2024 Annual Progress Report

SWMU-1 Oily Water Sewer

HF Sinclair Puget Sound Refining LLC

March 2025

Submitted by:

HF Sinclair Puget Sound Refining LLC

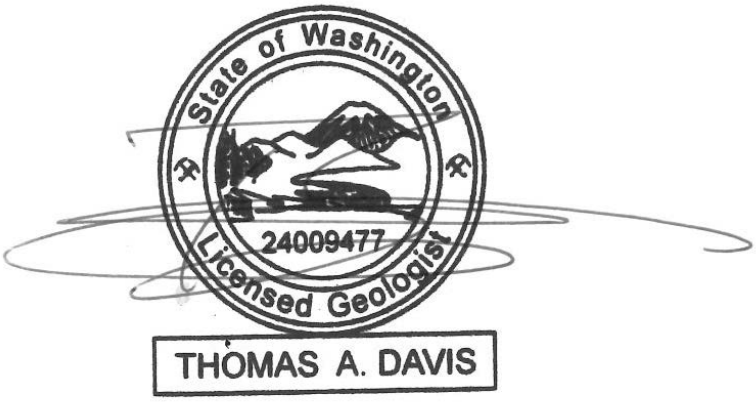
8505 South Texas Road
Anacortes, WA 98221

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:



3/31/2025

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

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LIST OF APPENDICES

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

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

- Chromium (III): 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 (µg/L) which exceeded the MTCA Method A cleanup level of 5.0 µg/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.

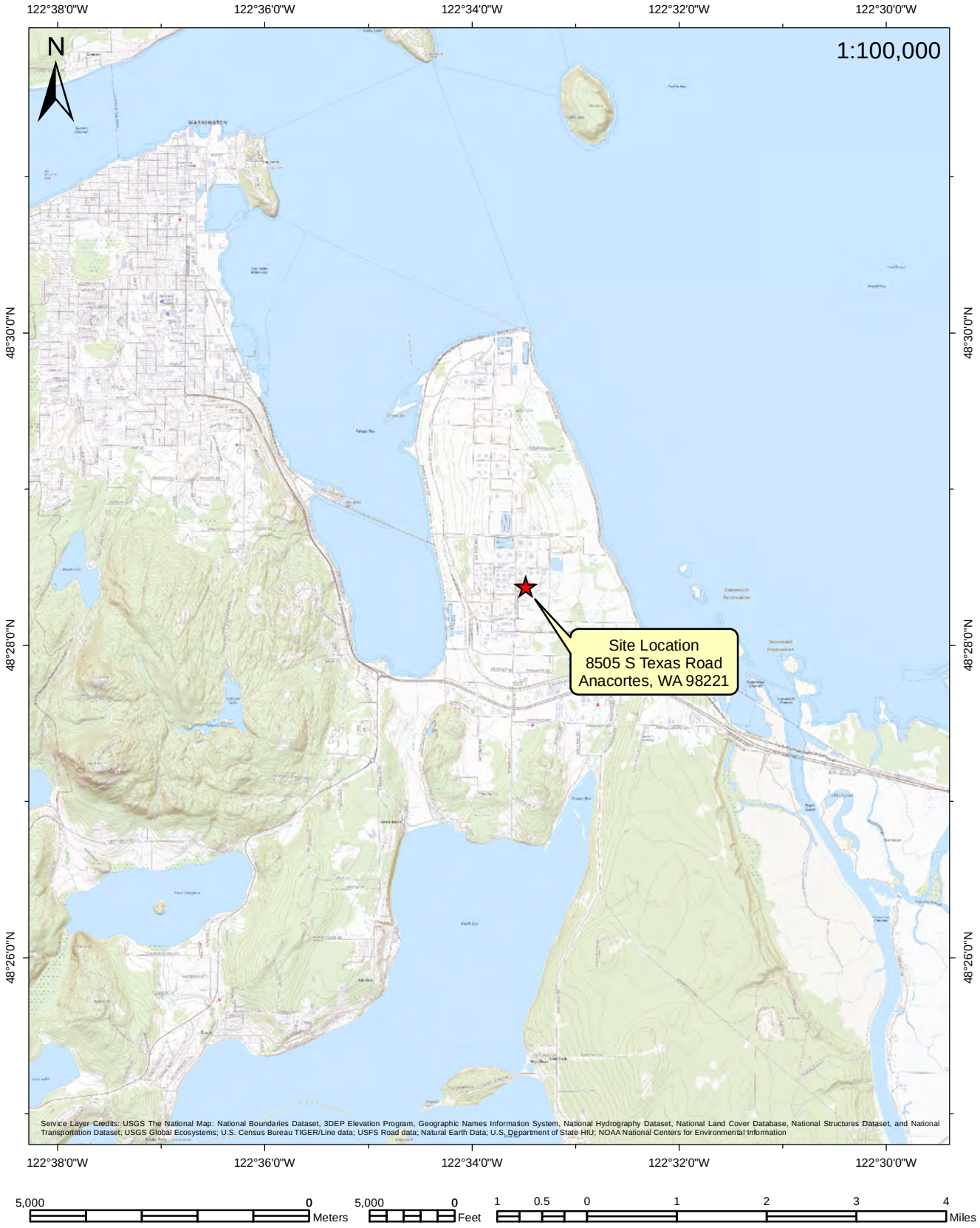
U.S. Environmental Protection Agency, Region 1 (EPA). September 19, 2017. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.

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



Prepared for:	Prepared by:	Site Location Map	
HF Sinclair	ALL4	2023 OWS Annual Report 3/15/2024	Figure A-1

N

D-1.1
D-2.1
D-3.1
D-4.1
D-20
D-6.1
D-6
D-19
D-21
D-20C
D-22
D-23
D-12
D-24
D-24A
D-16
D-17
7
C-1
C-3
C-5
C-7
C-8A
C-9
42E
A-1
A-2
6-C
6-E
6-F
6-B
6-J
A-5
A-7
MH-1
B-01
B-3
3-U
3-S
3-Q
3-N
3-L
3-J
3-G
3-E
3-C
3-B
5-A
5-B
5-C
5-D
5-E
5-F
5-M
5-O
5-P
B-02
4-C
4-D

Oily Sewer Manholes

Oily Water Sewer Major Trunk Lines

Inspection completed:

2023

Future Inspection Phase:

2026

2028

2031

All data are approximate and should be used for relative location reference only.

0 250 500 750 1,000 Feet

1 inch = 500 feet

HF Sinclair

8505 South Texas Road
Anacortes, WA 98221

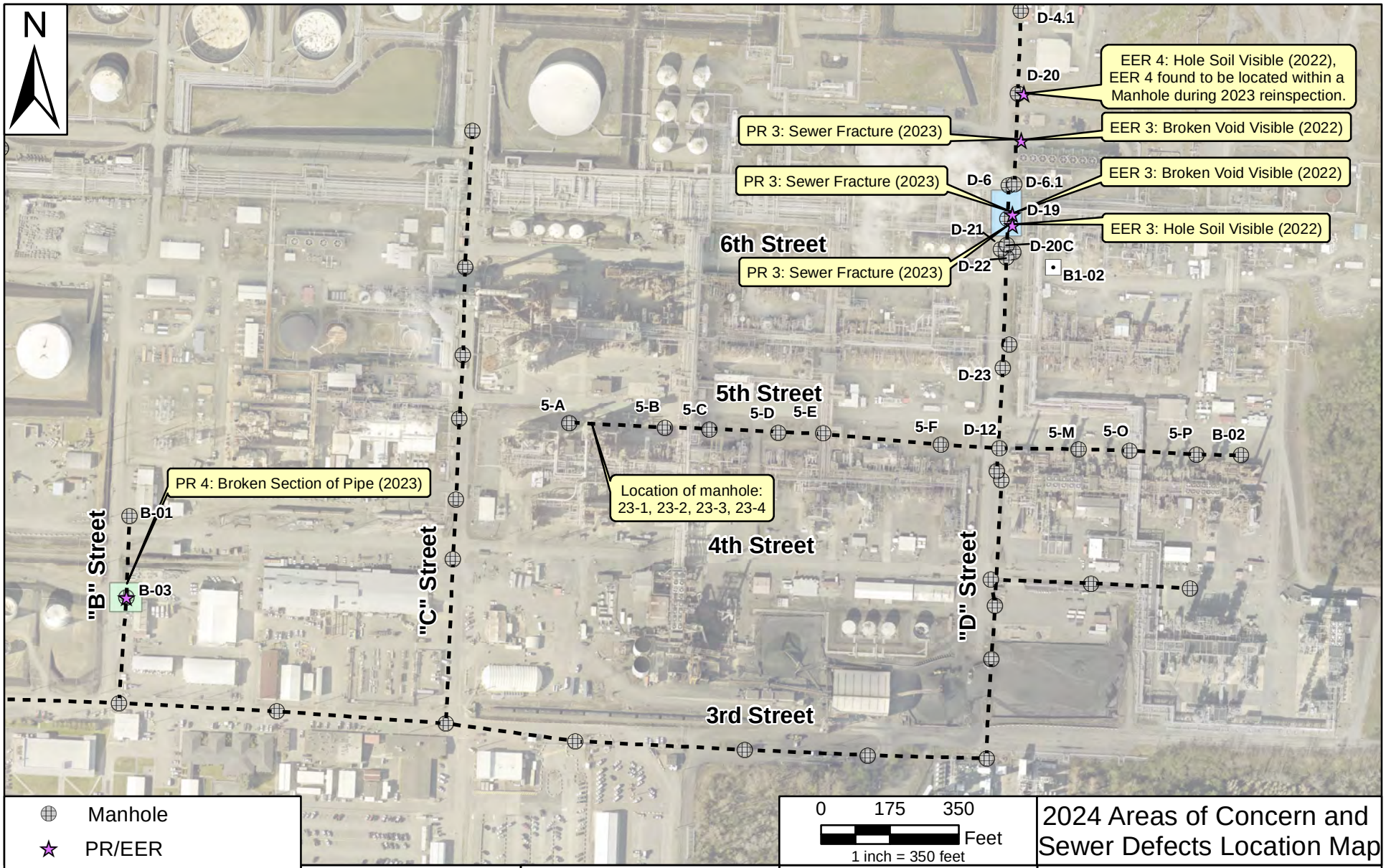
HF Sinclair PSR Base Map: General Sewer Plan (34-ES-1)

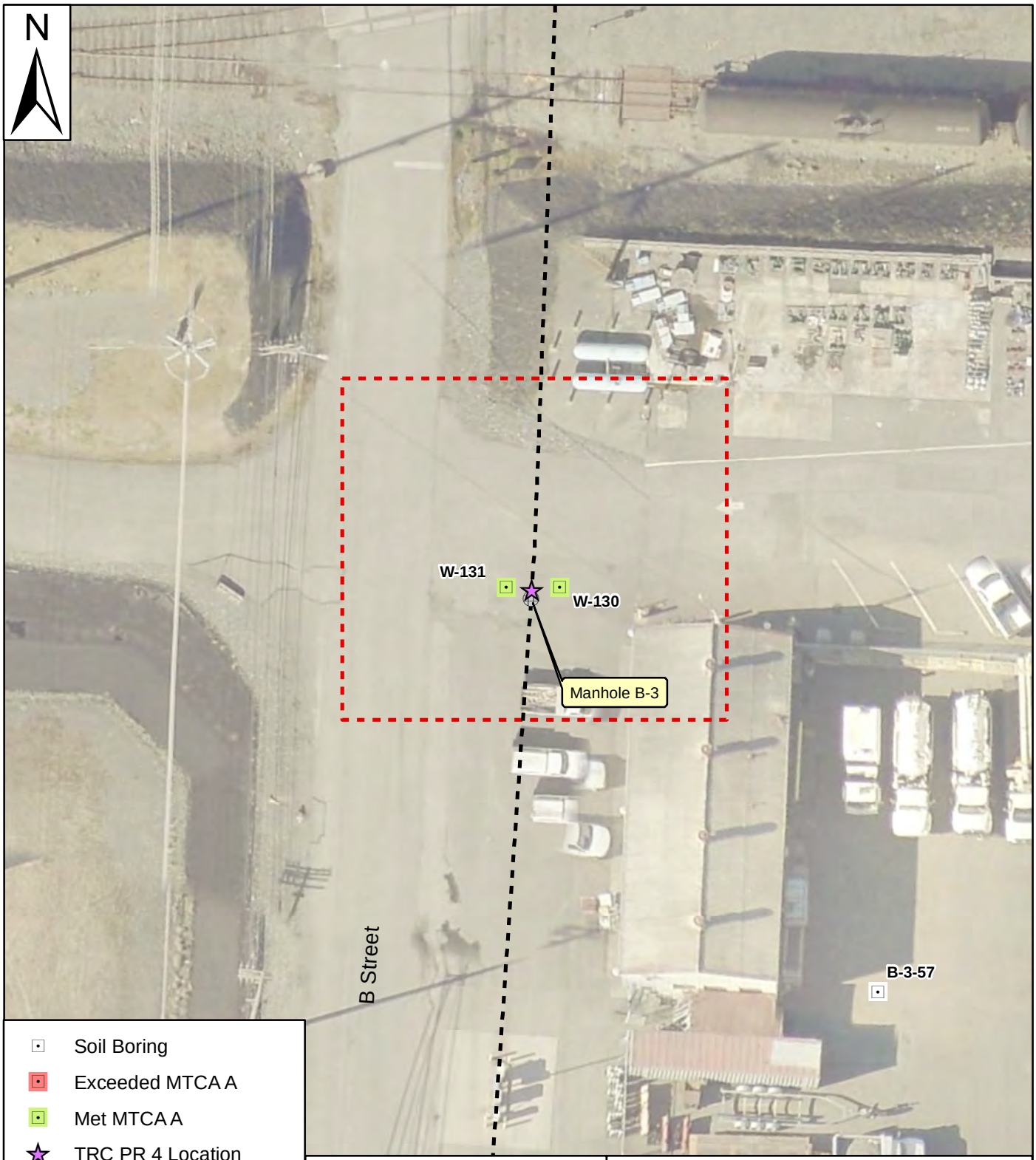
HFS OWS Annual Rpt 2024

Prepared: 1/7/2025

Major Trunk Lines Oily Water Sewer Map

Figure A-2


N
D-4.1
D-20
EER 4: Hole Soil Visible (2022), EER 4 found to be located within a Manhole during 2023 reinspection.
PR 3: Sewer Fracture (2023)
EER 3: Broken Void Visible (2022)
PR 3: Sewer Fracture (2023)
D-6
D-6.1
EER 3: Broken Void Visible (2022)
D-19
D-21
EER 3: Hole Soil Visible (2022)
6th Street
D-20C
PR 3: Sewer Fracture (2023)
D-22
B1-02
D-23
5th Street
5-A
5-B
5-C
5-D
5-E
5-F
D-12
5-M
5-O
5-P
B-02
PR 4: Broken Section of Pipe (2023)
Location of manhole: 23-1, 23-2, 23-3, 23-4
B-01
B-03
"B" Street
"C" Street
4th Street
"D" Street
3rd Street
Manhole
PR/EER
Soil Boring
OWS Main Trunk Line
AOC-1
AOC-2
0
175
350
Feet
1 inch = 350 feet
2024 Areas of Concern and Sewer Defects Location Map
All data are approximate and should be used for relative location reference only.
Prepared for:
HF Sinclair
Prepared by:
ALL4
8505 South Texas Road
Anacortes, WA 98221
2023 OWS Annual Report
12/27/2024
Figure A-3



Soil Boring
Exceeded MTCA A
Met MTCA A
TRC PR 4 Location
OWS Manhole
Oily Water Sewer
AOC-2

0 15 30 45 Feet
1 inch = 30 feet

All data are approximate and should be used for relative location reference only.

AOC-2 Soil Sample Location and Results

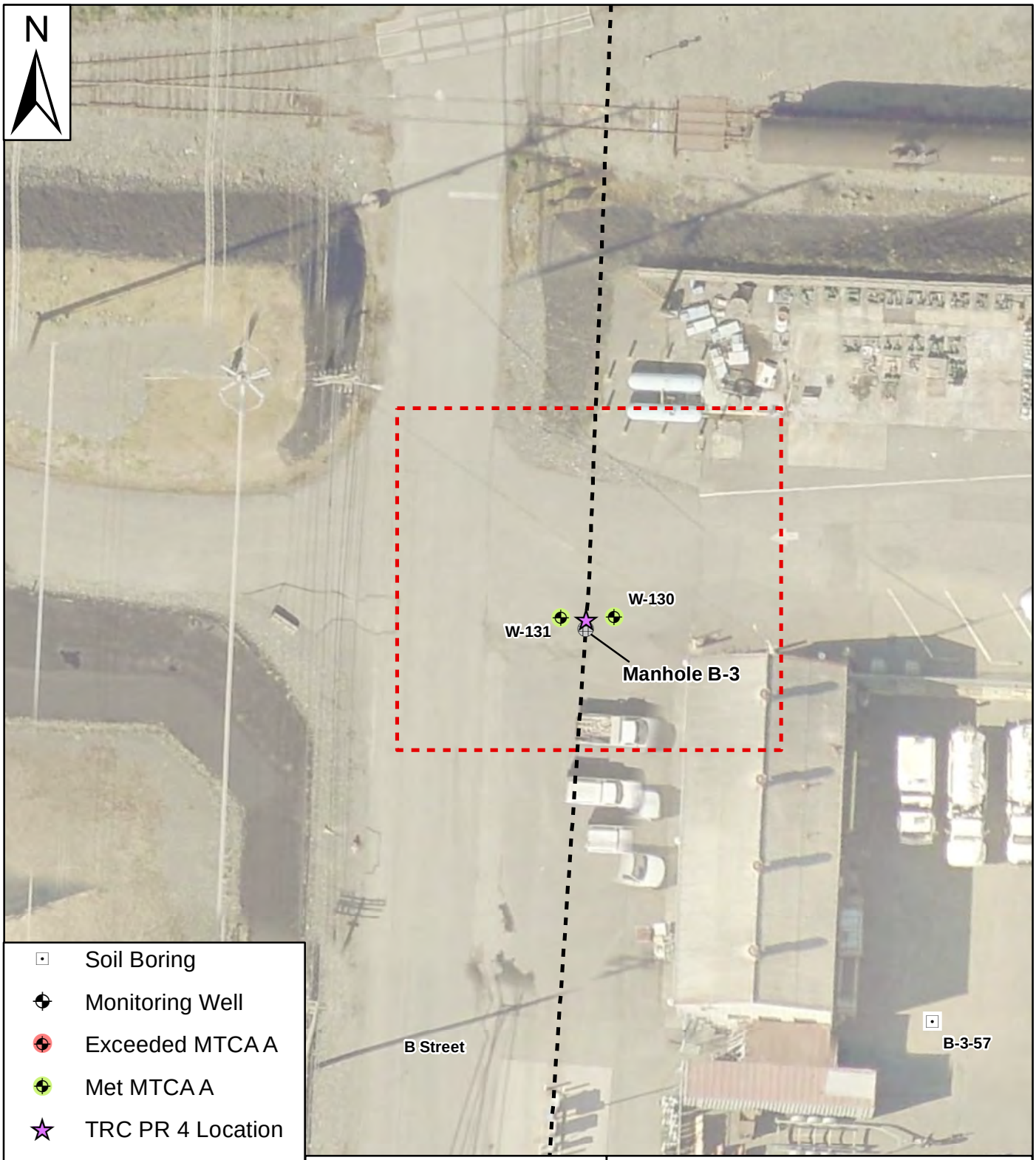
Prepared for: HF Sinclair

Prepared by: ALL4

8505 South Texas Road
Anacortes, WA 98221

OWS AOC-2 Investigation
12/23/2024

Figure A-4



- Soil Boring
- Monitoring Well
- Exceeded MTCA A
- Met MTCA A
- TRC PR 4 Location
- OWS Manhole
- Oily Water Sewer
- AOC-2

0 15 30 45 Feet

1 inch = 30 feet

All data are approximate and should be used for relative location reference only.

