chromium		120.7	2.0	125	0	96.6	86.2 - 107	125.9	4.2 2.9 7	R
Lead		121.5	1.0	125	0	97.2	87.5 - 107	128.3	5.45 2.4	R
Nickel		120.9	2.0	125	0	96.8	85.4 - 109	129.1	6.55 3.2	R
Zinc		123.6	2.5	125	0	98.9	88.2 - 111	133.6	7.79 3.8 9	R
The following	g samples were analyze	ed in this batch:								

## Client:ALL4 LLCProject:HFS OWS AOC-2WorkOrder:EV25010121

#### **QC BATCH REPORT**

Batch ID:	R506307 (0)	Instrume	nt:	Manual Entry I	M	ethod:	CV MERCUR (DISSOLVED	RY ANALYSIS D) (DISSOLVI	8 BY EPA-245.1 ED)
MBLK	Sample ID:	MBLK-R506307		Units:	UG/L	An	alysis Date:	24-Jan-2025	13:00
Client ID:		Run ID	Man II_50	ual Entry 06307	SeqNo: 8	8672853	PrepDate:		DF: <b>1</b>
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		ND	0.20						
LCS	Sample ID:	LCS-R506307		Units:	UG/L	An	alysis Date:	24-Jan-2025	13:00
Client ID:		Run ID	Man II_5	ual Entry 06307	SeqNo: 8	8672852	PrepDate:		DF: <b>1</b>
Analyte		Result	- PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		2.63	0.20	2.5	0	105	80.6 - 118		
LCSD	Sample ID:	LCSD-R506307		Units:	UG/L	An	alysis Date:	24-Jan-2025	5 13:00
Client ID:		Run ID	Man II_50	ual Entry 06307	SeqNo: 8	672851	PrepDate:		DF: <b>1</b>
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		2.61	0.20	2.5	0	104	80.6 - 118	2.63	0.763 7.9 4
The following	g samples were analyze	ed in this batch:							

#### ALS Everett, US

Client: Project: WorkOrder:	ALL4 LLC HFS OWS AOC-2 EV25010121	QUALIFIERS, ACRONYMS, UNITS
Qualifier	Description	
*	Value exceeds Regulatory Limit	
а	Not accredited	
В	Analyte detected in the associated Method Blank above the Reporting Limit	
E	Value above quantitation range	
Н	Analyzed outside of Holding Time	
J	Analyte detected below quantitation limit	
Μ	Manually integrated, see raw data for justification	
n	Not offered for accreditation	
ND	Not Detected at the Reporting Limit	
0	Sample amount is > 4 times amount spiked	
Р	Dual Column results percent difference > 40%	
R	RPD above laboratory control limit	
S	Spike Recovery outside laboratory control limits	
U	Analyzed but not detected above the MDL/SDL	
Acronym	Description	
DCS	Detectability Check Study	
DUP	Method Duplicate	
LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicate	
MBLK	Method Blank	
MDL	Method Detection Limit	
MQL	Method Quantitation Limit	
MS	Matrix Spike	
MSD	Matrix Spike Duplicate	
PDS	Post Digestion Spike	
PQL	Practical Quantitaion Limit	
SD	Serial Dilution	
SDL	Sample Detection Limit	
TRRP	Texas Risk Reduction Program	

### Page 22 of 45

## **Data Qualifiers**

- * Value exceeds Regulatory Limit
- a Not accredited
- B Analyte detected in the associated Method Blank above the Reporting Limit
- E Value above quantitation range
- H Analyzed outside of Holding Time
- J Analyte detected below quantitation limit
- M Manually integrated, see raw data for justification
- n Not offered for accreditation
- ND Not Detected at the Reporting Limit
- O Sample amount is > 4 times amount spiked
- P Dual Column results percent difference > 40%
- R RPD above laboratory control limit
- S Spike Recovery outside laboratory control limits
- U Analyzed but not detected above the MDL/SDL

					Sample Receipt Checklist
Work Order ID:	EV25010121		Date/	Time Received:	<u>22-Jan-2025 11:35</u>
Client Name:	ALL05-BELLINGHAM		Rece	ived by:	<u>Olivia Wyatt</u>
Completed By	: /S/ Kristina Wahl	22-Jan-2025 13:54	Reviewed by:		
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	water		Carrier name:	ALS Courier	
Shipping contai	iner/cooler in good condition?		Yes 📝	No	Not Present
Custody seals i	intact on shipping container/co	ooler?	Yes 📃	No 🗌	Not Present
Custody seals i	intact on sample bottles?		Yes 📃	No 🗌	Not Present
VOA/TX1005/T	X1006 Solids in hermetically s	sealed vials?	Yes 📃	No 📃	Not Present
Chain of custoo	dy present?		Yes 📝	No 📃	
Chain of custoo	dy signed when relinquished a	nd received?	Yes 🗹	No 🔲	
Samplers name	e present on COC?		Yes 📃	No 🗹	
Chain of custoo	dy agrees with sample labels?		Yes 🗹	No 🚺	
Samples in pro	per container/bottle?		Yes 🗹	No 📘	
Sample contair	ners intact?		Yes 🗹	No 📘	
Sufficient samp	ble volume for indicated test?		Yes 🗹	No 🚺	
All samples rec	eived within holding time?		Yes 🗹	No 📘	
Container/Tem	p Blank temperature in compli	ance?	Yes	No 🗹	
Temperature(s)	)/Thermometer(s):		10.2 C On ice		189
Cooler(s)/Kit(s)	:				
Date/Time sam	ple(s) sent to storage:				
Water - VOA vi	als have zero headspace?		Yes 🔽	No 📃 No	VOA vials submitted
Water - pH acc	eptable upon receipt?		Yes 🔽	No 📃	N/A
pH adjusted?			Yes 📃	No 🔽	N/A
pH adjusted by	:				
Login Notes:					
Client Contacte	ed:	Date Contacted:		Person Contac	cted:
Contacted By:		Regarding:			
Comments:					
Corrective Action	on:				
	L				



**RIGHT SOLUTIONS | RIGHT PARTNER** 



February 3, 2025

Carl Nott ALS Environmental 8620 Holly Drive, Suite 100 Everett, WA 98208

Re: Analytical Data for Project EV25010121 Laboratory Reference No. 2501-223

Dear Carl:

Enclosed are the analytical results and associated quality control data for samples submitted on January 23, 2025.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 26 of 45 Date of Report: February 3, 2025 Samples Submitted: January 23, 2025 Laboratory Reference: 2501-223 Project: EV25010121

#### **Case Narrative**

Samples were collected on January 22, 2025 and received by the laboratory on January 23, 2025. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 27 of 45

Matrix: Water Units: ug/L (ppb)

0 (11 )				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	EV25010121-01					
Laboratory ID:	01-223-01					
Aliphatic C5-C6	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C6-C8	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aliphatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Aromatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C12-C13	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aromatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Methyl t-butyl ether	ND	10	EPA 8021B	1-28-25	1-28-25	
Benzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Toluene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Ethylbenzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
m,p-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
o-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	79	61-122				

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 28 of 45

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	EV25010121-02					
Laboratory ID:	01-223-02					
Aliphatic C5-C6	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C6-C8	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aliphatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Aromatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C12-C13	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aromatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Methyl t-butyl ether	ND	10	EPA 8021B	1-28-25	1-28-25	
Benzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Toluene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Ethylbenzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
m,p-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
o-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	79	61-122				

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 29 of 45

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	EV25010121-03					
Laboratory ID:	01-223-03					
Aliphatic C5-C6	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C6-C8	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aliphatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Aromatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C12-C13	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aromatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Methyl t-butyl ether	ND	10	EPA 8021B	1-28-25	1-28-25	
Benzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Toluene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Ethylbenzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
m,p-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
o-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	75	61-122				

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 30 of 45

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	EV25010121-04					
Laboratory ID:	01-223-04					
Aliphatic C5-C6	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C6-C8	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aliphatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Aromatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C12-C13	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aromatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Methyl t-butyl ether	ND	10	EPA 8021B	1-28-25	1-28-25	
Benzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Toluene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Ethylbenzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
m,p-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
o-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	73	61-122				

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 31 of 45

#### VOLATILE PETROLEUM HYDROCARBONS QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

M

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0128W3					
Aliphatic C5-C6	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C6-C8	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aliphatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aliphatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Aromatic C8-C10	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C10-C12	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Aromatic C12-C13	ND	50	NWTPH-VPH	1-28-25	1-28-25	
Total Aromatic	NA		NWTPH-VPH	1-28-25	1-28-25	
Methyl t-butyl ether	ND	10	EPA 8021B	1-28-25	1-28-25	
Benzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Toluene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Ethylbenzene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
m,p-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
o-Xylene	ND	1.0	EPA 8021B	1-28-25	1-28-25	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	61-122				

					Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Reco	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB01	28W1								
Benzene	45.7	46.7	50.0	50.0	91	93	81-117	2	12	
Toluene	45.9	47.1	50.0	50.0	92	94	85-116	3	12	
Ethylbenzene	45.3	46.4	50.0	50.0	91	93	84-116	2	12	
m,p-Xylene	44.7	45.8	50.0	50.0	89	92	85-115	2	12	
o-Xylene	44.5	45.6	50.0	50.0	89	91	86-116	2	11	
Surrogate:										
Fluorobenzene					75	79	61-122			

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 32 of 45



#### **Data Qualifiers and Abbreviations**

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1 Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 Sample extract treated with a silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881 Page 33 of 45

SPECIAL INSTRUCTIONS: SIGNATURES (Name, Company, Date, Time): // C 1-92 19:10 PLEASE EMAIL 0TH	EV25010121-04 1/22/2025 9:00:00 AM Water X	EV25010121-03 1/22/2025 8:40:00 AM Water X	EV25010121-02 1/22/2025 10:45:00 AM Water X	EV25010121-01 1/22/2025 9:40:00 AM Water X	SAMPLE I.D. DATE AND TIME MATRIX LAB#	ADDRESS:	ATTENTION:	INVOICE TO COMPANY: SAME	E-MAIL: carl.nott@alsglobal.com	PHONE: (425) 356-2600 P.O.#:: 32-EV25010121	Everett, WA 98208	ADDRESS: 8620 Holly Drive Suite 100	PROJECT MANAGER: Carl Nott	REPURT TO COMPANY ALS Environmental	PROJECT ID: EV/25010121 ANALYSIS DECITESTE	ALS http://www.alsglobal.com Date 1/23/2025 Page	Everett, WA 98208 Phone (425) 356-2600 Laboratory Analysis Request 01-223	Al S Environmental
															ESTED	1 of 1	3	

-CWW-



3600 Fremont Ave N Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

ALS Everett Carl Nott 8620 Holly Drive, Ste 100 Everett, WA 98208

RE: EV25010121, Work Order Number: 2501411

February 05, 2025

#### **Attention Carl Nott:**

Alliance Technical Group, LLC - Seattle received 4 sample(s) on 1/23/2025 for the analyses presented in the following report.

#### Extractable Petroleum Hydrocarbons by NWEPH

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Alliance Technical Group is committed to accuracy, speed, and customer service. Thank you for choosing Alliance Technical Group's Seattle laboratory team for your analytical needs. We appreciate this opportunity to serve you!