AOC-2 Monitoring Well Location and Results

Prepared for: HF Sinclair

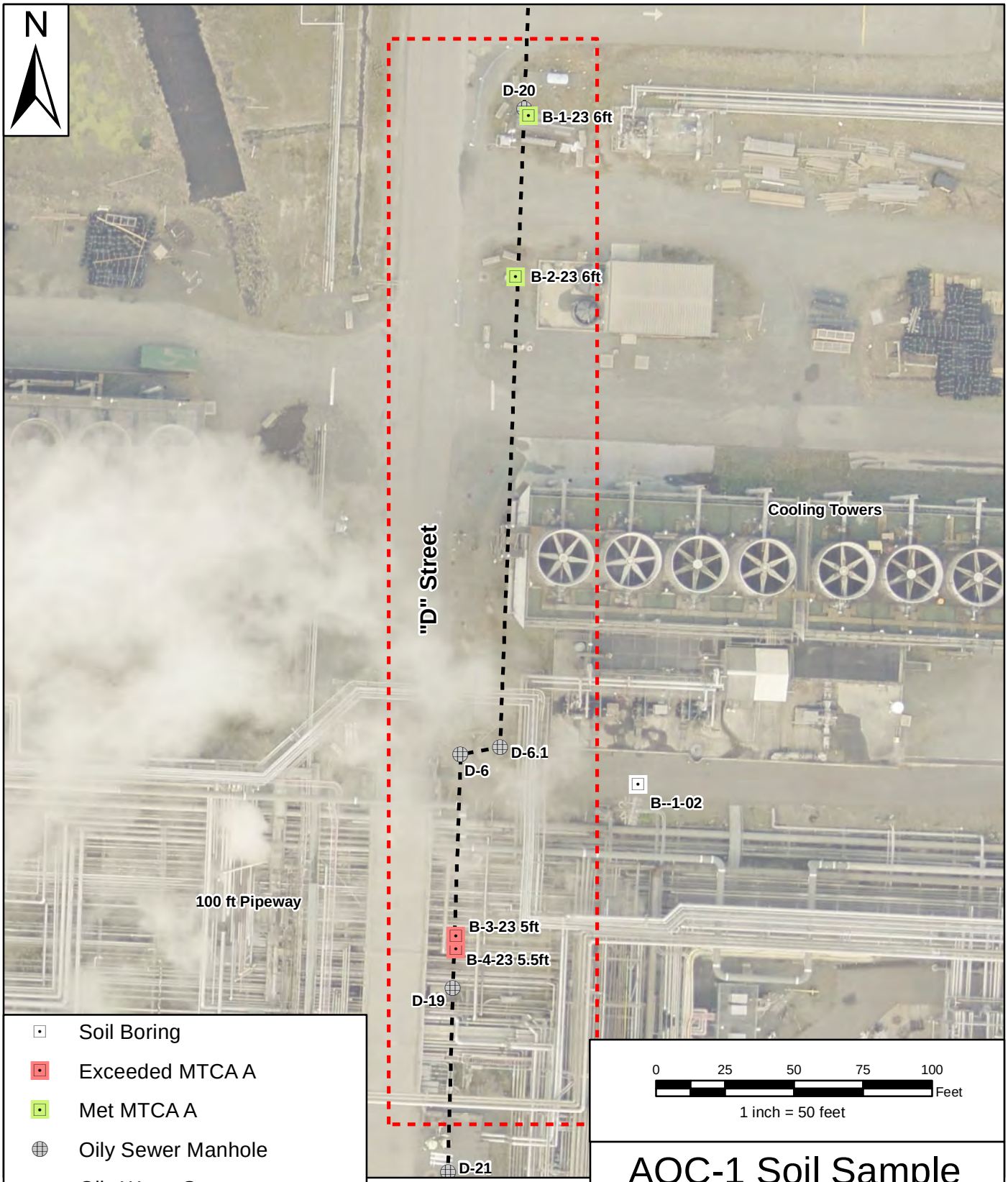
Prepared by: ALL4

8505 South Texas Road
Anacortes, WA 98221

OWS AOC-2 Investigation

2/24/2025

Figure A-5



Soil Boring
Exceeded MTCA A
Met MTCA A
Oily Sewer Manhole
Oily Water Sewer
OWS AOC-1

0 25 50 75 100 Feet
1 inch = 50 feet

All data are approximate and should be used for relative location reference only.

AOC-1 Soil Sample Location and Results

Prepared for: HF Sinclair

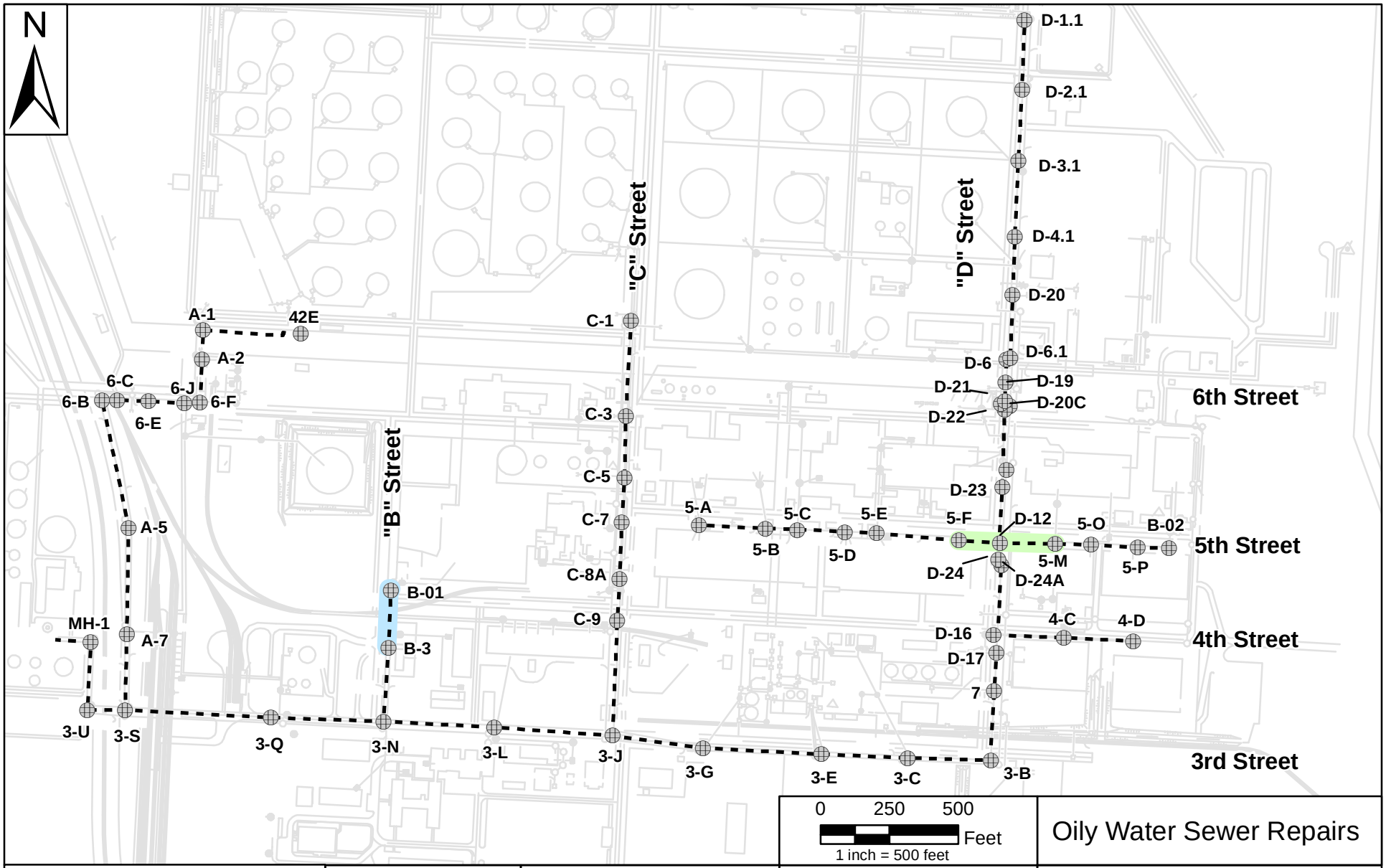
Prepared by: ALL4

8505 South Texas Road
Anacortes, WA 98221

2023 OWS Annual Report

2/25/2025

Figure A-6


N
D-1.1
D-2.1
D-3.1
D-4.1
D-20
D-6.1
D-6
D-19
D-21
D-20C
D-22
D-23
D-12
D-24
D-24A
D-16
D-17
7
"D" Street
"C" Street
"B" Street
6th Street
5th Street
4th Street
3rd Street
A-1
42E
A-2
6-C
6-B
6-J
6-F
6-E
A-5
A-7
MH-1
3-U
3-S
3-Q
3-N
3-L
3-J
3-G
3-E
3-C
3-B
C-1
C-3
C-5
C-7
C-8A
C-9
B-01
B-3
5-A
5-B
5-C
5-D
5-E
5-F
5-O
5-M
5-P
B-02
4-C
4-D
0
250
500
Feet
1 inch = 500 feet
OWS Manhole
OWS Trunk Lines
OWS Repairs 2024
OWS Repairs 2023
All data are approximate and should be used for relative location reference only.
Prepared for:
HF Sinclair
Prepared by:
ALL4
Oily Water Sewer Repairs
8505 S Texas Road
Anacortes, WA 98221
2024 OWS Annual Report
12/23/2024
Figure A-7