Sincerely,

Kelley Lovejoy

Kelley Lovejoy Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910



Original

#### www.fremontanalytical.com

Page 35 of 45



CLIENT: Project: Work Order:	ALS Everett EV25010121 2501411	Work Order S	Sample Summary				
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received				
2501411-001	EV25010121-01	01/22/2025 9:40 AM	01/23/2025 12:55 PM				
2501411-002	EV25010121-02	01/22/2025 10:45 AM	01/23/2025 12:55 PM				
2501411-003	EV25010121-03	01/22/2025 8:40 AM	01/23/2025 12:55 PM				
2501411-004	EV25010121-04	01/22/2025 9:00 AM	01/23/2025 12:55 PM				

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



**Case Narrative** 

WO#: **2501411** Date: **2/5/2025** 

CLIENT:ALS EverettProject:EV25010121

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

#### **III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

## **Qualifiers & Acronyms**



WO#: **2501411** Date Reported: **2/5/2025** 

#### Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank **CCV** - Continued Calibration Verification **DF** - Dilution Factor **DUP - Sample Duplicate** HEM - Hexane Extractable Material ICV - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MCL - Maximum Contaminant Level MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **REP - Sample Replicate RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



## **Analytical Report**

 Work Order:
 2501411

 Date Reported:
 2/5/2025

#### CLIENT: ALS Everett Project: EV25010121

Lab ID: 2501411-001 Client Sample ID: EV25010121-	·01		Collection Matrix: V	<b>n Date:</b> Vater	1/22/2025 9:40:00 AM
Analyses	Result	RL Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarl	oons by NWEF	<u>'H</u>	Batc	h ID: 46	555 Analyst: AP
Aliphatic Hydrocarbon (C8-C10)	ND	76.0	µg/L	1	2/3/2025 5:22:29 PM
Aliphatic Hydrocarbon (C10-C12)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aliphatic Hydrocarbon (C12-C16)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aliphatic Hydrocarbon (C16-C21)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aliphatic Hydrocarbon (C21-C34)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aromatic Hydrocarbon (C8-C10)	82.7	76.0	µg/L	1	2/3/2025 5:22:29 PM
Aromatic Hydrocarbon (C10-C12)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aromatic Hydrocarbon (C12-C16)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aromatic Hydrocarbon (C16-C21)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Aromatic Hydrocarbon (C21-C34)	ND	38.0	µg/L	1	2/3/2025 5:22:29 PM
Surr: 1-Chlorooctadecane	57.9	50 - 150	%Rec	1	2/3/2025 5:22:29 PM
Surr: o-Terphenyl	87.2	50 - 150	%Rec	1	2/3/2025 5:22:29 PM

#### Lab ID: 2501411-002

#### Collection Date: 1/22/2025 10:45:00 AM Matrix: Water

Client Sample ID: EV25010121-	•02		Matrix: V	Vater	r					
Analyses	Result	RL Qual	Units	DF	Date Analyzed					
Extractable Petroleum Hydrocarl	oons by NWEF	<u>2H</u>	Batc	h ID: 46	555 Analyst: AP					
Aliphatic Hydrocarbon (C8-C10)	ND	75.8	µg/L	1	2/3/2025 5:44:10 PM					
Aliphatic Hydrocarbon (C10-C12)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Aliphatic Hydrocarbon (C12-C16)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Aliphatic Hydrocarbon (C16-C21)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Aliphatic Hydrocarbon (C21-C34)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Aromatic Hydrocarbon (C8-C10)	77.4	75.8	µg/L	1	2/3/2025 5:44:10 PM					
Aromatic Hydrocarbon (C10-C12)	ND	37.9	μg/L	1	2/3/2025 5:44:10 PM					
Aromatic Hydrocarbon (C12-C16)	ND	37.9	μg/L	1	2/3/2025 5:44:10 PM					
Aromatic Hydrocarbon (C16-C21)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Aromatic Hydrocarbon (C21-C34)	ND	37.9	µg/L	1	2/3/2025 5:44:10 PM					
Surr: 1-Chlorooctadecane	74.5	50 - 150	%Rec	1	2/3/2025 5:44:10 PM					
Surr: o-Terphenyl	97.2	50 - 150	%Rec	1	2/3/2025 5:44:10 PM					



## **Analytical Report**

 Work Order:
 2501411

 Date Reported:
 2/5/2025

#### CLIENT: ALS Everett Project: EV25010121

Lab ID: 2501411-003 Client Sample ID: EV25010121-	03		Collection Matrix: V	<b>n Date:</b> Vater	1/22/2025 8:40:00 AM
Analyses	Result	RL Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarl	oons by NWEF	<u>2H</u>	Batc	h ID: 46	555 Analyst: AP
Aliphatic Hydrocarbon (C8-C10)	ND	75.4	µg/L	1	2/3/2025 6:27:18 PM
Aliphatic Hydrocarbon (C10-C12)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aliphatic Hydrocarbon (C12-C16)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aliphatic Hydrocarbon (C16-C21)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aliphatic Hydrocarbon (C21-C34)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aromatic Hydrocarbon (C8-C10)	ND	75.4	µg/L	1	2/3/2025 6:27:18 PM
Aromatic Hydrocarbon (C10-C12)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aromatic Hydrocarbon (C12-C16)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aromatic Hydrocarbon (C16-C21)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Aromatic Hydrocarbon (C21-C34)	ND	37.7	µg/L	1	2/3/2025 6:27:18 PM
Surr: 1-Chlorooctadecane	75.1	50 - 150	%Rec	1	2/3/2025 6:27:18 PM
Surr: o-Terphenyl	84.0	50 - 150	%Rec	1	2/3/2025 6:27:18 PM

#### Lab ID: 2501411-004

#### Collection Date: 1/22/2025 9:00:00 AM Matrix: Water

Client Sample ID: EV25010121-	•04		Matrix: V	Matrix: Water						
Analyses	Result	RL Qual	Units	DF	Date Analyzed					
Extractable Petroleum Hydrocarl	oons by NWEF	<u>2H</u>	Batc	h ID: 46	555 Analyst: AP					
Aliphatic Hydrocarbon (C8-C10)	ND	75.7	µg/L	1	2/3/2025 6:48:59 PM					
Aliphatic Hydrocarbon (C10-C12)	ND	37.8	μg/L	1	2/3/2025 6:48:59 PM					
Aliphatic Hydrocarbon (C12-C16)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aliphatic Hydrocarbon (C16-C21)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aliphatic Hydrocarbon (C21-C34)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aromatic Hydrocarbon (C8-C10)	ND	75.7	µg/L	1	2/3/2025 6:48:59 PM					
Aromatic Hydrocarbon (C10-C12)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aromatic Hydrocarbon (C12-C16)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aromatic Hydrocarbon (C16-C21)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Aromatic Hydrocarbon (C21-C34)	ND	37.8	µg/L	1	2/3/2025 6:48:59 PM					
Surr: 1-Chlorooctadecane	50.1	50 - 150	%Rec	1	2/3/2025 6:48:59 PM					
Surr: o-Terphenyl	77.8	50 - 150	%Rec	1	2/3/2025 6:48:59 PM					



#### Work Order: 2501411

CLIENT: ALS Everett

**Project:** EV25010121

- - -

### **QC SUMMARY REPORT**

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-46555	SampType:	MBLK			Units: µg/L		Prep Da	te: 1/24/20	)25	RunNo: 973	398	
Client ID: MBLKW	Batch ID:	46555					Analysis Da	te: <b>2/3/202</b>	25	SeqNo: 202	29849	
Analyte	R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)		ND	80.0		0	0						
Aliphatic Hydrocarbon (C10-C12)		ND	40.0		0	0						
Aliphatic Hydrocarbon (C12-C16)		ND	40.0		0	0						
Aliphatic Hydrocarbon (C16-C21)		ND	40.0		0	0						
Aliphatic Hydrocarbon (C21-C34)		ND	40.0		0	0						
Surr: 1-Chlorooctadecane		370		500.0		74.0	50	150				
Sample ID: MB-46555	SampType:	MBLK			Units: µg/L		Prep Dat	te: 1/24/20	)25	RunNo: 973	399	
Client ID: MBLKW	Batch ID:	46555					Analysis Da	te: 2/3/202	25	SeqNo: 202	29860	
Analyte	R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)		ND	80.0		0	0						
Aromatic Hydrocarbon (C10-C12)		ND	40.0		0	0						
Aromatic Hydrocarbon (C12-C16)		ND	40.0		0	0						
Aromatic Hydrocarbon (C16-C21)		ND	40.0		0	0						
Aromatic Hydrocarbon (C21-C34)		ND	40.0		0	0						
Surr: o-Terphenyl		440		500.0		87.9	50	150				
Sample ID: <b>LCS-46555</b>	SampType:	LCS			Units: µg/L		Prep Dat	te: 1/24/20	)25	RunNo: 973	398	
Client ID: LCSW	Batch ID:	46555					Analysis Da	te: <b>2/3/202</b>	25	SeqNo: 202	29850	
Analyte	R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)		353	80.0	1,250	0	28.2	5	92.3				
Aliphatic Hydrocarbon (C10-C12)		261	40.0	625.0	0	41.8	12.8	95.6				
Aliphatic Hydrocarbon (C12-C16)		376	40.0	625.0	0	60.2	21.9	106				
Aliphatic Hydrocarbon (C16-C21)		425	40.0	625.0	0	68.1	20.7	113				
Aliphatic Hydrocarbon (C21-C34)		474	40.0	625.0	0	75.8	24.7	117				
Surr: 1-Chlorooctadecane		373		500.0		74.6	50	150				

Page 41 of 45



#### Work Order: 2501411

CLIENT: ALS Everett

**Project:** EV25010121

_____

### QC SUMMARY REPORT

#### Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: LCS-46555	SampType: LCS			Units: µg/L		Prep Dat	te: 1/24/20	25	RunNo: 973	99	
Client ID: LCSW	Batch ID: 46555					Analysis Dat	te: <b>2/3/202</b>	5	SeqNo: 202	9861	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	593	80.0	1,250	0	47.4	5	93.4				
Aromatic Hydrocarbon (C10-C12)	432	40.0	625.0	0	69.2	40.3	116				
Aromatic Hydrocarbon (C12-C16)	442	40.0	625.0	0	70.7	17.5	138				
Aromatic Hydrocarbon (C16-C21)	443	40.0	625.0	0	70.9	55	132				
Aromatic Hydrocarbon (C21-C34)	409	40.0	625.0	0	65.5	47.7	120				
Surr: o-Terphenyl	360		500.0		72.1	50	150				
Sample ID: LCSD-46555	SampType: LCSD			Units: µg/L		Prep Dat	te: 1/24/20	25	RunNo: 973	98	
Client ID: LCSW02	Batch ID: 46555							_	0 11 000	0054	
	Baton 12. 40000					Analysis Dat	te: 2/3/202	5	SeqNo: 202	9851	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	Analysis Dat LowLimit	te: <b>2/3/202</b> HighLimit	5 RPD Ref Val	SeqNo: 202 %RPD	RPDLimit	Qual
Analyte Aliphatic Hydrocarbon (C8-C10)	Result 414	RL 80.0	SPK value 1,250	SPK Ref Val	%REC 33.1	Analysis Dat LowLimit 5	te: <b>2/3/202</b> HighLimit 92.3	5 RPD Ref Val 353.0	SeqNo: 202 %RPD 16.0	RPDLimit	Qual
Analyte Aliphatic Hydrocarbon (C8-C10) Aliphatic Hydrocarbon (C10-C12)	Result 414 309	RL 80.0 40.0	SPK value 1,250 625.0	SPK Ref Val 0 0	%REC 33.1 49.4	Analysis Dat LowLimit 5 12.8	te: 2/3/202 HighLimit 92.3 95.6	5 RPD Ref Val 353.0 261.2	SeqNo: 202 %RPD 16.0 16.7	20 20	Qual
Analyte Aliphatic Hydrocarbon (C8-C10) Aliphatic Hydrocarbon (C10-C12) Aliphatic Hydrocarbon (C12-C16)	Result 414 309 435	RL 80.0 40.0 40.0	SPK value 1,250 625.0 625.0	SPK Ref Val 0 0 0	%REC 33.1 49.4 69.5	Analysis Dat LowLimit 5 12.8 21.9	te: <b>2/3/202</b> HighLimit 92.3 95.6 106	5 RPD Ref Val 353.0 261.2 376.4	SeqNo: 202 %RPD 16.0 16.7 14.3	20 20 20	Qual
Analyte Aliphatic Hydrocarbon (C8-C10) Aliphatic Hydrocarbon (C10-C12) Aliphatic Hydrocarbon (C12-C16) Aliphatic Hydrocarbon (C16-C21)	Result 414 309 435 471	RL 80.0 40.0 40.0 40.0	SPK value 1,250 625.0 625.0 625.0	SPK Ref Val 0 0 0 0	%REC 33.1 49.4 69.5 75.4	Analysis Dat LowLimit 5 12.8 21.9 20.7	te: <b>2/3/202</b> HighLimit 92.3 95.6 106 113	5 RPD Ref Val 353.0 261.2 376.4 425.4	SeqNO: 202 %RPD 16.0 16.7 14.3 10.2	20 20 20 20 20 20	Qual
Analyte Aliphatic Hydrocarbon (C8-C10) Aliphatic Hydrocarbon (C10-C12) Aliphatic Hydrocarbon (C12-C16) Aliphatic Hydrocarbon (C16-C21) Aliphatic Hydrocarbon (C21-C34)	Result 414 309 435 471 486	RL 80.0 40.0 40.0 40.0 40.0	SPK value 1,250 625.0 625.0 625.0 625.0 625.0	SPK Ref Val 0 0 0 0 0	%REC 33.1 49.4 69.5 75.4 77.8	Analysis Dat LowLimit 5 12.8 21.9 20.7 24.7	te: 2/3/202 HighLimit 92.3 95.6 106 113 117	5 RPD Ref Val 353.0 261.2 376.4 425.4 474.0	SeqNO: 202 %RPD 16.0 16.7 14.3 10.2 2.56	RPDLimit 20 20 20 20 20 20 20	Qual