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 Inspections 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 over lifetime	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 over lifetime	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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	171.1	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	237.5	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	246.1	4-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	261.9	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	268.5	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	292	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	327.9	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	334.6	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	337.6	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	337.6	6-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	341	4-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	341	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	343.8	6-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	347.3	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	347.3	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	354.8	5-10	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	359.1	4-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	371	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-3	D-3.1:D-4.1	379.1	8-10	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 satisfactory
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 satisfactory
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	3	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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	25.3	12-12	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	27.4	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	27.4	12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	45.3	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	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 Inspections 2023									
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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	64.4	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	69.7	3-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	75.4	12-12	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	80.4	12-2	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	81.7	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	81.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	87.7	3-9	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	105.8	5-7	3	Fracture Circumferential	Normal degradation of pipe over lifetime	**AOC-1 Investigation: Site characterization, soil sampling**	April-2023	Continue montioring condition
2023-5	D-20:D-6.1	107.7	12-12	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	110.1	6-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	111.8	8-4	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	115.9	6-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	117.9	8-10	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	135.8	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	141.9	12-12	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	148.2	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	148.2	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	154.1	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	154.1	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-5	D-20:D-6.1	166.6	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	172.3	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	172.3	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	172.3	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	172.3	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	172.3	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	178.2	6-11	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-5	D-20:D-6.1	196.4	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	196.4	8-10	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	196.4	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	202.4	1-2	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	208.2	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-5	D-20:D-6.1	214.3	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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	4	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-7	D-6:D-19	0-82	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-7	D-6:D-19	4.8	7-8	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-7	D-6:D-19	4.8	9-7	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 Inspections 2023									
2023-7	D-6:D-19	13	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-7	D-6:D-19	45.5	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-7	D-6:D-19	61.9	12	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	62.3	1-11	2	Crack Circumferential	Normal degradation of pipe over lifetime	**AOC-1 Investigation: Site characterization, soil sampling**	April-2023	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	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-8	D-19:D-20	20.2	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-8	D-19:D-20	40.4	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-8	D-19:D-20	59.1	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	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
2023-9	D-22:D-23	55-61.3	11-1	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	110.8-127.2	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	129.2-147	1	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	162	12	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	189.2-208.9	9-3	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	237-247	11	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-9	D-22:D-23	309.6	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	0-8	4-8	3	Surface Damage Corrosion	Normal degradation of pipe from operational flows	**AOC-1 Investigation: Site characterization, soil sampling**	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	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	146-158	10-2	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	150-176.1	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	165-171.4	10-2	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	176.2-217.3	12-12	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-10	D-23:D-24	187.6	11	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	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	64.7	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	70.3	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	77.6	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	78.8	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	96.6	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	102.4	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	113.1	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	121.8	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
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	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	179	6	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 Inspections 2023									
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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	25.6	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-23	D-1.1:D-2.1	250.1	10-4	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	0-253.3	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	2.5	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	8.2	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	15.7	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	16.1	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	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	54.9	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	61	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	73	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	73.8	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	79	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	87.9	6-8	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	91.1	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	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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	151.6	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	157.7	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	163.7	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	169.7	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-24	D-2.1:D-3.1	175.6	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	175.6	6-7	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-24	D-2.1:D-3.1	229.9	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	237.5	5-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	0-412	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	6.9	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	85.8	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	158.3	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	170.4	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	261.3	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	267.3	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	279.3	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	303.3	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	323.8	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	323.8	4-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	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
2023-25	D-3.1:D-4.1	334.1	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	336.5	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	339.8	6	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 Inspections 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	352.1	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	353.4	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	355.4	5-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	358	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	358	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	364.2	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	370.2	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	383.7	5-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	385.5	5-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	394.5	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	398	5-7	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	398.8	4-6	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-25	D-3.1:D-4.1	410.6	10-2	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	0-82.3	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	11.9	6	2	Fracture Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	11.9	3-5	1	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	24.3	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-26	D-6:D-19	44.5	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-26	D-6:D-19	60.7	12	3	Point Repair Patch	Likely due to trench pipe work	**AOC-1 Investigation: Site characterization, soil sampling**	April-2023	Continue monitoring condition
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 characterization, soil sampling**	April-2023	Continue monitoring condition
2023-26	D-6:D-19	64.9	6	2	Crack Longitudinal	Likely due to trench pipe work	**AOC-1 Investigation: Site characterization, soil sampling**	April-2023	Continue monitoring condition
2023-26	D-6:D-19	81.2	6	3	Fracture Longitudinal	Normal degradation of pipe over lifetime	**AOC-1 Investigation: Site characterization, soil sampling**	April-2023	Continue monitoring condition
2023-27	D-21:D-22	0-14.9	12-12	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-32	D-21:D-22	0-21.5	12-12	2	Surface Damage Corrosion	Normal degradation of pipe from operational flows	No Remedial Action Taken	-	Condition remains satisfactory
2023-33	D-20C:D-22	0-16.2	12-12	1	Surface Damage Surface Spalling	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-ST-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
2023-ST-1	D-1.1	12	8	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-1	D-1.1	12	7-9	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-2	D-2.1	3	3	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-2	D-2.1	4	12-5	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-2	D-2.1	6.2	6	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-2	D-2.1	12	2	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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-3	D-3.1	3.5	5	2	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-3	D-3.1	6.7	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-3	D-3.1	8	4-5	2	Crack Circumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-3	D-3.1	11	11-03	2	Crack CIrcumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-4	D-4.1	0-1.1	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	2	9-10	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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 Inspections 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
2023-ST-4	D-4.1	6	9	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-5	D-20	1	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-5	D-20	2-4.4	9-2	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-6	D-6.1	1	1	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-6	D-6.1	1	3	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-6	D-6.1	1.3	2	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-ST-7	D-6	0-9.5	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-7	D-6	1-2	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-7	D-6	2.5	6-9	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-8	D-23	1	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-8	D-23	1.5	9	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-8	D-23	2	5-7	2	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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	1.3	4	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-14	D-21	4.7	3	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-14	D-21	7.6	12-12	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-25	D-19	0-8.2	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-25	D-19	2.5-4.1	6	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-25	D-19	2.9	11	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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	-	Condition remains 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 satisfactory
2023-ST-27	D-22	13	12-2	2	Crack Circumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-28	D-12	0-2	12-12	2	Surface Damage Reinforcement Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-28	D-12	2-7.5	12-12	2	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-28	D-12	8	12-2	2	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
B-Street Inspections 2023									
2023-11	B-1:B-3	5.9	6-11	3	Fracture Multiple	Normal degradation of pipe 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	Joint Offset Medium	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	10	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	14.2	12-12	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	18.2	1-3	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	18.2	5-6	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	22.2	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	24.5	2-6	1	Crack Spiral	Normal degradation of pipe 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	B-1:B-3	30.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	34.4	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	38.4	6-7	2	Fracture Circumferential	Normal degradation of pipe 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	B-1:B-3	42.2	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	46.3	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	50.4	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	54	12-5	2	Crack Spiral	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 Inspections 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	Joint Offset Medium	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	70.5	10-11	2	Fracture Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	70.5	7-9	2	Fracture Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	70.5	3-5	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	74.3	12-12	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	78	12-8	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	82.4	2-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	82.4	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	86.3	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	86.3	9	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	90.7	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	94.6	12-12	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	98.7	5-1	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	102.5	6-1	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	102.7	5	2	Crack Longitudinal	Normal degradation of pipe 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	134	1-6	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	134.7	6, 9	2	Crack Hinge 2	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	135.5	7-10	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	12-2	2	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	138.8	7-12	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	142.7	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	146.7	7-9	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	146.7	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	151	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	154.7	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	4-5	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	158.8	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-11	B-1:B-3	162.7	7	2	Crack Longitudinal	Normal degradation of pipe 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 Inspections 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 over lifetime	Liner Installed	August-2024	-
2023-11	**B-1:B-3**	**206.8**	**5-8**	**4**	**Broken**	Normal degradation of pipe over lifetime	**Liner installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells Installed**	Liner: August-2024 Investigation: December-2024	-
2023-11	B-1:B-3	206.8	NA	2	Joint Offset Medium	Normal degradation of pipe over lifetime	**Liner installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells Installed**	Liner: August-2024 Investigation: December-2024	-
2023-31	B-1:B-3	2	11-1	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	2	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	5.7	6-10	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	9.3	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	13.6	12-12	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	5-6	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	10-1	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	17.6	6-7	2	Fracture Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	21.5-26	12-12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	29.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	29.2	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	33.5-36.8	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	2-5	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	7-8	1	Fracture Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	37.4	8-10	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	41.7	5-11	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	45.3	12-12	2	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	49.5	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	53.4	12-12	3	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	3-7	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	57.4	10-11	2	Fracture Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	61.7	3-5	2	Crack Longitudinal	Normal degradation of pipe 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	Normal degradation of pipe 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 Inspections 2023									
2023-31	B-1:B-3	93.4	12-12	2	Crack Multiple	Normal degradation of pipe 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	121.8	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	126	12-12	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	130.4	12-12	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	2-6	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	133.8	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	134.4	7-10	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	137.8	4-9	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	142	12-12	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	145.9	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	145.9	6-9	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	149.7	3	1	Crack Longitudinal	Normal degradation of pipe 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 over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	166	7-9	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	166	3-5	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	170	2-5	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	170	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	173.8	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	177.9	6-9	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	177.9	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	181.9	1-6	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	181.9	7-8	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	186	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	190.1	6-10	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	190.1	4-5	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	August-2024	-
2023-31	B-1:B-3	194	2-5	1	Crack Spiral	Normal degradation of pipe 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	-
2023-31	B-1:B-3	206	NA	2	Joint Offset Medium	Normal degradation of pipe over lifetime	**Liner Installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells Installed**	Liner: August-2024 Investigation: December-2024	-
2023-31	**B-1:B-3**	**206**	**5-8**	**4**	**Broken**	Normal degradation of pipe over lifetime	**Liner Installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells Installed**	Liner: August-2024 Investigation: December-2024	-
2023-31	B-1:B-3	206	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	**Liner Installed; AOC-2 Investigation: Soil Sampling, Monitoring Wells Installed**	Liner: August-2024 Investigation: December-2024	-
2023-ST-23	B-1	0.6-2.5	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-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 Inspections 2023									
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 Inspections 2023									
2023-12	B-02:5-P	0-55.7	12-12	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	25.7	9	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	41.5	8-9	2	Surface Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	44-47.1	5-10	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	48.2	3-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	49.3	7-9	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-12	B-02:5-P	53.5	12-12	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	0-82	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	5	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	5	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	21.5	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	25.9	12	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	35.3	6-7	2	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	35.4	10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	41.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	41.8	12-1	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	45.2	4	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	48.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	48.4	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	52.6	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	72.8	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-13	5-B:5-C	80.9	5-8	3	Fracture Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Continue monitoring condition
2023-14	5-C:5-D	0-265.3	12-12	2	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	2	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	2	6	1	Deposits Settled Gravel	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	2	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	39.5	6-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	40.9	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	41.9	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	44.9	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-14	5-C:5-D	56.8	4-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	65	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	65	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	69.2	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	73.1	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	77.3	5-6	2	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 Inspections 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 over lifetime	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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	126	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	130.1	5-7	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	134.2	1-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	138.3	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	146.4	2	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	146.4	8-9	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	150.5	50-10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	158.5	5-10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	162.4	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	166.7	8-1	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	166.7	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	166.7	9-10	2	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	170.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	174.6	3-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	178.8	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	182.9	4-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	187	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	187	3-4	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	191	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	191	3-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	195.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	195.2	3-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	195.2	5-9	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	203	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	207	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	215.3	5-10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	219.4	1-4	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	223.5	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	223.5	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-14	5-C:5-D	227.4	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	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
2023-15	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 Inspections 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-E	26.2	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	26.2	2-3	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	38.4	8	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	43.2	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	48.2	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	51.3	3-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	55.9	1	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	59.5	6-9	2	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	62.3	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	97.3	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	71.8	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	71.8	4-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	71.8	3	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-15	5-D:5-E	79.5	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	87.9	10	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	0-55.2	12-12	1	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	3.4	5-7	2	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	4.8	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	11.1	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	12.3	6-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	15.3	5-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	20.1	3-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	21.5	5-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	22.8	8-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	29.3	5-6	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	37.6	2-6	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	41.2	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	43-47.3	5-7	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	48.7	12-12	2	Surface Damage Aggregate Missing	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	49.3	6-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-16	B-02:5-P	53.2	8-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	0-133.2	12-12	1	Surface Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	3.9	9	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	3.9	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	3.9	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	7.9	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	7.9	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	11.8	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	11.8	6	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	15.5	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	21.1	6-7	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	24.4	3	2	Crack Longitudinal	Normal degradation of pipe 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 Inspections 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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	64.7	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	68.7	12-1	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	72.6	8-9	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	72.6	12	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	72.6	2	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	73	3-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	76.7	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	76.7	6-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	80.7	4-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	80.7	1-2	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	84.2	7-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	84.2	7-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	84.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	84.9	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	88.5	7	1	Surface Damage Aggregate Missing	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-B	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-B	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 over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	113.1	8-9	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	117	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	117	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	120.4	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	121.5	4-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	127.4	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-17	23-4:5-B	129	5-6	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	3	10-11	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	15.1	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	23.1	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	31	6-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	35.5	4-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-18	23-1:5-A	35.5	7-8	2	Fracture Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	5.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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	23-1:23-2	17.7	6-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	19.9	7-11	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	19.9	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	22.7	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-19	23-1:23-2	22.7	10	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	0-52.6	10-2	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	3.1	6	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 Inspections 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	8.5	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	9.8	5-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	10.3	6-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	11.6	2-5	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	14.2	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	17.6	7-4	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	21.7	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	22	7-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	25.1	6-10	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	33.9	12-5	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	33.9	4	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	37	1	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	39	3-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-20	23-2:23-3	44.4	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	0-26.1	12-12	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	4.9	5-6	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	7.4	6-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	11.1	6-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	14.6	6-9	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	14.6	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	16	6-8	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	18.2	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-21	23-3:23-4	23.7	10-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-22	5-F:D-12	0	6	1	Surface Damage Aggregate Visible	Degradation due to elevated levels of H2S	Liner Installed	January-2024	-
2023-22	5-F:D-12	0-55.8	9-3	2	Surface Damage Aggregate Projecting	Degradation due to elevated levels of H2S	Liner Installed	January-2024	-
2023-22	5-F:D-12	2	8-9	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	2	1-3	2	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	9	2-3	3	Surface Damage Reinforcement Visible	Degradation due to elevated levels of H2S	Liner Installed	January-2024	-
2023-22	5-F:D-12	12.4	7-8	2	Fracture Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	15.5	6-7	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	21.4	7-8	1	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	24.3	6-7	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	24.3	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	25.5	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	27.3	8-9	2	Crack Spiral	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	27.3	4	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	31.5	5-6	2	Fracture Circumferential	Normal degradation of pipe 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	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	40.4	6	1	Crack Longitudinal	Normal degradation of pipe 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	Normal 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 Inspections 2023									
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-F:D-12	113.2	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	113.2	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	116.9	7-8	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	116.9	5-6	2	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-22	5-F:D-12	128.6	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	0-136.9	8-4	1	Surface Damage Aggregate Visible	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	5.6	8-9	2	Surface Damage Aggregate Missing	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	23	8-10	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	28	3-4	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	34.8	9-11	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	38.9	8	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	40.8	8-10	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	53.5	8-10	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	59.7	7-10	1	Crack Multiple	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	63.8	7-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-36	5-F:D-12	63.8	10	2	Surface Damage Aggregate Missing	Normal degradation of pipe 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-E:5-F	2-61.3	10-2	3	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Continue monitoring condition
2023-28	5-E:5-F	5.9	6-7	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	5.9	3-6	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	9.8	4-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	17.9	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	35.5	8	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	38.3	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	38.3	9-3	2	Crack Longitudinal Hinge, 2	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	42.5	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	42.5	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	54.6	5-6	1	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	58.9	4	3	Fracture Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Continue montioring condition
2023-28	5-E:5-F	61.4-234	8-4	3	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Continue montioring condition
2023-28	5-E:5-F	67.3	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	79.3	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-E:5-F	157.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
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 Inspections 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-E:5-F	172.8	4-5	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	177.1	12	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	184.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	195.5	3-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	213.6	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	213.6	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	225.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	234.1-268	10-2	2	Surface Damage Reinforcement Visible	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	245.3	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	257.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-28	5-E:5-F	257.5	11	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-O	4.3	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	5.3	4-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	6	4-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	6.9	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	7.5	5-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	9.1	3-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	11.3	5-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	12.8	4-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	17.6	4-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	20.2	4-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	24.2	5-7	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	27.5	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-O	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-O	42.4	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	43.9	6-8	2	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	45.1	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	47.1	6-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	49.6	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	51.1	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	52.1	6-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	54.2	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	54.6	5-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	58.4	4-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	60	4-6	1	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-O	69.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	6934	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	75.6	5-6	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	77.2	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	79	5-7	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	87.3	3-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	100.1	6	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 Inspections 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-O	133.7	6-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	134.4	2	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	138.3	12-12	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	139.1	5-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	143	4-7	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	145.9	3	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	145.9	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	146.7-150	4-8	2	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	153.6-158.8	4-9	1	Crack Multiple	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	161.2	5-7	2	Crack Spiral	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	165.9	6-8	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	174	3-9	1	Crack Circumferential	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	176.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-29	5-P:5-O	176.7	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains 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-O: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-O: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-O:5-M	20.7	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O: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-O:5-M	27.1	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O:5-M	36	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O:5-M	51.5	5	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O:5-M	51.5	7	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O:5-M	73.8	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-30	5-O:5-M	80.5	6	1	Crack Longitudinal	Normal degradation of pipe over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-34	5-M:D-12	52.6-106	12-12	2	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-35	5-M:D-12	0-103.4	12-12	2	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-37	5-M:D-12	0-164.1	12-12	2	Surface Damage Roughness Increased	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-37	5-M:D-12	17	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-37	5-M:D-12	17	5	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-37	5-M:D-12	22.5	7	2	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-37	5-M:D-12	27-31	4	1	Crack Longitudinal	Normal degradation of pipe over lifetime	Liner Installed	January-2024	-
2023-ST-9	23-1	0.5	9-10	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-9	23-1	1	5-9	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-9	23-1	3.8	6	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-9	23-1	3.8	7	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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 satisfactory
2023-ST-11	23-3	6.5	7	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-12	23-4	0.2	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-12	23-4	5.5	9	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-12	23-4	6	11-12	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-12	23-4	7	9-10	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-12	23-4	7.3	9-10	1	Crack Circumferential	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-13	5-C	0-9.8	12-12	2	Surface Damage Aggregate Visible	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 Inspections 2023									
2023-ST-13	5-C	4.5	12	1	Crack Multiple	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-13	5-C	4.5	1	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-15	5-B	1-2.6	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-15	5-B	4.5-7	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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	5.7	9	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-15	5-B	6.3	11	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-15	5-B	8-10.8	12-12	2	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-ST-16	5-D	2.5-6	12-6	2	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-17	5-E	1.3-3.8	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-17	5-E	3.8-6.5	12-12	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-ST-17	5-E	5	6	2	Surface Damage Reinforcement Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-18	5-F	0.7	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-18	5-F	2.3-8.5	12	2	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-ST-19	5-M	7.6	12-12	2	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-20	5-O	0.5	12-12	1	Surface Damage Aggregate Visible	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-20	5-O	0.6-6.2	12-12	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-20	5-O	2.6	6	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-20	5-O	5.5	2-4	1	Crack Spiral	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-21	5-P	2.8	6-7	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-21	5-P	3	12	1	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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-ST-21	5-P	5.2	2	1	Crack Longitudinal	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-22	B-02	5.5	6	1	Surface Damage Roughness Increased	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory
2023-ST-22	B-02	6.5	12	1	Surface Damage Surface Spalling	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains 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
2023-ST-22	B-02	9	11	2	Surface Damage Aggregate Missing	Normal degradation of manhole over lifetime	No Remedial Action Taken	-	Condition remains satisfactory

Table B-2
SWMU-1 Soil Sample Descriptions
HF 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 Concentration[a][b] (mg/kg)	Method C (For Industrial Land Use) Soil Direct Contact Pathway: Exposure via Combined Incidental Ingestion and Dermal Contact			Soil Protection of Potable Groundwater Quality: Leaching Pathway
		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	2.1×10^{-3}	5.1×10^{-9}	170
B-2-23 6 ft (4/10/2023)	**1,576.01**	33,000	4.8×10^{-2}	1.3×10^{-7}	170
B-3-23 5 ft (4/13/2023)	100.72	18,000	5.6×10^{-3}	6.7×10^{-8}	170
B-4-23 5.5 ft (4/13/2023)	159.01	23,000	7.0×10^{-3}	3.9×10^{-8}	170
AOC-2					
B-1-14 ft-120224 (12/2/24)	83.13	40,000	2.1×10^{-3}	5.1×10^{-9}	830
B-1-16 ft-120224 (12/2/24)	51.13	24,000	2.1×10^{-3}	5.1×10^{-9}	300
B-1-20 ft-120224 (12/2/24)	51.13	24,000	2.1×10^{-3}	5.1×10^{-9}	300
B-2-14 ft-120224 (12/2/24)	51.13	24,000	2.1×10^{-3}	5.1×10^{-9}	300
B-2-16 ft-120224 (12/2/24)	51.13	24,000	2.1×10^{-3}	5.1×10^{-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).

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

Analyte	Method	Units	MTCA Method C Direct Contact Cleanup Level[a]:	Protection of Ground Water (Vadose)[b]:	AOC-1				AOC-2				
					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
					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

Sample ID	EPA-6020 Arsenic	EPA-6020 Cadmium	EPA-7196 Chromium (VI)	CrVI - Total Cr Chromium(III)	EPA-6020 Lead	EPA-6020 Nickel	EPA-7471 Mercury	EPA-6020 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

RMF_n - 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

Sample ID	EPA-8270 Acenaphthene	EPA-8270 Acenaphthylene	EPA-8270 Anthracene	EPA-8270 Benzo[G,H,I]Perylene	EPA-8270 Fluoranthene	EPA-8270 Fluorene	EPA-8270 Total Naphthalene[d]	EPA-8270 Phenanthrene	EPA-8270 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

Analyte	Method	Units	MTCA Method A Cleanup Level	W-130		W-131	Field Equipment Blank	W-130		W-131	Field Equipment Blank
				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

Well ID	Date	EPA-200.8 Arsenic (Dissolved)	EPA-200.8 Cadmium (Dissolved)	EPA-7196 Chromium VI (Dissolved)	Calc-Cr3 Chromium III (Dissolved)	EPA-200.8 Chromium (Dissolved)	EPA-200.8 Lead (Dissolved)	EPA-200.8 Nickel (Dissolved)	EPA-245.1 Mercury (Dissolved)	EPA-200.8 Zinc (Dissolved)
		µg/L	µg/L		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MTCA 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 Sinclair Puget Sound 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
Toxicity Equivalency Factor (TEF):		0.1	1	0.1	0.1	0.01	0.1	0.1	--
MTCA 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

Sample ID	Date	EPA-8270 Acenaphthene	EPA-8270 Acenaphthylene	EPA-8270 Anthracene	EPA-8270 Benzo[G,H,I]Perylene	EPA-8270 Fluoranthene	EPA-8270 Fluorene	EPA-8270 Naphthalenes[(b)]	EPA-8270 Phenanthrene	EPA-8270 Pyrene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MTCA Method A Cleanup Level:		-	-	-	-	-	-	160	-	-
MTCA 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	pH	ORP	Turbidity
		(ft)	(ft)	(^{o}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-13
Oil Water Sewer - EIM Submission Information
HF Sinclair Puget Sound Refinery - Anacortes, WA

Study	Sampling Location	Sampling Dates	Receipt Date of Validated Data	Validation Performed	Date submitted to Ecology's EIM system			Associated EIM Study ID Number
					EIM Location File	EIM Result File	EIM Well Water-Level File	
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

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Attachments

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.

Table 1. Inspected Segments

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	

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

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)

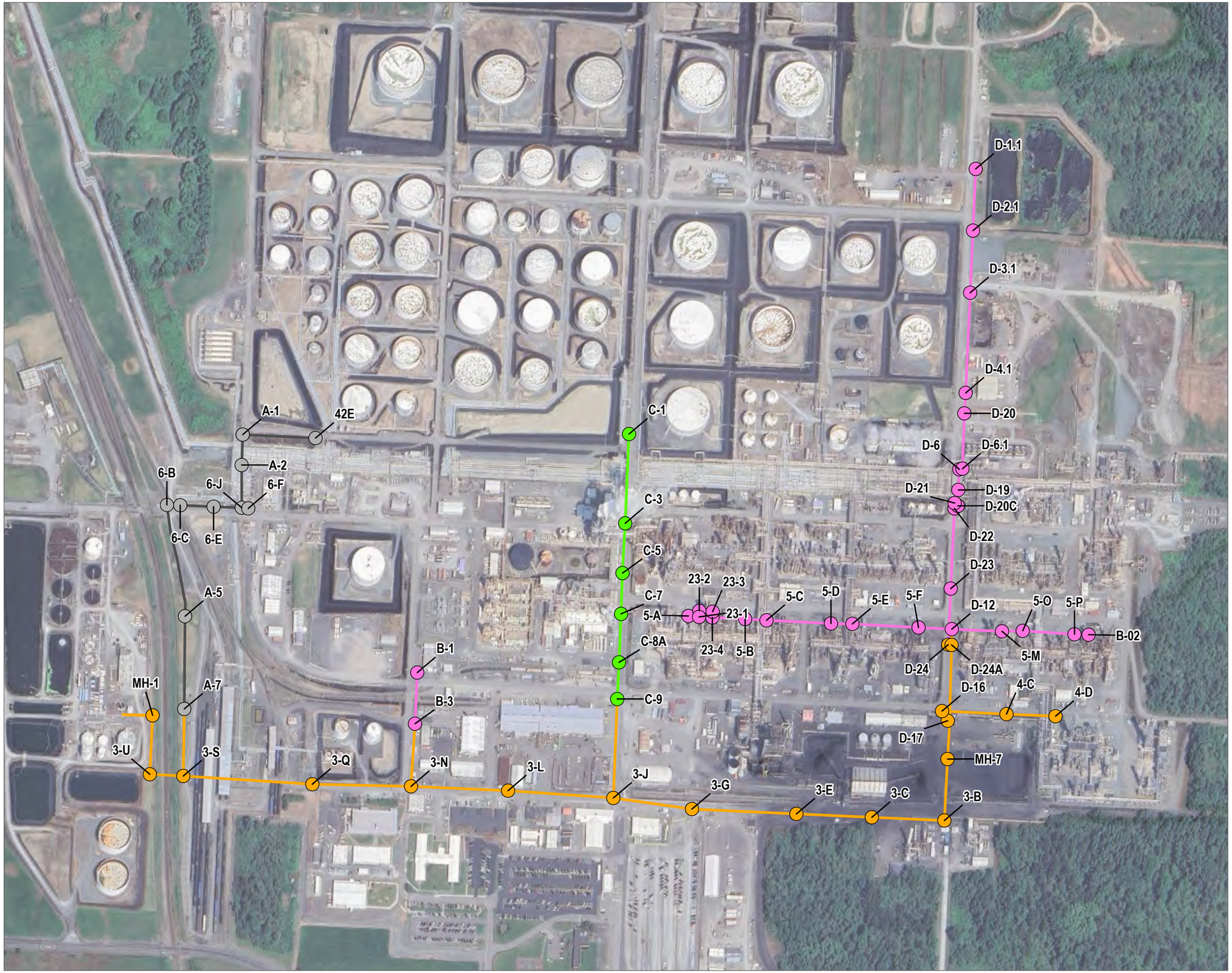
- 2023-13 (5-B:5-C)
  - Continue monitoring, or scope for future repair, sewer segment for PR=3 fracture between approximately 78 and 83 ft east of MH 5-B.
- 2023-14 (5-C:5-D)
  - Dig and replace sewer segment for PR=3 joint offset between approximately 262 and 267 ft east of MH 5-C.