Sample ID: LCSD-46555	SampType: LCSD			Units: µg/L		Prep Dat	te: 1/24/20	25	RunNo: 973	99	
Client ID: LCSW02	Batch ID: 46555					Analysis Da	te: 2/3/202	5	SeqNo: 202	9862	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	672	80.0	1,250	0	53.8	5	93.4	592.5	12.6	20	
Aromatic Hydrocarbon (C10-C12)	457	40.0	625.0	0	73.2	40.3	116	432.2	5.62	20	
Aromatic Hydrocarbon (C12-C16)	433	40.0	625.0	0	69.3	17.5	138	442.0	2.03	20	
Aromatic Hydrocarbon (C16-C21)	381	40.0	625.0	0	61.0	55	132	443.0	14.9	20	
Aromatic Hydrocarbon (C21-C34)	379	40.0	625.0	0	60.6	47.7	120	409.5	7.86	20	
Surr: o-Terphenyl	323		500.0		64.7	50	150		0		

-Page 42 of 45



#### Work Order: 2501411

CLIENT: ALS Everett

Aromatic Hydrocarbon (C21-C34)

Surr: o-Terphenyl

Project: EV25010121

ND

390

37.8

472.8

## **QC SUMMARY REPORT**

#### Extractable Petroleum Hydrocarbons by NWEPH

0

0

25

Sample ID: 2501411-002ADUP	SampType: <b>DUP</b>			Units: µg/L		Prep Date:	1/24/20	25	RunNo: 97:	398	
Client ID: EV25010121-02	Batch ID: 46555					Analysis Date:	2/3/202	5	SeqNo: 20	29855	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	75.7		0	0			0		25	
Aliphatic Hydrocarbon (C10-C12)	ND	37.8		0	0			0		25	
Aliphatic Hydrocarbon (C12-C16)	ND	37.8		0	0			0		25	
Aliphatic Hydrocarbon (C16-C21)	ND	37.8		0	0			0		25	
Aliphatic Hydrocarbon (C21-C34)	ND	37.8		0	0			0		25	
Surr: 1-Chlorooctadecane	296		472.8		62.5	50	150		0		
Sample ID: 2501411-002ADUP	SampType: <b>DUP</b>			Units: µg/L		Prep Date:	1/24/20	25	RunNo: 97	399	
Client ID: EV25010121-02	Batch ID: 46555					Analysis Date:	2/3/202	5	SeqNo: 202	29866	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	75.7		0	0			77.43	36.0	25	
Aromatic Hydrocarbon (C10-C12)	ND	37.8		0	0			0		25	
Aromatic Hydrocarbon (C12-C16)	ND	37.8		0	0			0		25	
Aromatic Hydrocarbon (C16-C21)	38.5	37.8		0	0			25.28	41.4	25	