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



Inspection To Be Completed By
- DECEMBER 31, 2023
- DECEMBER 31, 2026
- DECEMBER 31, 2028
- DECEMBER 31, 2031

Inspection To Be Completed By Date
- DECEMBER 31, 2023
- DECEMBER 31, 2026
- DECEMBER 31, 2028
- DECEMBER 31, 2031

BASE MAP: GOOGLE EARTH PRO AERIAL IMAGERY
SERVICE LAYER, 2/2024
DATA SOURCES: TRC

1:4,800 1" = 400' 0 200 400 FEET

PROJECT: HF SINCLAIR PUGET SOUND REFINING LLC
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS
AND REPAIR RECOMMENDATIONS

TITLE:
PROCESS SEWER INSPECTION SCOPE

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		FIGURE 1
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

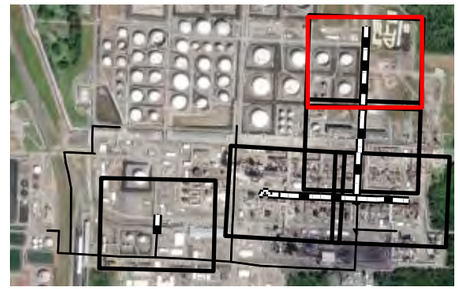
FILE: PSR_3_4_Defects.aprx

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

1:1,200 1" = 100' 0 50 100 FEET



PROJECT: **HF SINCLAIR PUGET SOUND REFINING LLC**
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS AND REPAIR RECOMMENDATIONS

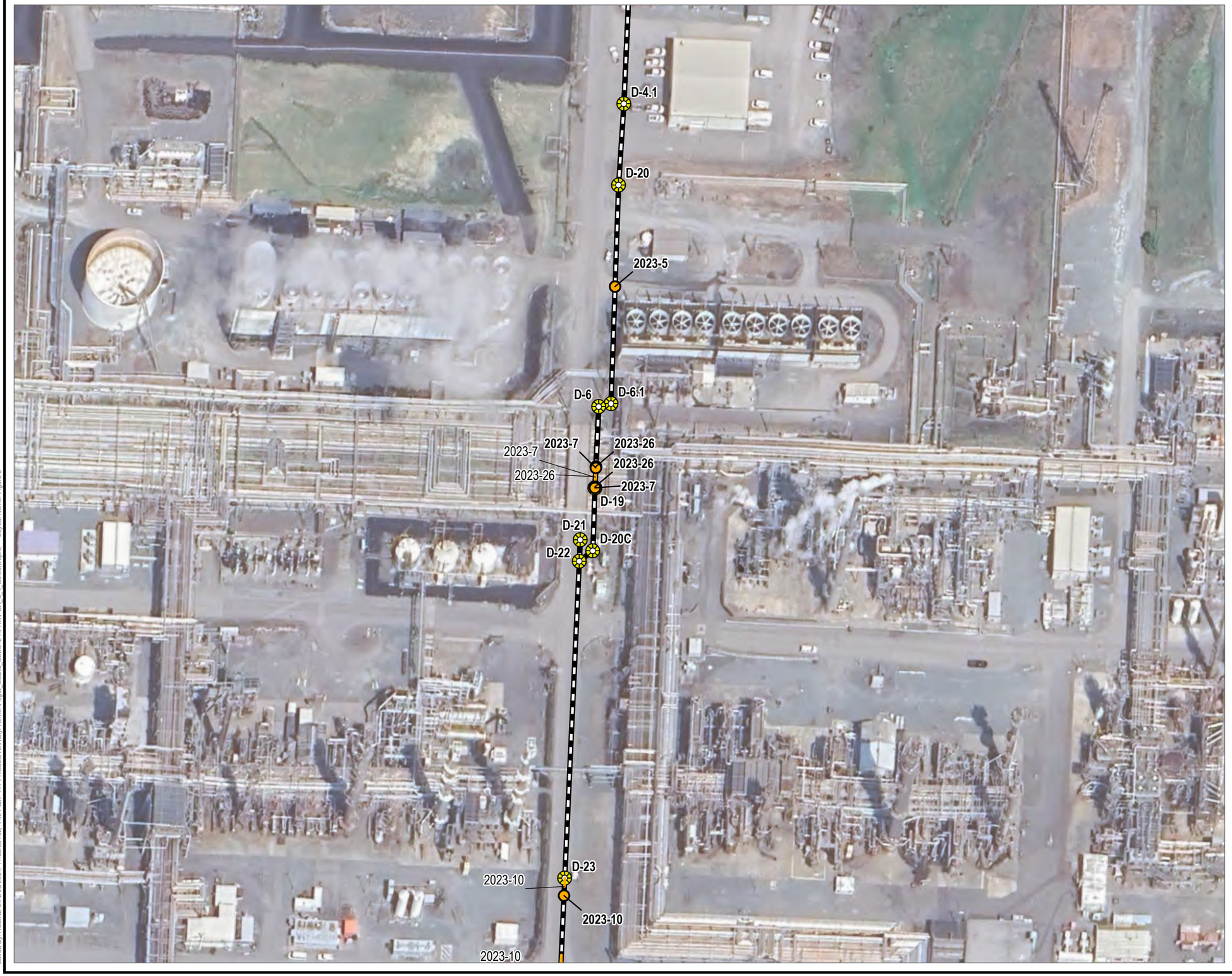
TITLE:
2023 SEWER INSPECTIONS AND PRIORITIZATION RATED DEFECTS 3 & 4

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

FIGURE 2A

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

FILE: PSR_3_4_Defects.aprx



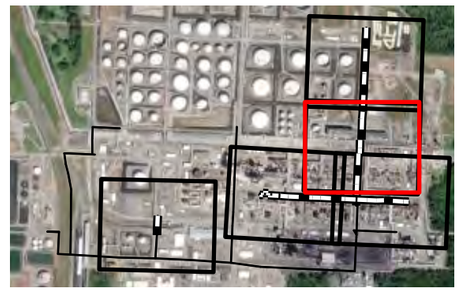
Point Defects
- Prioritization Rating = 3
- Prioritization Rating = 4

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

1:1,200 1" = 100'

0 50 100 FEET



PROJECT: **HF SINCLAIR PUGET SOUND REFINING LLC**
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS
AND REPAIR RECOMMENDATIONS

TITLE:
2023 SEWER INSPECTIONS AND PRIORITIZATION RATED DEFECTS 3 & 4

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		**FIGURE 2B**
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

FILE: PSR_3_4_Defects.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By AGUNE on 2/9/2024 11:58:53 AM; File Path: T:\...PROJECTS\Shell\Forties\Puget_Sound_Sewer\2-APRX\PSR_3_4_Defects.aprx; Layout Name: Figure 2

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

1:1,200 1" = 100'

0 50 100 FEET

PROJECT: **HF SINCLAIR PUGET SOUND REFINING LLC**
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS
AND REPAIR RECOMMENDATIONS

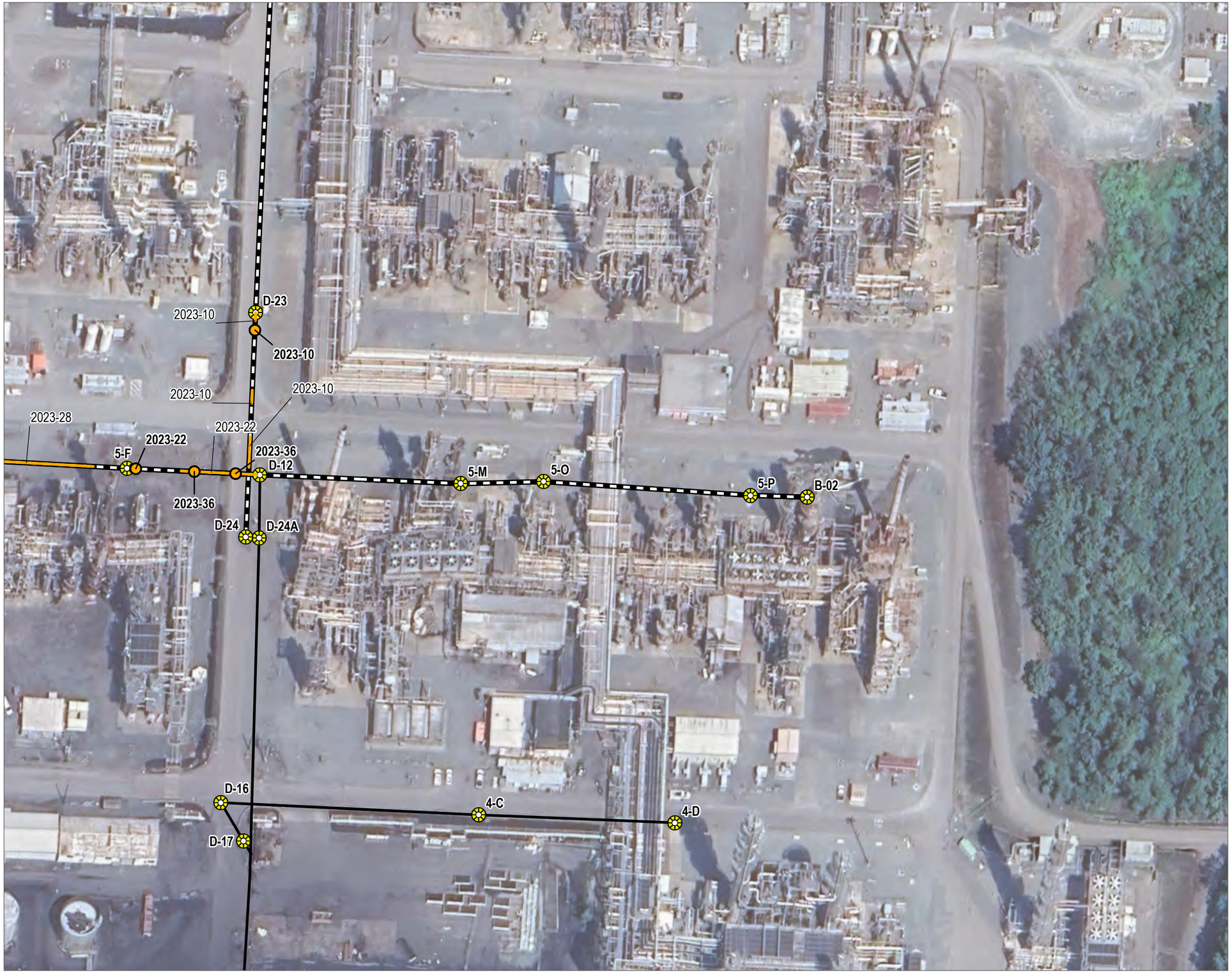
TITLE:
2023 SEWER INSPECTIONS AND PRIORITIZATION RATED DEFECTS 3 & 4

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		**FIGURE 2C**
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

FILE: PSR_3_4_Defects.aprx

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By AGLINE on 2/29/2024 11:58:53 AM; File Path: T:\...PROJECTS\Oil\Ferndale\Puget_Sound_Sewer\2-APRX\PSR_3_4_Defects.aprx; Layout Name: Figure 2

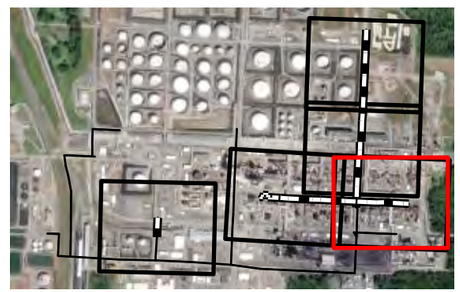


Point Defects
- Prioritization Rating = 3
- Prioritization Rating = 4

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

1:1,200 1" = 100' 0 50 100 FEET



PROJECT: HF SINCLAIR PUGET SOUND REFINING LLC
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS
AND REPAIR RECOMMENDATIONS

TITLE:
2023 SEWER INSPECTIONS AND PRIORITIZATION RATED DEFECTS 3 & 4

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		FIGURE 2D
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

FILE: PSR_3_4_Defects.aprx

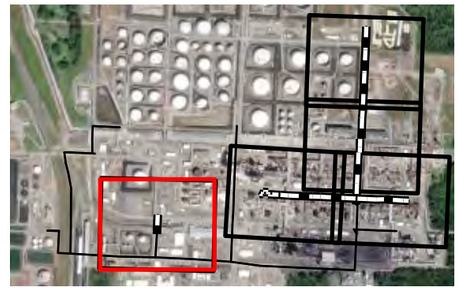
Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet; Map Rotation: 0
Saved By ACLINE on 2/29/2024 11:38:53 AM; File Path: T:\...\PROJECTS\Shell\Forest Pond_Sound_Sewer\3-APRX\PSR_3_4_Defects.aprx; Layout Name: Figure 2

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

1:1,200 1" = 100' 0 50 100 FEET



PROJECT: **HF SINCLAIR PUGET SOUND REFINING LLC**
PUGET SOUND REFINERY
2023 PROCESS SEWER INSPECTIONS AND REPAIR RECOMMENDATIONS

TITLE:
2023 SEWER INSPECTIONS AND PRIORITIZATION RATED DEFECTS 3 & 4

DRAWN BY:	A. CLINE	PROJ. NO.:	542643.0000.0000
CHECKED BY:	S. RAY		**FIGURE 2E**
APPROVED BY:	N. LONGTIN		
DATE:	FEBRUARY 2024		

TRC
505 EAST HUNTLAND DRIVE
SUITE #250
AUSTIN, TX 78752
PHONE: 512.329.6080

FILE: PSR_3_4_Defects.aprx

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.

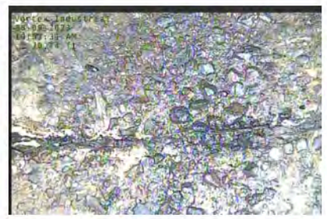
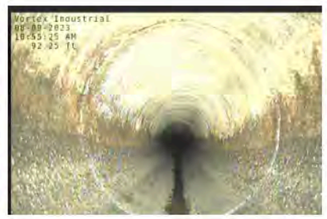
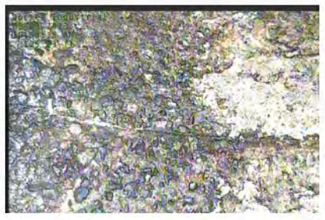
Notes:

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

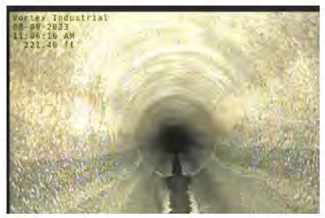
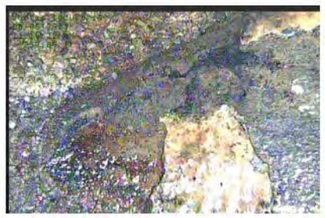
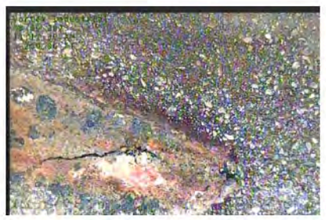
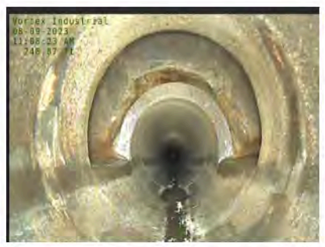
Attachment 2: Process Segment Inspection Summary Reports

Process Segment Inspection Summary Report

Setup ID	2023-1	Inspection Date	Aug 9, 2023	Inspected Length (ft)	253.4	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	6
Segment ID	D-1.1:D-2.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	1	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-1.1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 253.4	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	     

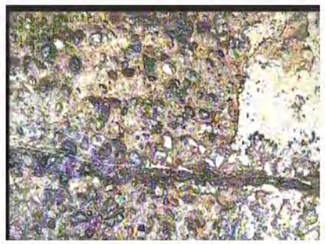
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	176	Structural	0	5-6	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	221.5	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	221.5	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	250.8	Structural	0	6-7	3	0	0	1	Crack Multiple	  
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	

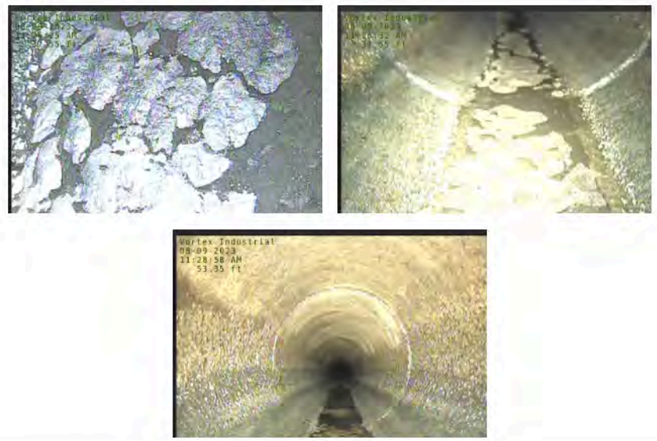
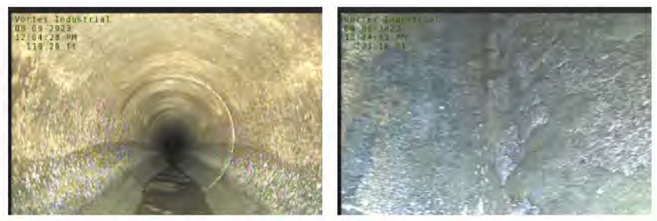
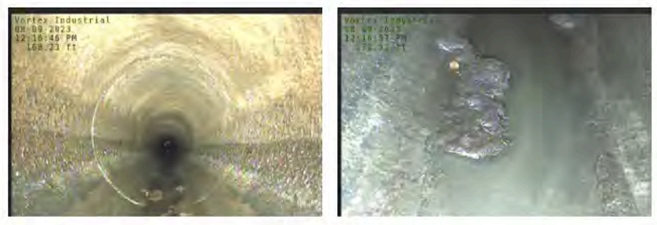
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-2	Inspection Date	Aug 9, 2023	Inspected Length (ft)	255.4	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	4
Segment ID	D-2.1:D-3.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	1	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-2.1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 255.4	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	O&M	10	6	0	2	0	0	Deposits Settled Fine	
Deposits Settled Fine	Point	168.6	O&M	10	6	0	2	0	0	Deposits Settled Fine	