0

0

50

150

82.4



## Sample Log-In Check List

Client Name:	ALSE	Work Order Number: 2501411							
Logged by:	Clare Griggs	Date Received:	1/23/2025	12:55:00 PM					
Chain of Cust	ody								
1. Is Chain of C	sustody complete?	Yes 🖌	No 🗌	Not Present					
2. How was the	sample delivered?	<u>Client</u>							
<u>Log In</u>									
3. Custody Seal (Refer to com	s present on shipping container/cooler? ments for Custody Seals not intact)	Yes	No 🗌	Not Present					
4. Was an attem	npt made to cool the samples?	Yes 🖌	No 🗌						
5. Were all items	s received at a temperature of >2°C to 6°C *	Yes 🖌	No 🗌						
6. Sample(s) in	proper container(s)?	Yes 🖌	No 🗌						
7. Sufficient sam	nple volume for indicated test(s)?	Yes 🖌	No 🗌						
8. Are samples	properly preserved?	Yes 🗹	No 🗌						
9. Was preserva	ative added to bottles?	Yes	No 🗹	NA 🗌					
10. Is there heads	space in the VOA vials?	Yes	No 🗌	NA 🗹					
11. Did all sample	es containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌						
12. Does paperwo	ork match bottle labels?	Yes 🗹	No 🗌						
13. Are matrices	correctly identified on Chain of Custody?	Yes 🔽	No 🗌						
14. Is it clear what	at analyses were requested?	Yes 🗸	No 🗌						
15. Were all hold be met?	times (except field parameters, pH e.g.) able to	Yes 🖌	No 🗌						
Special Hand	<u>ling (if applicable)</u>								
16. Was client n	otified of all discrepancies with this order?	Yes	No 🗌	NA 🔽					
Person	Notified: Date	:							
By Who	om: Via:	eMail 🗌 Ph	none 🗌 Fax	In Person					
Regard	ling:		-						
Client I	nstructions:								
17. Additional re	emarks:								

#### Item Information

Item #	Temp ⁰C
Sample	2.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SPECIAL INSTRUCTIONS:	EV25010121-04	EV25010121-02	EV25010121-01	SAMPLE I.D.	ADDRESS:	ATTENTION:	INVOICE TO COMPANY:	E-MAIL:	PHONE:		ADDRESS:	PROJECT MANAGER:	REPORT TO COMPANY	PROJECT ID:	ALS I B620 H Everett Fax () http://w
							SAME	carl.nott@alsglobal.com	(425) 356-2600	Everett, WA 98208	8620 Holly Drive Suite 1	Carl Nott	ALS Environmental	EV25010121	Environmental olly Drive, Suite 100 , WA 98208 (425) 356-2600 (425) 356-2626 www.alsglobal.com
	1/22/2025 9:00:00 AM Water	1/22/2005 8-10-00 AM Water	1/22/2025 9:40:00 AM Water	DATE AND TIME MATRIX LAB#					P.O.#:: 32-EV25010121		100				Chain Of Custody/ Laboratory Analysis Request
	× >	< >	× ×	Hd			N		-10					ANALYSIS REQUESTED	2501411 te 1/23/2025 Page Of
	Page 45	of 4	45												

2. Relinquished By:

Received By:

Received By:

1. Relinquished By: OUUV

ALS

1-23 12:54

PLEASE EMAIL RESULTS BY NOON ON:

OTHER:

2/5/2025

ATG 1123125 12:55PM

SIGNATURES (Name, Company, Date, Time):

**RIGHT SOLUTIONS | RIGHT PARTNER** 

## APPENDIX J -SOIL BORELOG B-3-57



SOURCE: Dames & Moore, 1957, Job No. 68-AN-1. "Report of Preliminary Foundation Investigation, Proposed Northwest Refinery, Anacories, Washington "for Texaco Inc.

Job No. 33759284

Figure A-19 Log of Boring B-3-57

RP752 Facility Siting Project Anacortes, Washington

URS

ţ

## APPENDIX K -SAMPLING AND ANALYSIS PLAN SWMU 1 AOC-1 GROUNDWATER INVESTIGATION



## SAMPLING AND ANALYSIS PLAN SWMU 1 – OILY WATER SEWER AREA OF CONCERN – 1

## **GROUNDWATER INVESTIGATION**

HF SINCLAIR PUGET SOUND REFINING LLC SUBMITTED TO:









HF Sinclair PSR LLC 8505 South Texas Road Anacortes, WA 98221



1.	INTRODUCTION1-2							
2.	SAMI	AMPLING AND ANALYSIS PLAN						
	2.1	PROJEC	T SCHEDULE	2-1				
	2.2	SOIL BO	DRING AND SOIL SAMPLING PROCEDURES	2-1				
		2.2.1	Proposed Soil Boring Locations	2-1				
		2.2.2	Preliminary Activities	2-1				
		2.2.3	Soil Borings and Soil Sampling Procedures	2-2				
		2.2.4	Field Screening Procedures	2-2				
		2.2.5	Soil Sample Collection	2-2				
		2.2.6	Soil Analysis	2-3				
		2.2.7	Decontamination Procedures	2-4				
	2.3	WASTE	MATERIALS HANDLING PROCEDURES	2-5				
	2.4	QUALITY ASSURANCE/QUALITY CONTROL						
	2.5	5 HEALTH AND SAFETY						
	2.6	REPORTING						
3.	REFE	RENCES		3-1				

### LIST OF APPENDICES

Appendix A - Figures



HF Sinclair Puget Sound Refining LLC AOC-1 Groundwater Investigation SAP 2025

#### 1. INTRODUCTION

Agreed Order No DE 16298 (AO) dated November 1, 2021, was entered into by the Washington State Department of Ecology (Ecology) and Equilon Enterprises LLC d/b/a Shell Oil Products concerning the Puget Sound Refinery, now known as HF Sinclair Puget Sound Refining LLC (HFSPSR). HFSPSR is situated two miles east of the city of Anacortes on the southern portion of March Point. The site address is 8505 South Texas Road, Anacortes, Washington 98221. (Figure A-1).

The objective of the AO is to investigate the integrity of the HFSPSR oily water sewer (OWS) system, also referred to as Solid Waste Management Unit 1 (SWMU-1). The OWS was constructed in accordance with the specifications in place in 1953 and consists of underground piping, drain hubs, manholes, hatches, and other access points. The OWS conveys process wastewater to the facility's effluent plant.

An Investigation and Response Plan (IRP) dated June 15, 2022, was prepared in accordance with the requirements in the AO. The IRP provides a framework to investigate the integrity of the OWS and respond to any potential releases of contamination to soil and/or groundwater. The IRP outlined four Phases of major OWS trunk line inspections to be completed by December 31, 2031.

Site characterization began in April 2023 along on D-Street from manhole D6.1 to D-21 to investigate sewer defects identified during voluntary video inspections completed by Shell from 2017-2019 and additional inspections performed in 2023 as discussed in the 2023 Annual Progress Report SWMU-1 Oily Water Sewer (WES, 2023). Four soil samples were collected along D-street to investigate the sewer defects. Analytical results from this investigation showed that soil sample B-3-23 5ft contained concentrations of Naphthalenes that exceeded the MTCA protection of groundwater, this sample also exceeded the protection of groundwater cancer risk threshold and hazard index threshold. Soil sample B-4-23 5.5 ft exceeded the protection of groundwater hazard index threshold. Due to these exceedances, the investigation area was named Area of Concern-1 (AOC-1). The AOC-1 location is shown on Figure A-2.



HF Sinclair Puget Sound Refining LLC AOC-1 Groundwater Investigation SAP 2025

#### 2. SAMPLING AND ANALYSIS PLAN

The soil and groundwater conditions at AOC-1 will be further investigated per the IRP. Soil samples will be collected from a soil boring that will be located downgradient from the B-3-23 sampling location at AOC-1. This sampling and analysis plan (SAP) describes sample collection, handling, and analysis procedures per Table 6.4 of the Washington State Department of Ecology's Guidance for Remediation of Petroleum Sites (Guidance), referenced in Section 3.3 of the IRP.

#### 2.1 PROJECT SCHEDULE

The soil sampling will occur in the Spring of 2025.

#### 2.2 SOIL BORING AND SOIL SAMPLING PROCEDURES

The following sections describe the soil boring and soil sampling procedures to be applied in the field.

#### 2.2.1 Proposed Soil Boring Location

One borehole will be drilled, and two or more soil samples will be collected in the vicinity of AOC-1. The soil boring location is shown on Figure A-2. This soil boring location was chosen due to the inaccessible nature of the original sampling location, as critical site infrastructure prevents the installation of a monitoring well at a location closer to the original soil boring.

#### 2.2.2 Preliminary Activities

Prior to the onset of field activities, all required permit(s) will be obtained from HFSPSR operations. The borehole locations will be marked with white paint and HFSPSR will provide an underground utility map for locations where work will be conducted at least 48 hours prior to the start of work. The boring location will be cleared to a depth of at least 5 feet (ft.) by hydro-excavation prior to initiating drilling.


#### 2.2.3 Soil Boring and Soil Sampling Procedures

A licensed driller will drill the boring and collect soil samples using a Hollow Stem Auger drill rig. The soil will be described according to the Unified Soil Classification System and the description will be recorded on the boring log. The specific soil sample collection depths will be documented on the boring log. The soil boring will be drilled to a depth of 15 ft. below ground surface (bgs).

A groundwater monitoring well will be installed in the soil boring as discussed in section 2.2.7.

## 2.2.4 Field Screening Procedures

Soil from the sampling interval will be placed in a plastic re-sealable bag, and the tip of a photo-ionization detector (PID) will be inserted into the plastic bag to measure organic vapor concentrations in the headspace. The PID measurement will be recorded on the boring log and in the field notebook. The organic vapor headspace analyses will be conducted using a MiniRAE Model 3000 PID equipped with a 10.6 eV lamp (or equivalent). The PID will be calibrated daily in accordance with manufacturer's specifications using an isobutylene standard. The calibration gas and concentration will be recorded in the field notebook.

Sheen tests will be conducted using a portion of the soil core and distilled water. Sheen tests will be recorded as either NS – no sheen, SS – slight sheen, MS – moderate sheen, or HS – heavy sheen.

#### 2.2.5 Soil Sample Collection

Soil boring depth intervals which yield field screening indications of petroleum impacts will be collected for laboratory analysis. If field screening does not indicate the presence of petroleum impacts, soil samples will be collected one foot below the depth of the sewer pipe (approximately six ft. bgs) and at the bottom of the soil boring (15 ft. bgs). Invert sewer pipe elevations are estimated from facility engineering drawing 35-AS-46.



If field screening indicates petroleum impacts at 15 feet bgs the soil boring will be advanced at five-foot intervals. The goal of the soil sampling exercise is to determine the total depth of petroleum impacts (if any are encountered) by collecting a clean soil sample at the bottom of the soil boring.

Soil samples will be collected as discrete samples, preserved in sample containers provided by the lab, and stored on ice in a cooler immediately after collection. If required, samples will be stored overnight in a refrigerator, at a secure location. Samples will be transferred to the laboratory following strict chain-ofcustody procedures.

## 2.2.6 Soil Sample Analysis

Soil analyses for contaminants of concern will be performed by ALS Environmental in Everett, Washington. ALS Environmental is a Washington State Department of Ecology accredited laboratory. Soil samples will be submitted to the lab under chain-of-custody and analyzed for the following contaminants of concern per the IRP:

- <u>NWTPH-EPH:</u> Extractable Petroleum Hydrocarbons (EPH)
- <u>NWTPH-VPH:</u> Volatile Petroleum Hydrocarbons (VPH)
- <u>EPA Method 8260:</u> Benzene, toluene, ethylbenzene, and total xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC)
- <u>EPA Method 8270 SIM:</u> Polycyclic Aromatic Hydrocarbons (PAHs)
- <u>EPA Method 6020 & 7471:</u> Arsenic, cadmium, chromium, chromium III, chromium VI, lead, nickel, mercury, and zinc

## 2.2.7 Groundwater Monitoring Well Installation

Due to the soil exceedances observed during the 2023 investigation, a groundwater monitoring well will be installed downgradient of soil boring B-3-23. The monitoring well will be installed with a screened interval that starts above the sewer pipe (5 ft. bgs) and extends to a depth below the sewer pipe where contamination is no longer observed (15 ft. bgs). The final monitoring well installation parameters will be based on information gathered in the field.