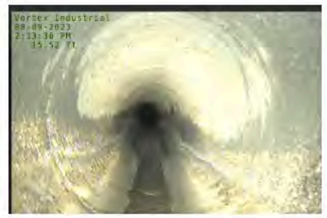
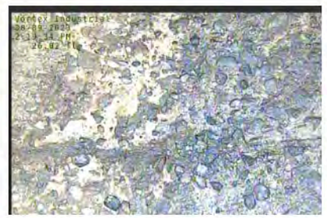
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

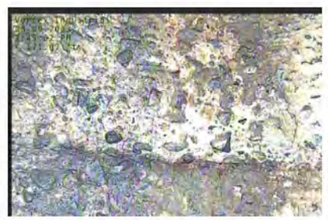
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

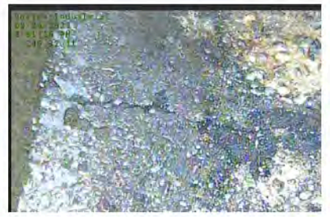
Setup ID	2023-3	Inspection Date	Aug 9, 2023	Inspected Length (ft)	412.3	Defects Rated ≥3	0	Peak Structural Rating	2	Total PR Defects	27
Segment ID	D-3.1:D-4.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Manhole	Point	0	Constructional	0		0	0	0	0	D-3.1	
Surface Aggregate Visible	Continuous	0 - 412.3	Structural	0	12-12	2	0	0	1	Surface Aggregate Visible	     

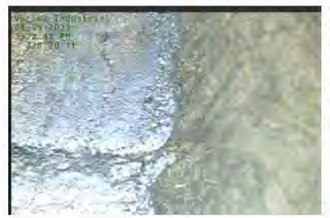
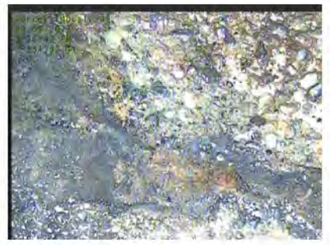
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
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	 

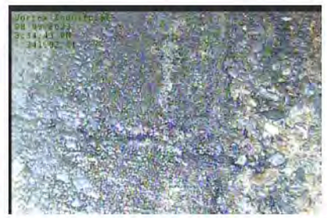
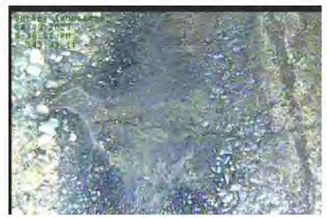
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

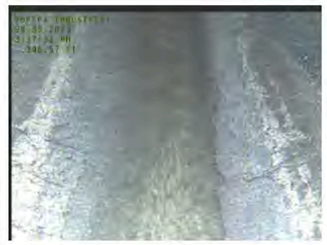
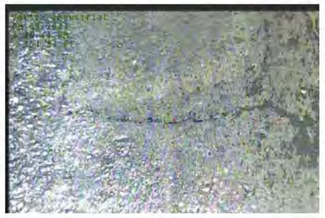
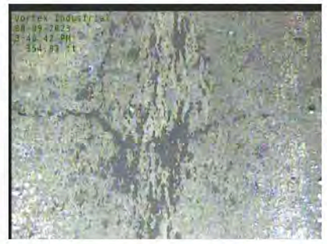
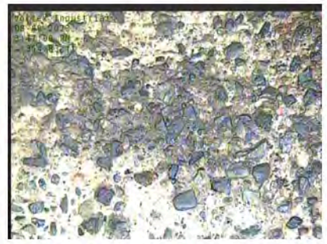
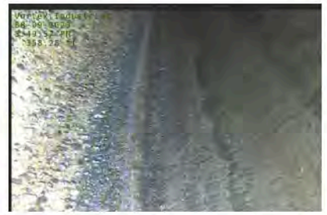
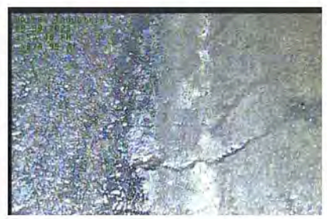
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
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	 

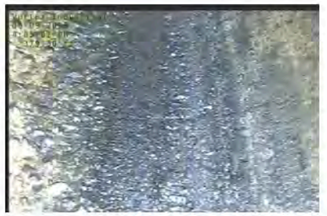
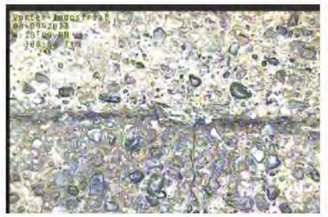
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	337.6	Structural	0	6-7	1	0	0	1	Crack Circumferential	
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	

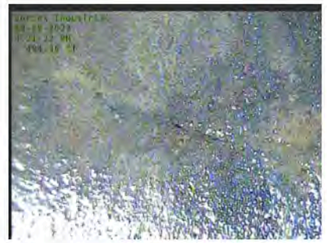
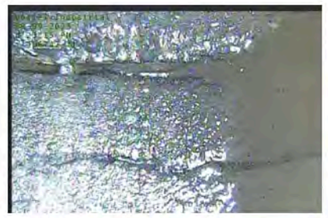
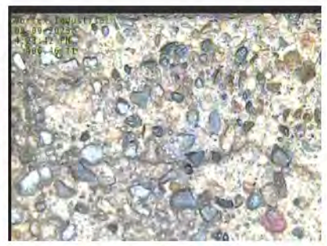
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
Crack Longitudinal	Point	395.1	Structural	0	11	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

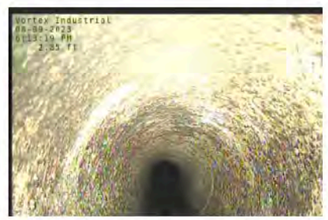
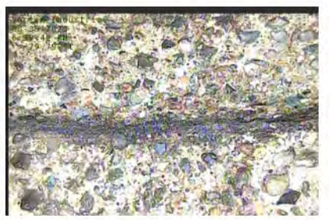
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	412.3	Constructional	0		0	0	0	0	D-4.1	  

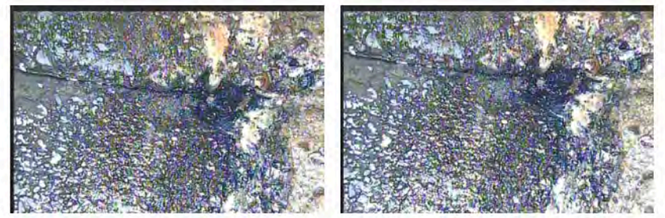
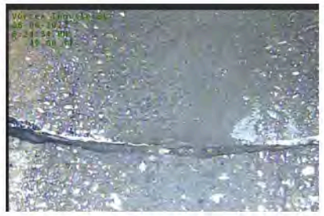
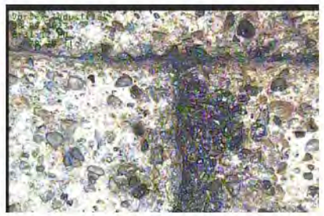
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

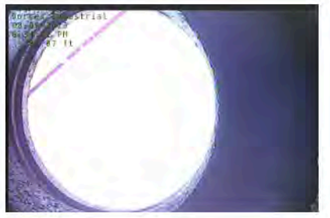
Setup ID	2023-4	Inspection Date	Aug 9, 2023	Inspected Length (ft)	82.9	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	7
Segment ID	D-4.1:D-20	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 82.9	Structural	0	12-12	1	0	0	1	Surface Damage Aggregate Visible	    
Manhole	Point	0	Constructional	0		0	0	0	0	D-4.1	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	82.9	Constructional	0		1	0	0	0	D-20	 

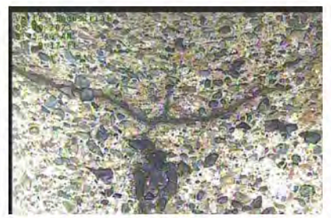
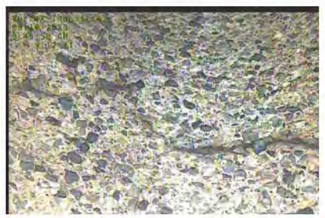
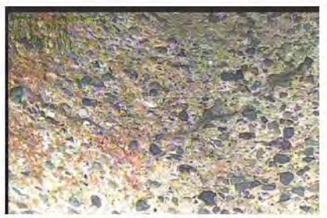
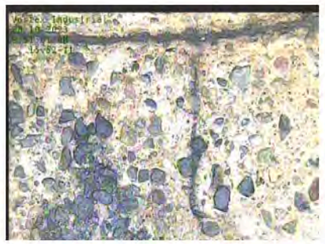
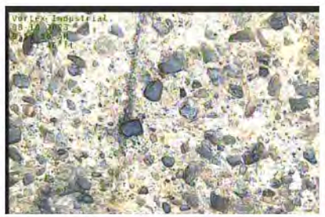
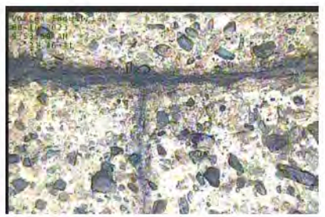
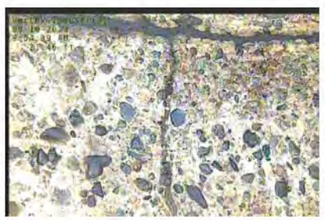
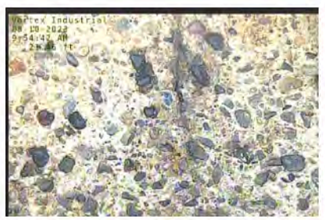
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

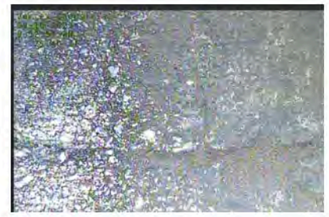
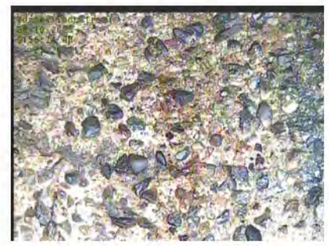
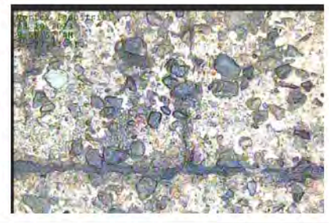
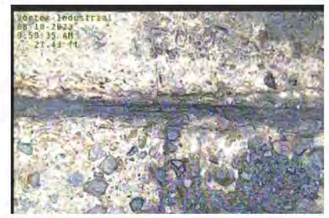
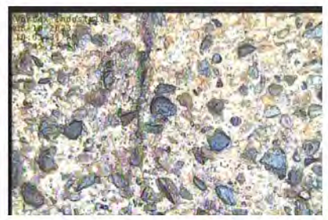
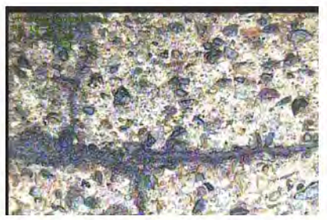
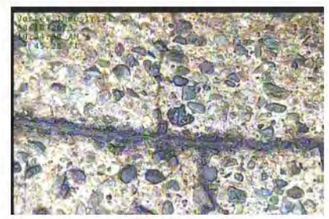
Setup ID	2023-5	Inspection Date	Aug 10, 2023	Inspected Length (ft)	227.7	Defects Rated ≥3	1	Peak Structural Rating	4	Total PR Defects	64
Segment ID	D-20:D-6.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	3	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-20	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 227.7	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	    

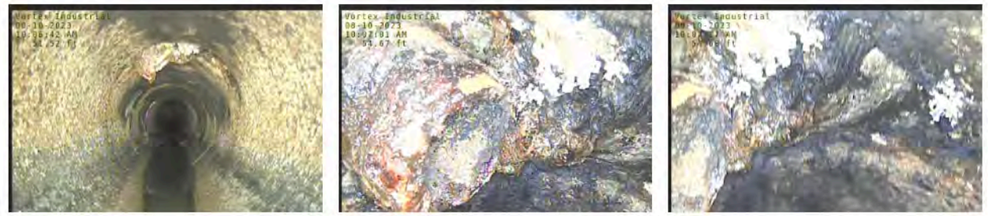
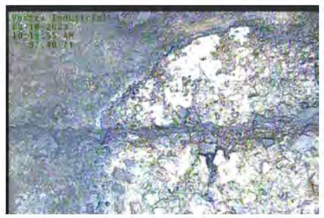
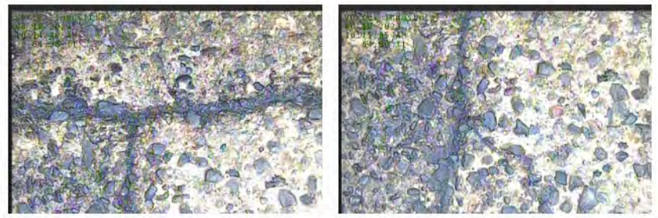
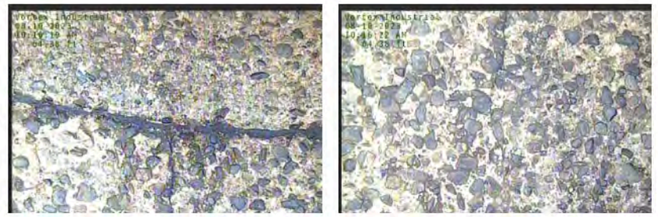
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

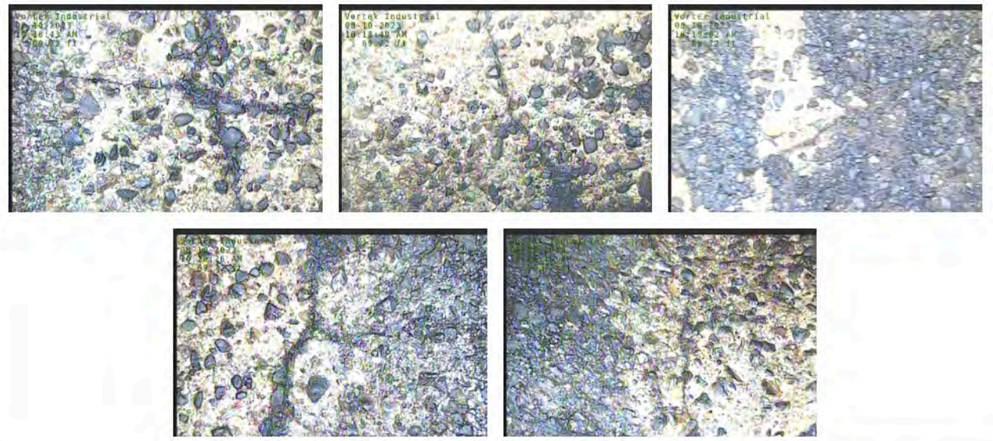
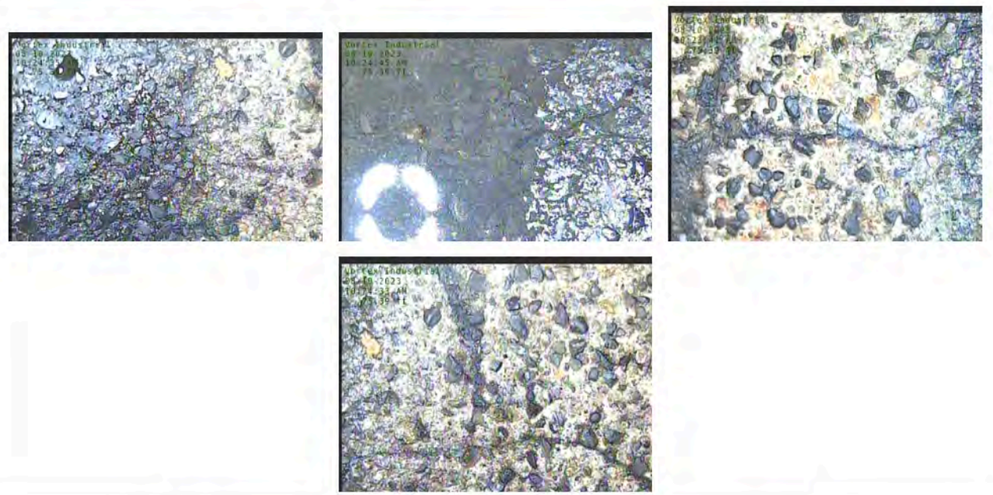
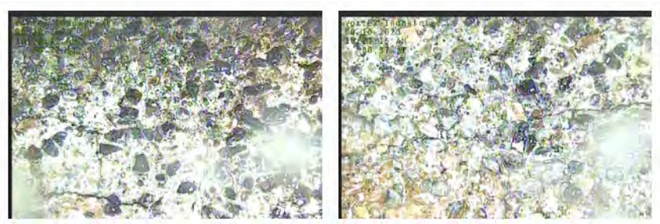
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

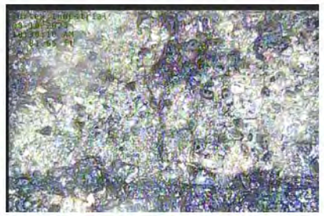
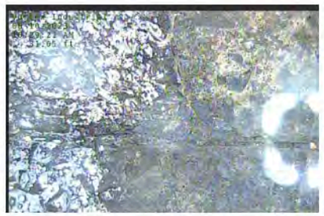
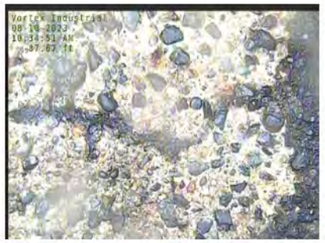
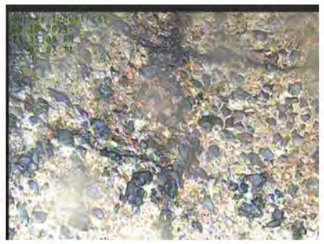
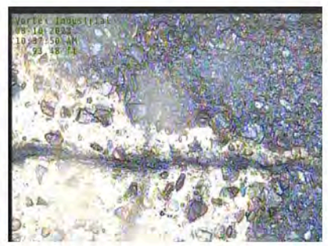
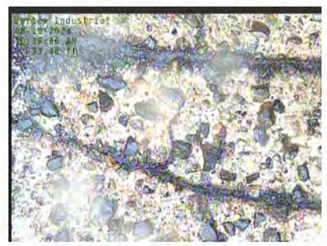
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Tap Break-In Intruding	Point	54.7	Constructional	0	11	0	4	0	1	Tap Break-In Intruding	
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	

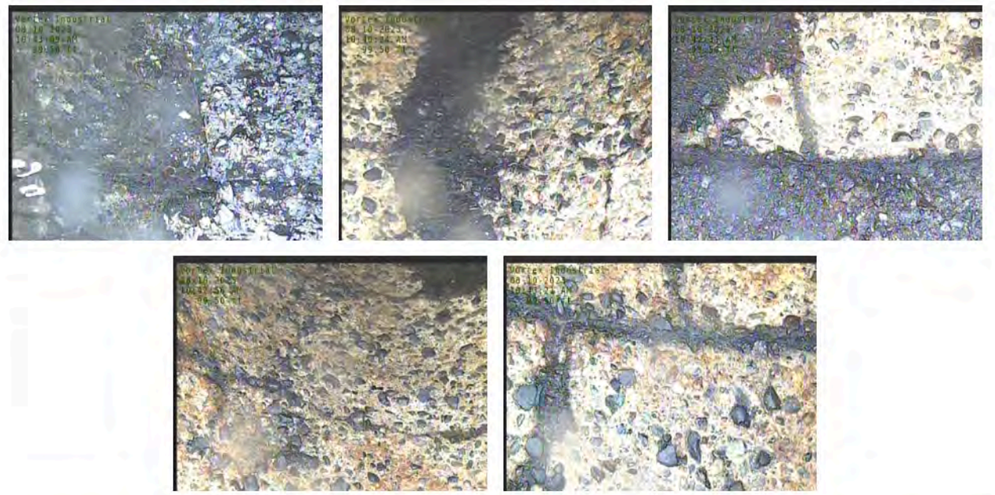
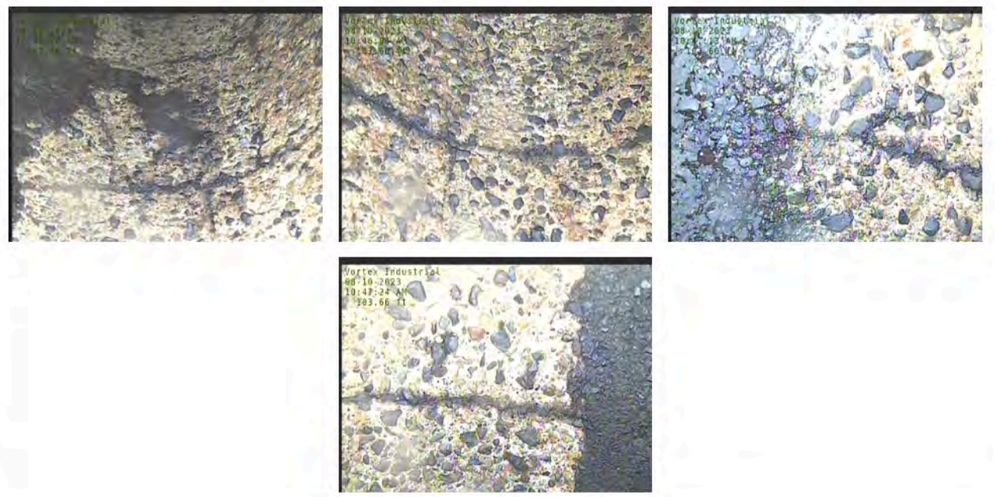
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Multiple	Point	80.4	Structural	0	12-2	3	0	0	1	Crack Multiple	

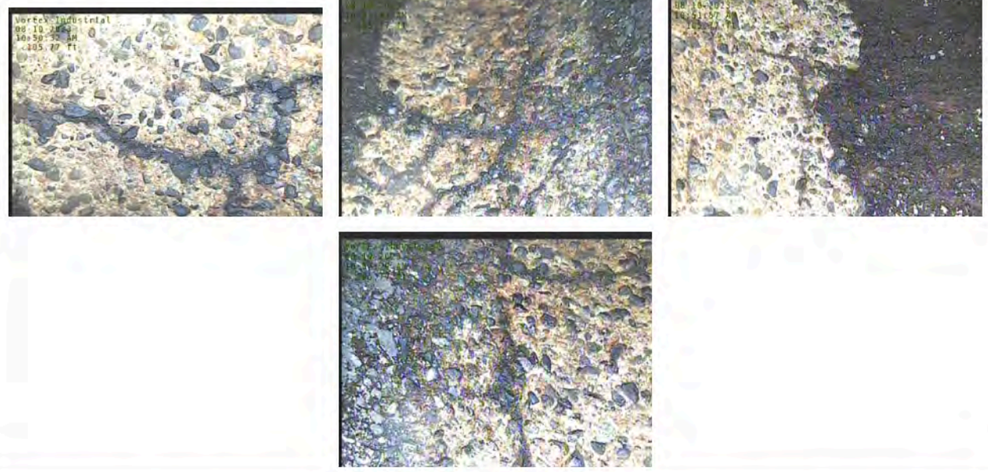
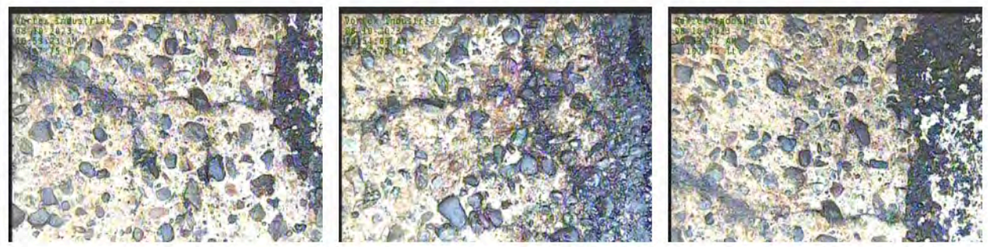
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	    

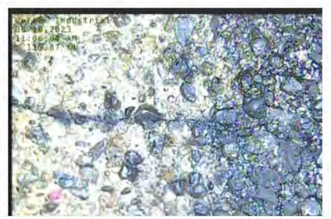
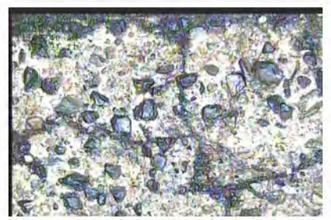
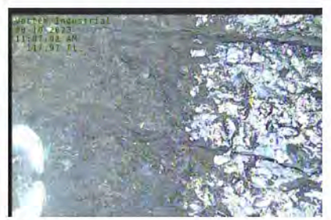
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

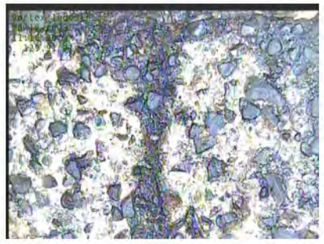
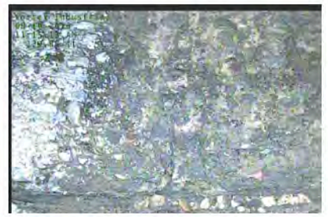
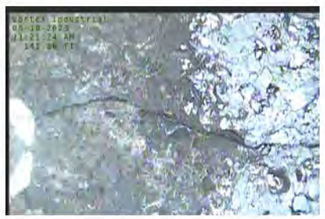
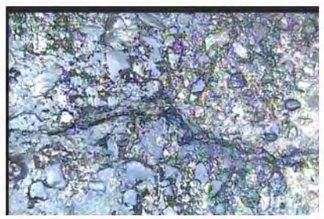
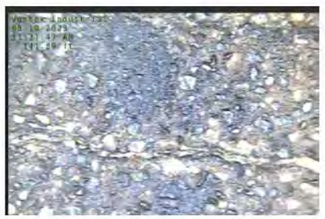
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	105.8	Structural	0	8-4	3	0	0	2	Crack Multiple	
Fracture Circumferential	Point	105.8	Structural	0	5-7	2	0	0	3	Fracture Circumferential	
Crack Multiple	Point	107.7	Structural	0	12-12	1	0	0	1	Crack Multiple	

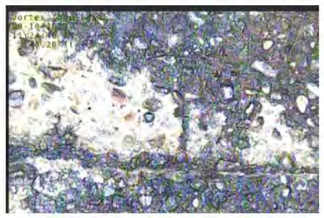
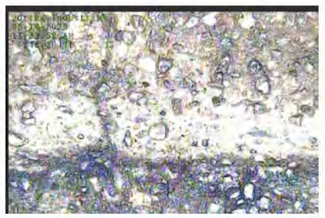
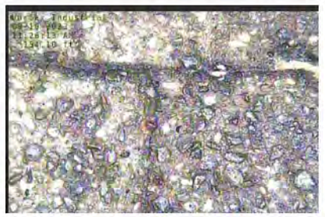
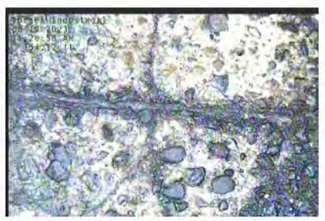
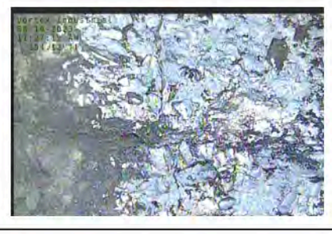
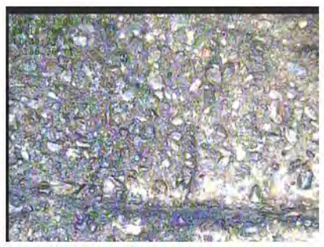
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

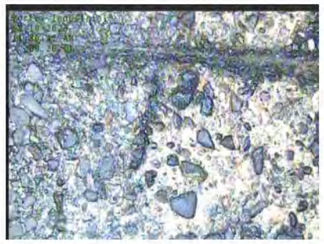
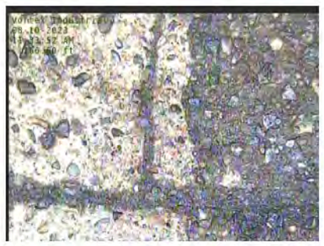
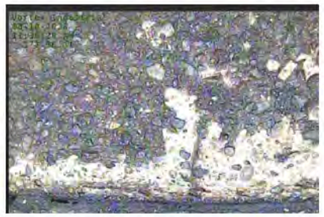
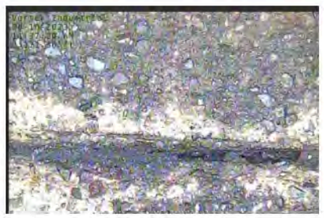
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	   

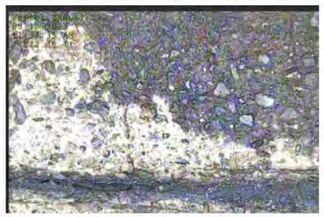
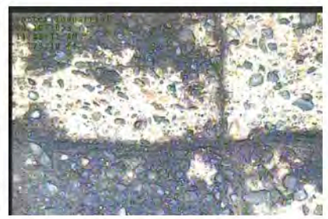
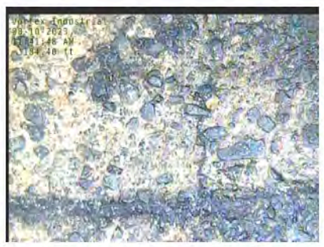
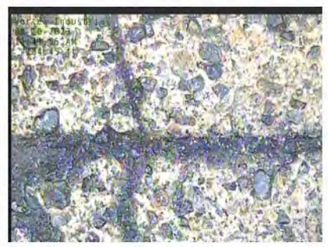
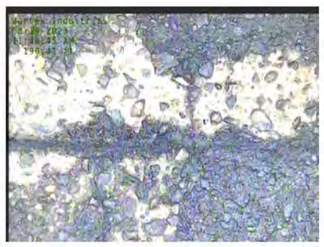
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
Crack Longitudinal	Point	154.1	Structural	0	9	2	0	0	1	Crack Longitudinal	 
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	

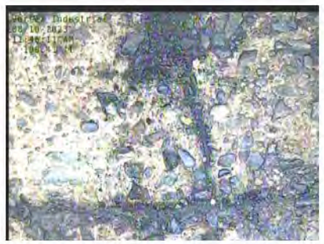
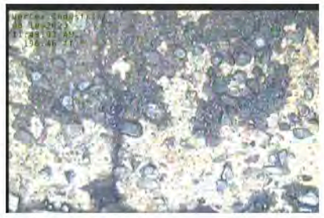
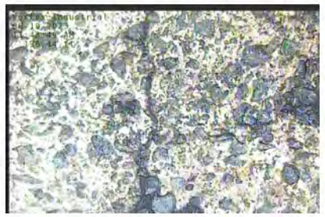
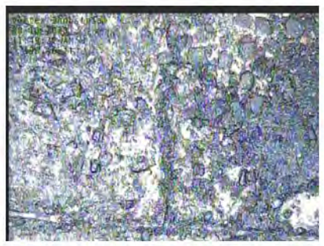
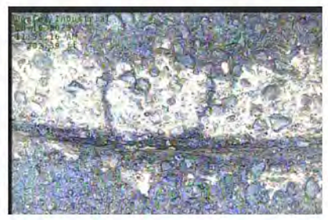
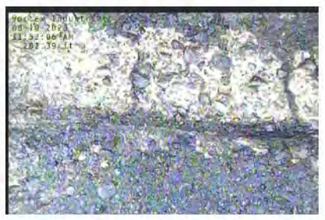
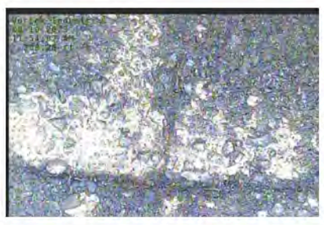
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

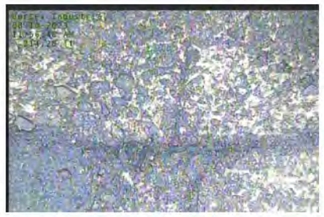
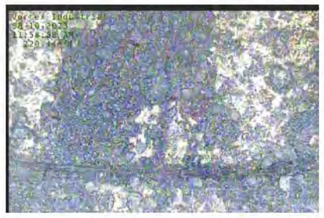
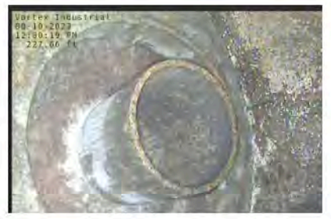
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

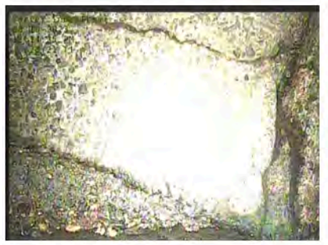
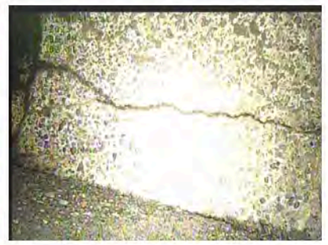
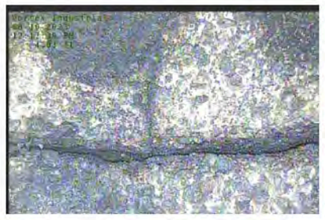
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-6	Inspection Date	Aug 10, 2023	Inspected Length (ft)	10.5	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	3
Segment ID	D-6.1:D-6	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-6.1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	0 - 10.5	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

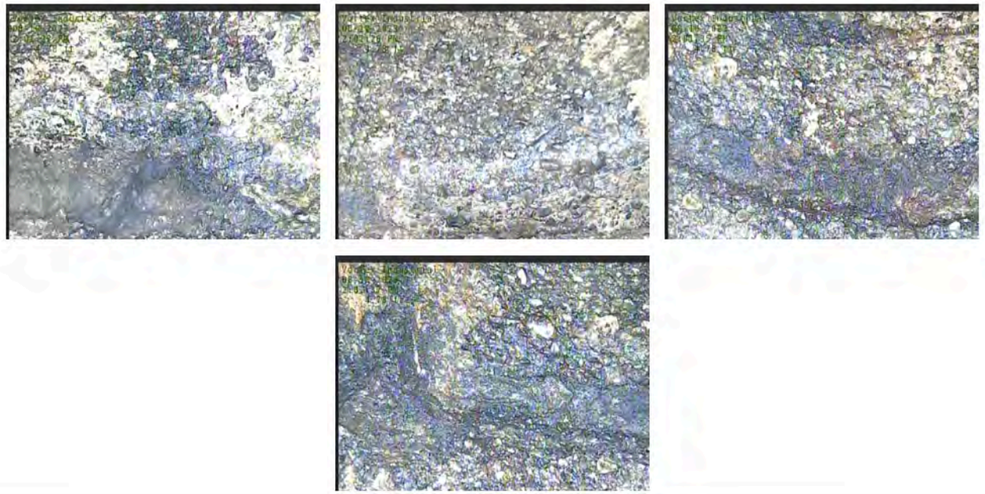
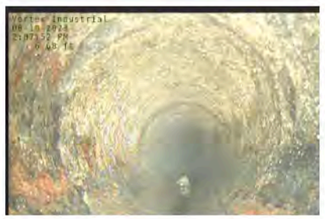
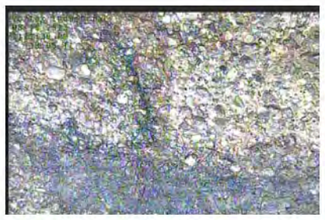
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

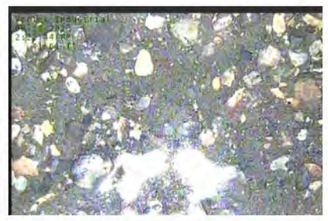
Setup ID	2023-7	Inspection Date	Aug 10, 2023	Inspected Length (ft)	82	Defects Rated ≥3	3	Peak Structural Rating	3	Total PR Defects	9
Segment ID	D-6:D-19	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-6	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 82	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	   

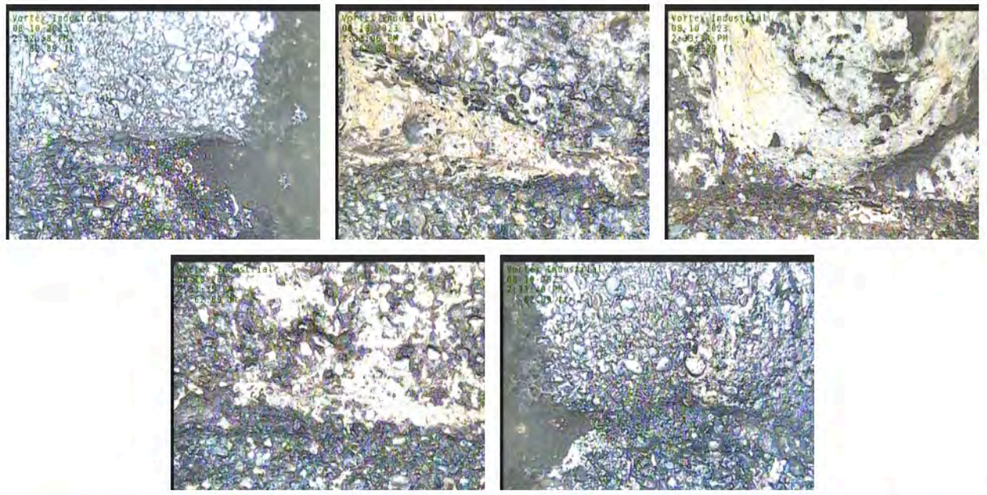
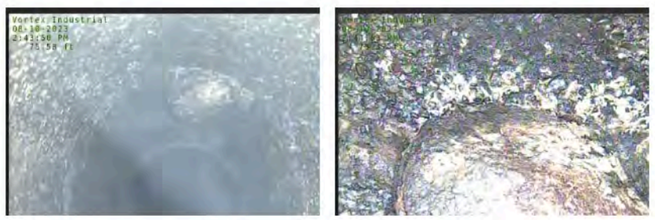
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Circumferential	Point	4.8	Constructional	0	7-8	2	0	0	2	Fracture Circumferential	
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	
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	 