The monitoring well will be constructed with machine-slotted, 2-inch diameter PVC pipe. Monitoring well construction will be in accordance with Washington State Resource Protection Well standards according to WAC 173-160. The groundwater monitoring well construction will be documented in a well construction diagram. The information recorded will consist of the well depth, the length and depth of the well screen, the type of materials used in well construction, the Ecology well tag number, and the name of the licensed driller who installed the well. The well will be installed with a flush mount well monument so as not to impede vehicle traffic patterns at the site.

#### 2.2.8 Groundwater Sample Collection

Following the installation of the monitoring well, the monitoring well will be developed, and a groundwater sample will be collected. Groundwater samples will be collected utilizing low stress (low flow) purging and sampling procedures (EPA, 2017). Groundwater samples will be collected in sample containers provided by the lab and stored on ice in a cooler immediately after collection. If required, samples will be stored overnight in a refrigerator, at a secure location. Samples will be transferred to the laboratory following strict chain-of-custody procedures.

#### 2.2.9 Groundwater Sample Analysis

Following the installation of the monitoring well, the monitoring well will be developed, and a groundwater sample will be collected. Soil analyses for contaminants of concern will be performed by ALS Environmental in Everett, Washington. ALS Environmental is a Washington State Department of Ecology accredited laboratory. Groundwater samples will be analyzed for the following contaminants of concern per the IRP:

- NWTPH-EPH: EPH
- NWTPH-VPH: VPH
- EPA Method 8260: BTEX, EDB, EDC
- EPA Method 8270 SIM: PAHs
- <u>EPA Method 200.8 & 7471:</u> Arsenic, cadmium, chromium, chromium III, chromium VI, lead, nickel, mercury, and zinc



Groundwater analyses for contaminants of concern will be performed by ALS Environmental in Everett, Washington. ALS Environmental is a Washington State Department of Ecology accredited laboratory.

#### 2.2.10 Decontamination Procedures

Decontamination will be conducted using Alconox detergent followed by a distilled water rinse.

## 2.3 WASTE MATERIALS HANDLING PROCEDURES

Soil cuttings generated from hydro-excavation and drilling will be stored on-site in a drum or roll-off box. The soil will be removed from the site and transported under manifest to a client- and regulatoryapproved facility for recycling or disposal. Groundwater and wash water generated during well installation, groundwater sampling activities, and during decontamination of sampling or drilling equipment will be containerized and disposed of at the refinery wash pad.

# 2.4 QUALITY ASSURANCE/QUALITY CONTROL

All soil characterization, sampling, and screening will be conducted by competent and trained personnel. Samples will be collected using decontaminated stainless-steel sampling implements and placed into laboratory-provided sample containers. The PID will be calibrated daily in accordance with manufacturer's specifications using an isobutylene standard.

Duplicate soil and groundwater samples will be collected and analyzed during this investigation. Each sample will have an adhesive plastic or waterproof label affixed to the container. Sample labels will include the project name, unique sample identification, and the sample date and time. Each cooler transported to the lab will include a trip blank and temperature blank provided by the lab. Samples will be stored on ice in a cooler and transported to the lab following proper shipping and chain-of-custody protocols. The analytical data will be reviewed to ensure it meets the laboratory-provided QA/QC such as surrogate recoveries for each sample, method blank results, duplicate analyses, matrix spike or method blank analyses.

PRIVILEGED AND CONFIDENTIAL, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION



HF Sinclair Puget Sound Refining LLC AOC-1 Groundwater Investigation SAP 2025

## 2.5 HEALTH AND SAFETY

ALL4 personnel will adhere to both the HFSPSR safe-work practices as well as company safety policies. All work will be properly permitted, and workers will be trained in hazard identification and mitigation.

## 2.6 REPORTING

Following the completion of the site investigation, a report will be prepared documenting the investigation results. The report will include a summary of all work performed at the site including a soil sample location map, soil borelogs, soil data summary tables, the groundwater monitoring well construction diagram, (if a well is installed), groundwater data summary tables (if a groundwater sample is collected), and a cross-section. The information will be included in the 2025 annual progress report due April 1, 2026.

If a release to soil is confirmed at a concentration that exceeds the MTCA Method C levels (developed in accordance with WAC 173-340-745) or a release to groundwater that exceeds the MTCA Method A cleanup levels (Table 740-1 in WAC 173-340-720) the release will be reported to Ecology within 90 days of discovery.

Soil and groundwater sample results will be uploaded to the State Environmental Information Management System (EIM) within 60 days after receiving the validated data.

PRIVILEGED AND CONFIDENTIAL, ATTORNEY WORK PRODUCT, ATTORNEY-CLIENT COMMUNICATION



**HF Sinclair Puget Sound Refining LLC** AOC-1 Groundwater Investigation SAP 2025

# 3. **REFERENCES**

- US Environmental Protection Agency Region 1 (EPA). September 19, 2017. Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples From Monitoring Wells EQASOP - GW4.
- HollyFrontier Puget Sound Refinery. March 21, 2023. 2023 Annual Progress Report, SWMU-1 Oil Water Sewer.
- HollyFrontier Puget Sound Refinery. June 15, 2022. Investigation and Response Plan SWMU 1 Oily Water Sewer.
- Washington State Department of Ecology (Ecology). November 1, 2021. Agreed Order for Interim Action Oily Water Sewer (SWMU-1). No. DE 16298.
- Washington State Department of Ecology (Ecology). June 2016. Guidance for Remediation of Petroleum Contaminated Sites. Publication No. 10-09-057.
- Washington State Department of Ecology (Ecology). 2024. Model Toxics Control Act Cleanup Regulation Chapter 173-340 WAC. Publication No. 94-06.
- Washington State Department of Ecology (Ecology). December 2008. Minimum Standards for Construction and Maintenance of Wells WAC 173-160-400.

APPENDIX A -
FIGURES





APPENDIX L -BORELOG B1-02



Figure A-1.2