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	33.4	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Deposits Settled Gravel	Continuous	37.5 - 52.8	O&M	10	6	0	2	0	0	Deposits Settled Gravel	  
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	
Point Repair Patch	Point	61.9	Structural	0	12	0	0	0	3	Point Repair Patch	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	62.3	Structural	0	1-11	1	0	0	2	Crack Circumferential	
Point Repair Patch	Continuous	66.1 - 75.1	Structural	20	12-3	0	0	0	3	Point Repair Patch	
Deposits Attached Encrustation	Point	78.5	O&M	10	12	0	2	0	0	Deposits Attached Encrustation	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	82	Constructional	0		0	0	0	0	D-19	
Fracture Longitudinal	Point	82	Structural	0	6	3	0	0	3	Fracture Longitudinal	

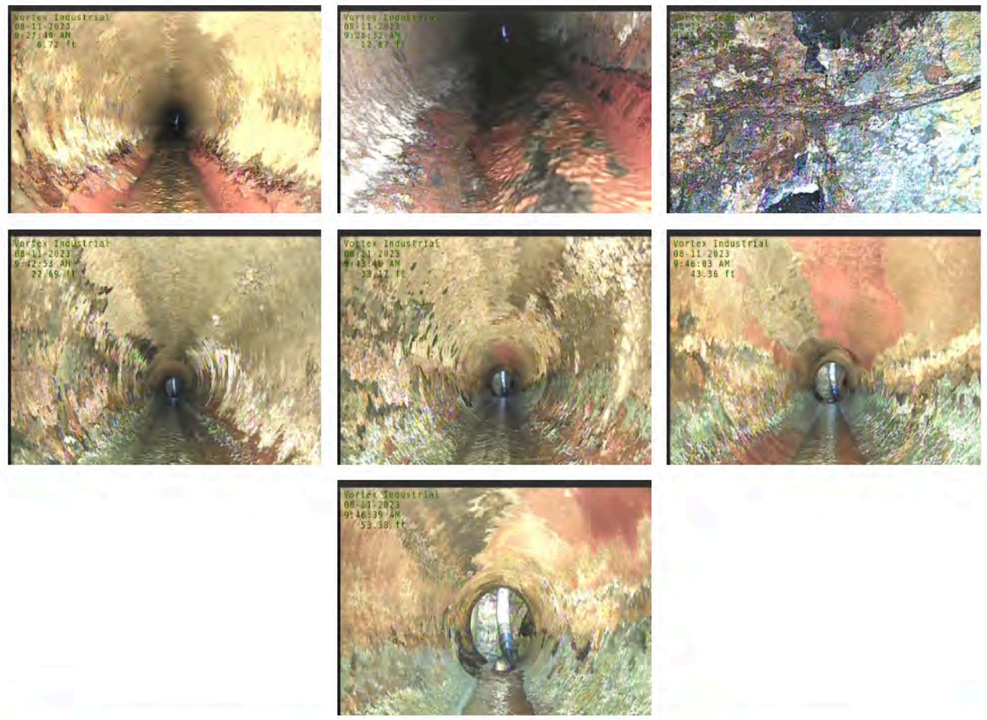
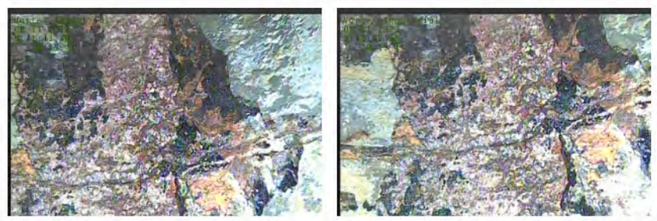
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

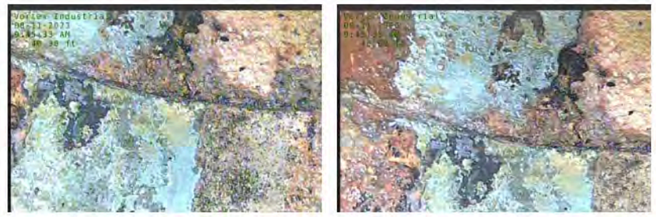
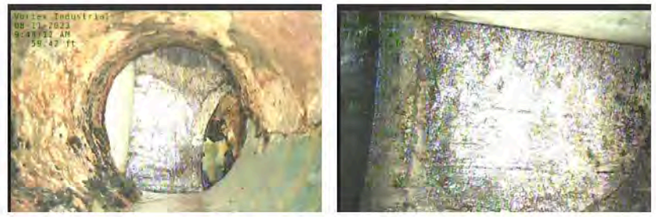
Setup ID	2023-8	Inspection Date	Oct 11, 2023	Inspected Length (ft)	64.3	Defects Rated ≥3	0	Peak Structural Rating	2	Total PR Defects	4
Segment ID	D-19:D-20C	Primary Pipe Material	SP	Pipe Diameter (in)	20	Peak Prioritization Rating	1	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-19	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Surface Spalling	Continuous	0 - 64.3	Structural	0	12-12	2	0	0	1	Surface Damage Surface Spalling	
Deposits Settled Gravel	Continuous	18.2 - 22.2	O&M	10		0	2	0	0	Deposits Settled Gravel	
Crack Longitudinal	Point	20.2	Structural	0	8	2	0	0	1	Crack Longitudinal	

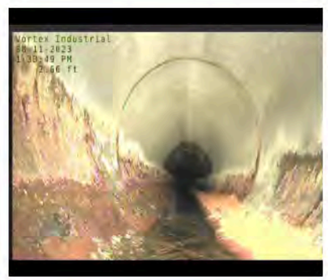
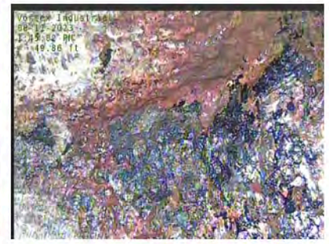
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	40.4	Structural	0	4	2	0	0	1	Crack Longitudinal	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

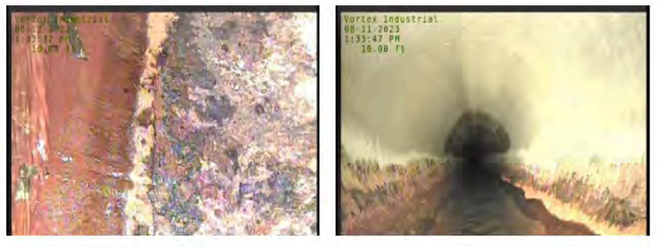
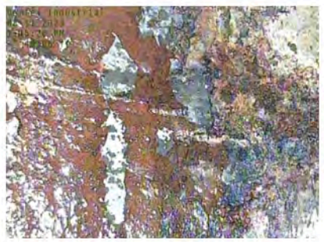
Setup ID	2023-9	Inspection Date	Aug 11, 2023	Inspected Length (ft)	332	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	11
Segment ID	D-22:D-23	Primary Pipe Material	SP	Pipe Diameter (in)	30	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-22	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Corrosion	Continuous	0 - 332	Structural	0	3-9	3	0	0	2	Surface Damage Corrosion	     

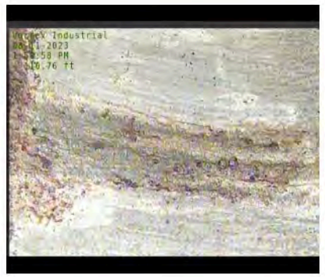
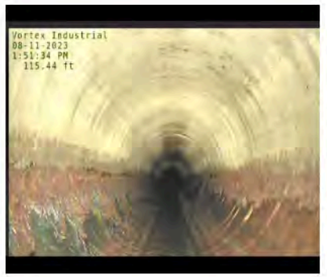
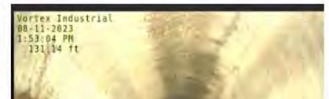
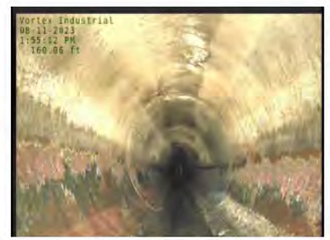
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos

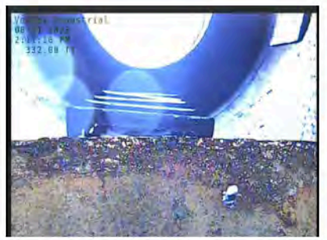
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
											
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	
Crack Longitudinal	Point	49.8	Structural	0	4	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Roughness Increased	Continuous	55 - 61.3	Structural	0	11-1	1	0	0	1	Surface Damage Roughness Increased	
Crack Longitudinal	Continuous	110.8 - 127.2	Structural	0	3	2	0	0	1	Crack Longitudinal	 
Crack Longitudinal	Continuous	129.2 - 147	Structural	0	1	2	0	0	2	Crack Longitudinal	  
Surface Damage Roughness Increased	Point	162	Structural	0	12	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Roughness Increased	Continuous	189.2 - 208.9	Structural	0	9-3	1	0	0	1	Surface Damage Roughness Increased	 

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Roughness Increased	Continuous	237 - 247	Structural	0	11	1	0	0	1	Surface Damage Roughness Increased	 
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	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-10	Inspection Date	Aug 11, 2023	Inspected Length (ft)	217.3	Defects Rated ≥3	4	Peak Structural Rating	3	Total PR Defects	14
Segment ID	D-23:D-24	Primary Pipe Material	SP	Pipe Diameter (in)	30	Peak Prioritization Rating	3	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Corrosion	Continuous	0 - 8	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Manhole	Point	0	Constructional	0		0	0	0	0	D-23	
Surface Damage Corrosion	Continuous	8 - 17	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	

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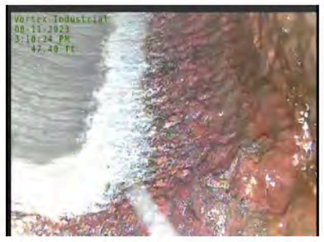
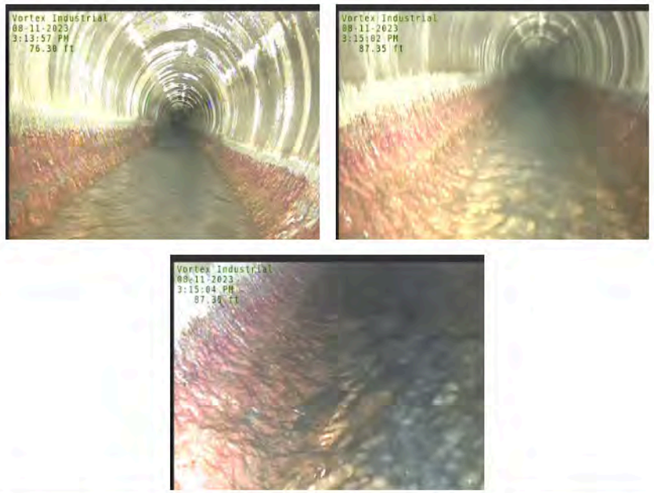
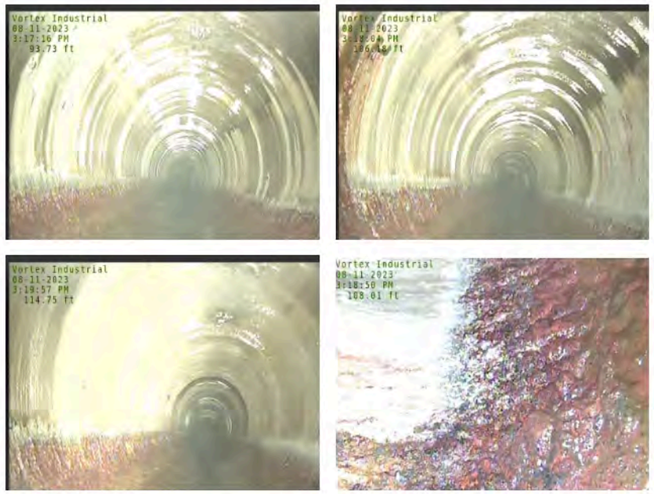
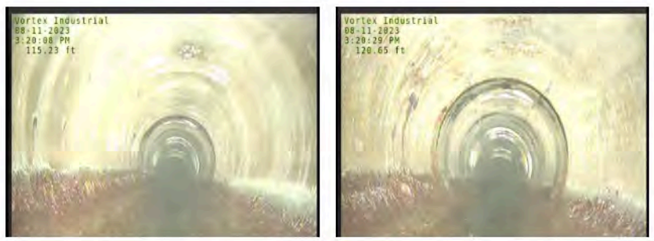
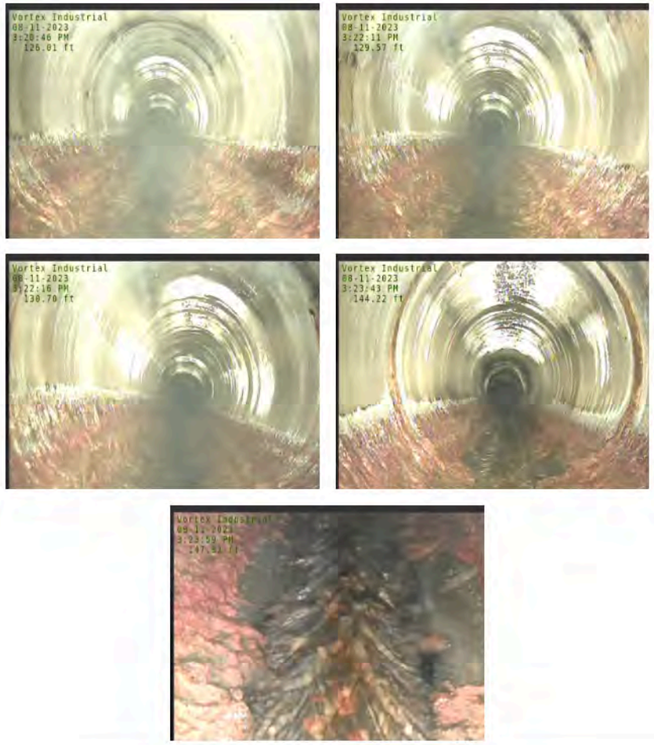
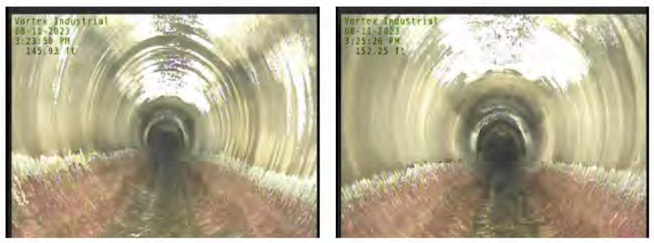
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Corrosion	Point	17	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	 
Surface Damage Corrosion	Continuous	19 - 75	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	    

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Corrosion	Continuous	75 - 88	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	
Surface Damage Corrosion	Continuous	88 - 120	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	
Surface Damage Roughness Increased	Continuous	117 - 125.4	Structural	0	9-1	1	0	0	1	Surface Damage Roughness Increased	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Corrosion	Continuous	120 - 150	Structural	0	4-8	3	0	0	3	Surface Damage Corrosion	
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	

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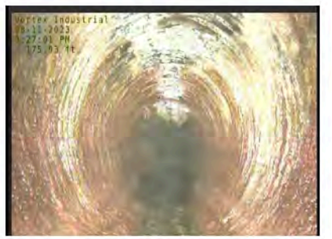
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Corrosion	Continuous	150 - 176.1	Structural	0	4-8	3	0	0	2	Surface Damage Corrosion	 
Surface Damage Roughness Increased	Continuous	165 - 171.4	Structural	0	10-2	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Corrosion	Continuous	176.2 - 217.3	Structural	0	12-12	3	0	0	2	Surface Damage Corrosion	   

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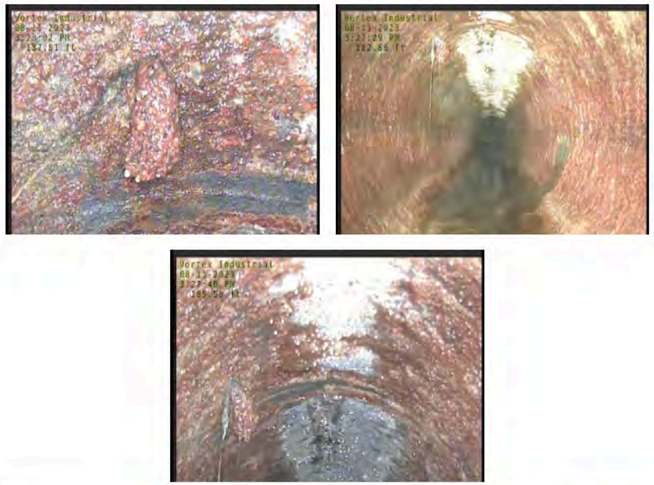
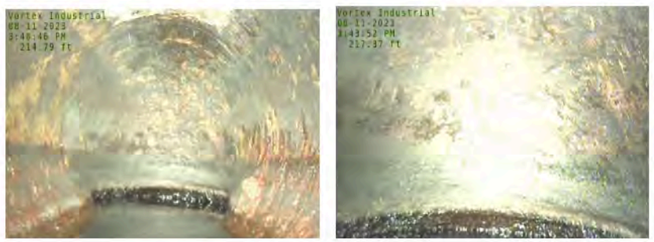
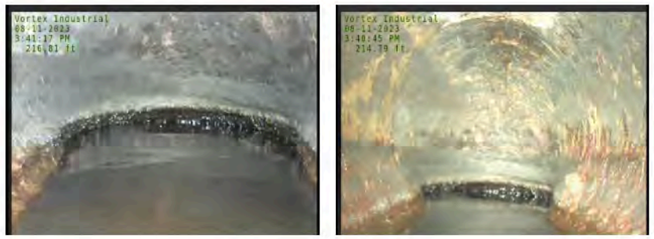
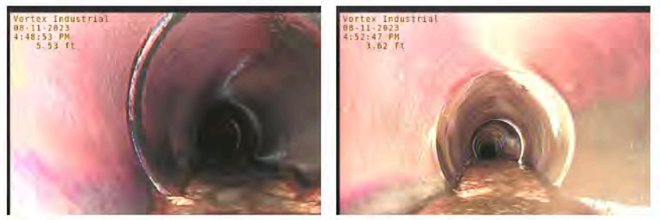
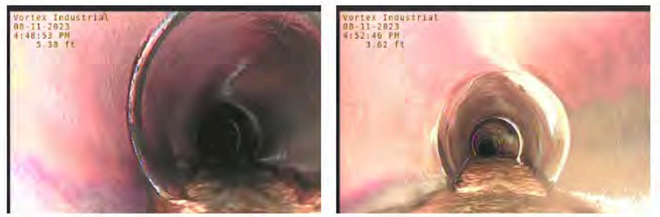
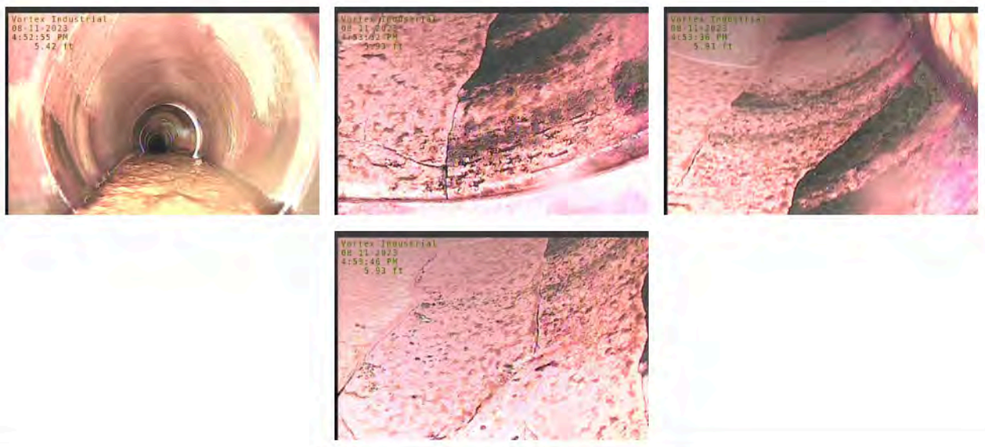
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Spalling	Point	187.6	Structural	5	11	2	0	0	1	Surface Damage Spalling	
Miscellaneous General Observation	Point	206.5	Miscellaneous	5	10	0	0	0	0	Ring Inserted in Pipe	
Manhole	Point	217.3	Constructional	0		0	0	0	0	D-24	
Line Down	Point	217.3	Constructional	100		0	4	4	0	Line Down	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-11	Inspection Date	Aug 11, 2023	Inspected Length (ft)	209.4	Defects Rated ≥3	5	Peak Structural Rating	4	Total PR Defects	95
Segment ID	B-1:B-3	Primary Pipe Material	VCP	Pipe Diameter (in)	10	Peak Prioritization Rating	4	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	B-1	
Miscellaneous Water Level	Point	0	Miscellaneous	20		0	0	0	0	Water Level at Start of Survey	
Fracture Multiple	Point	5.9	Structural	0	6-11	4	0	0	3	Fracture Multiple	

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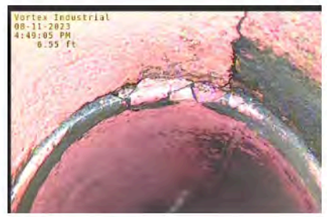
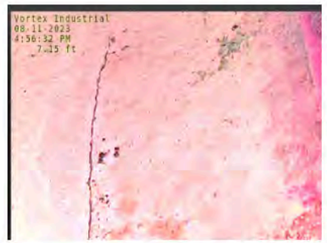
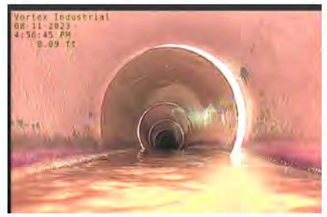
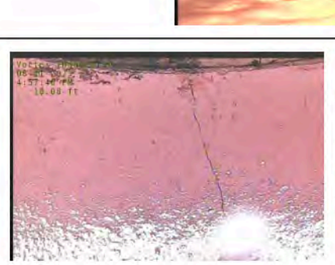
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	7	Structural	0	12-1	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	7.1	Structural	0	8	2	0	0	1	Crack Longitudinal	
Joint Offset Medium	Point	9.8	Structural	0		3	0	0	2	Joint Offset Medium	
Crack Longitudinal	Point	10	Structural	0	3	2	0	0	1	Crack Longitudinal	 

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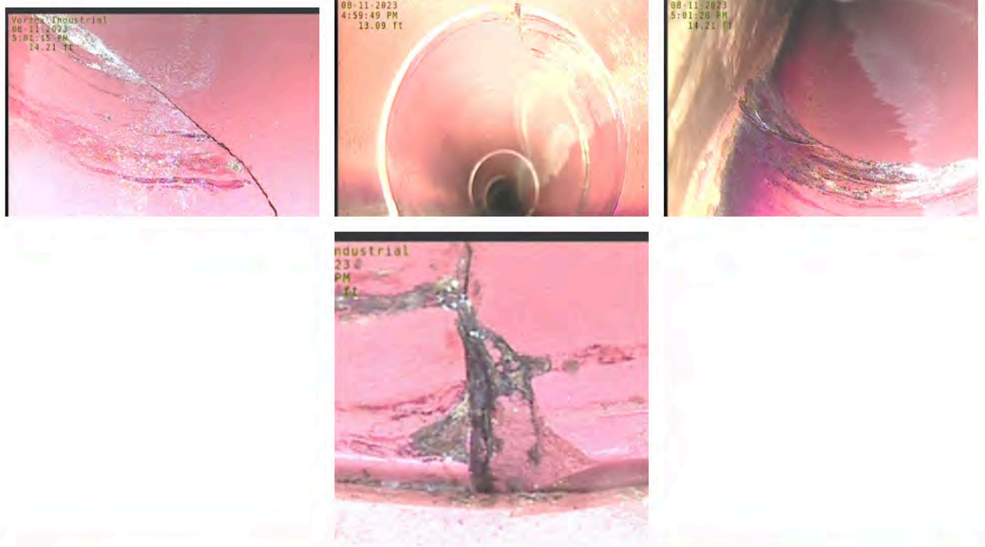
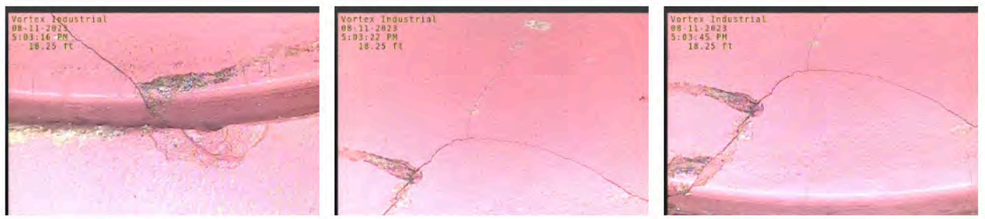
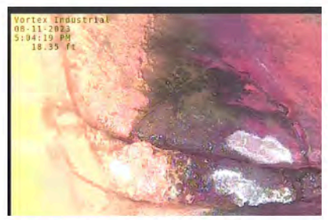
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Multiple	Point	14.2	Structural	0	12-12	2	0	0	3	Fracture Multiple	
Crack Multiple	Point	18.2	Structural	0	1-3	3	0	0	2	Crack Multiple	
Crack Multiple	Point	18.2	Structural	0	5-6	3	0	0	2	Crack Multiple	

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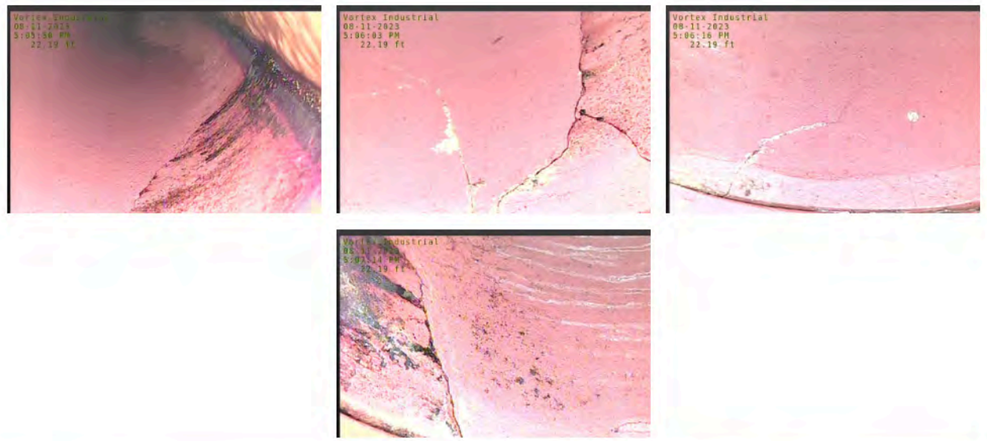
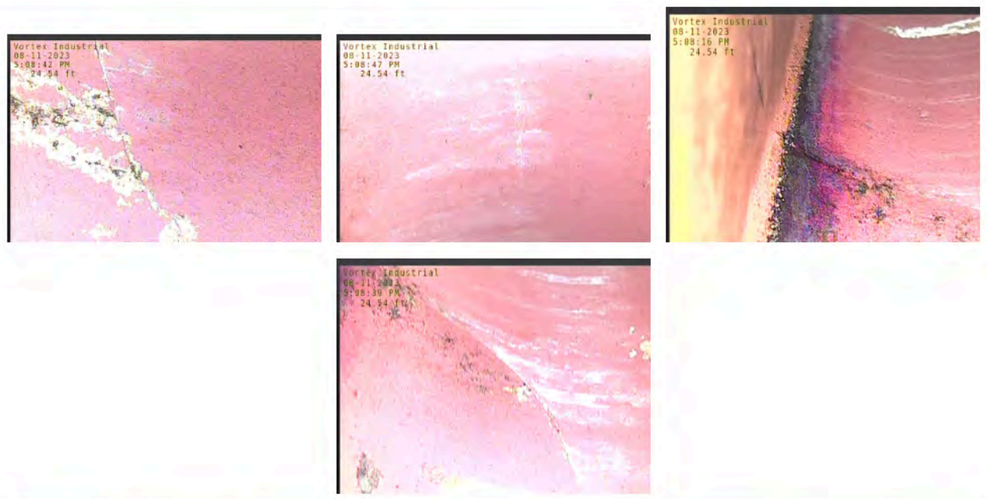
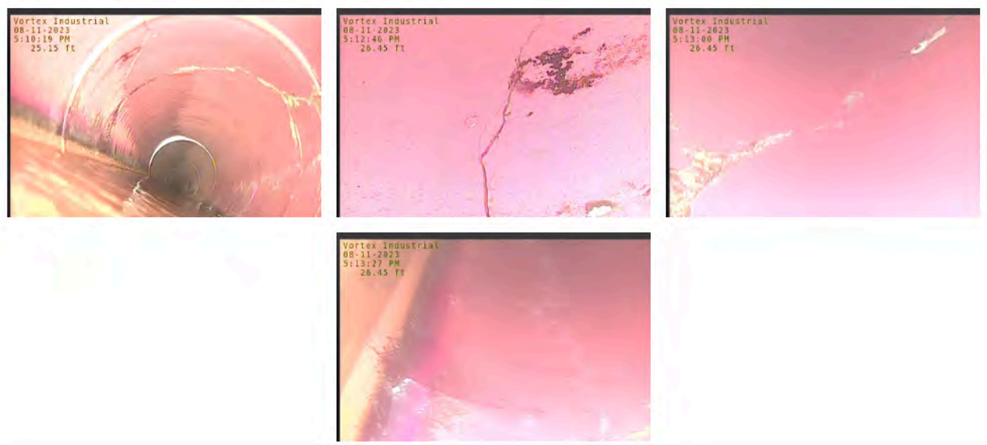
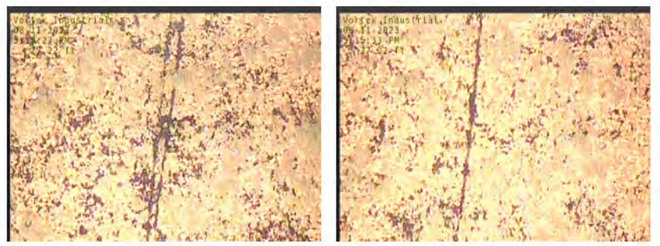
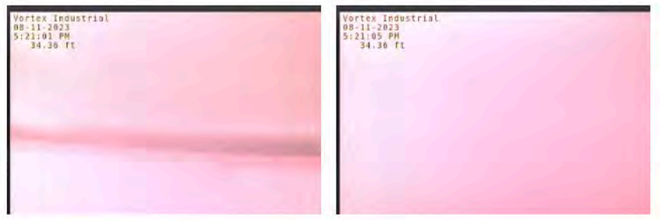
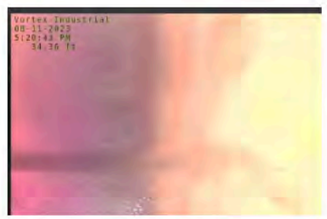
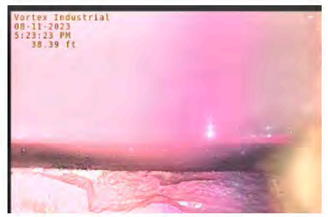
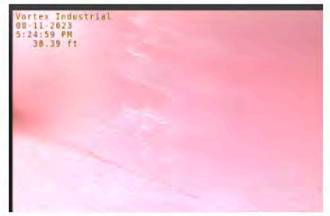
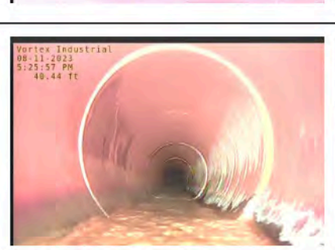
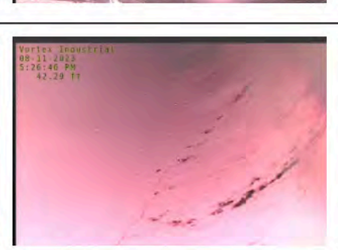
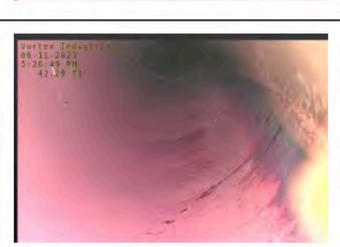
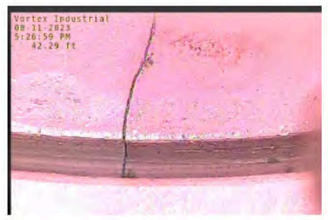
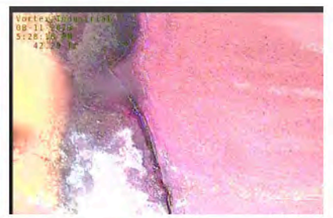
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	22.2	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Spiral	Point	24.5	Structural	0	2-6	2	0	0	1	Crack Spiral	
Crack Multiple	Point	26.5	Structural	0	12-12	3	0	0	2	Crack Multiple	

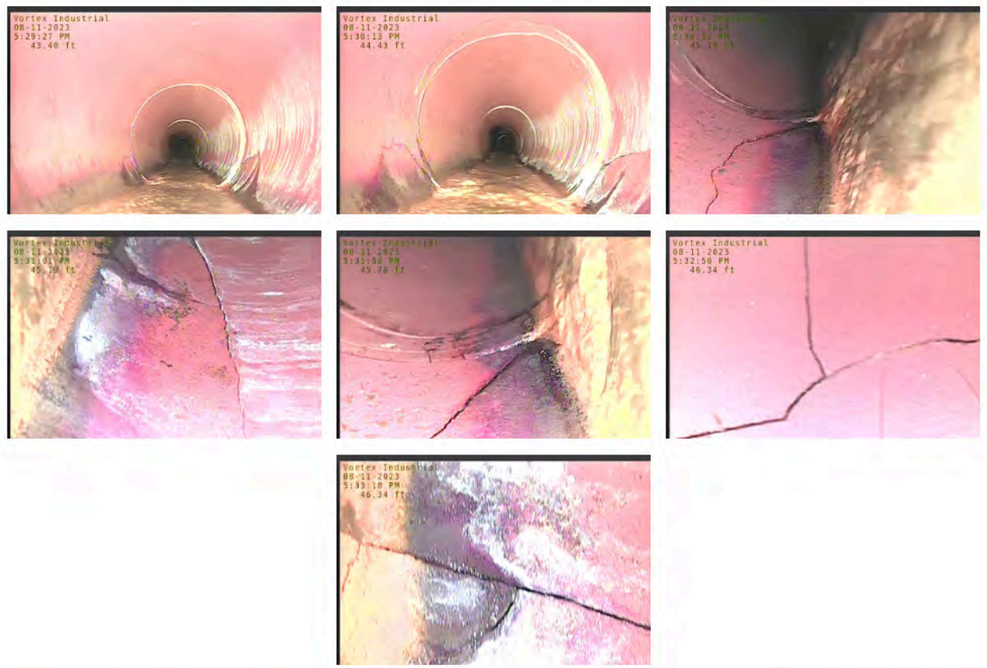
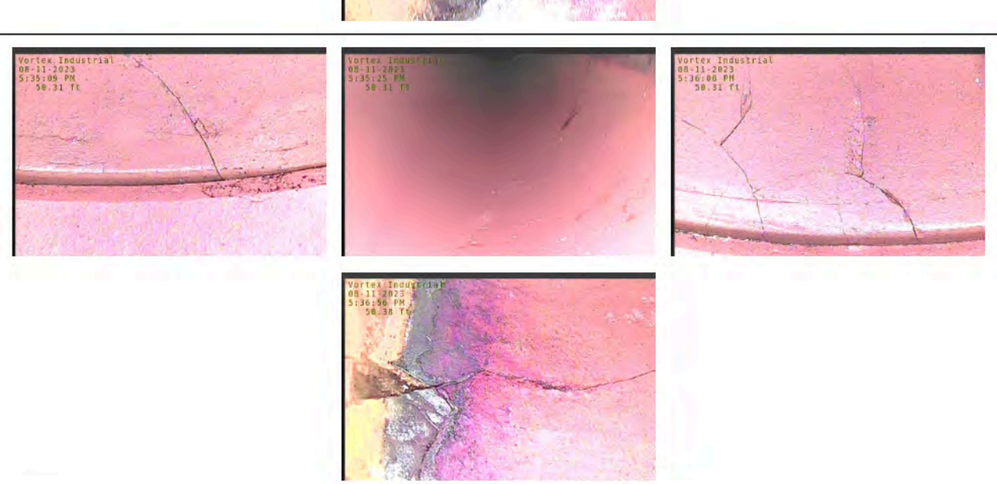
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Longitudinal	Point	34.4	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	34.4	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	34.4	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	34.4	Structural	0	9	2	0	0	1	Crack Longitudinal	

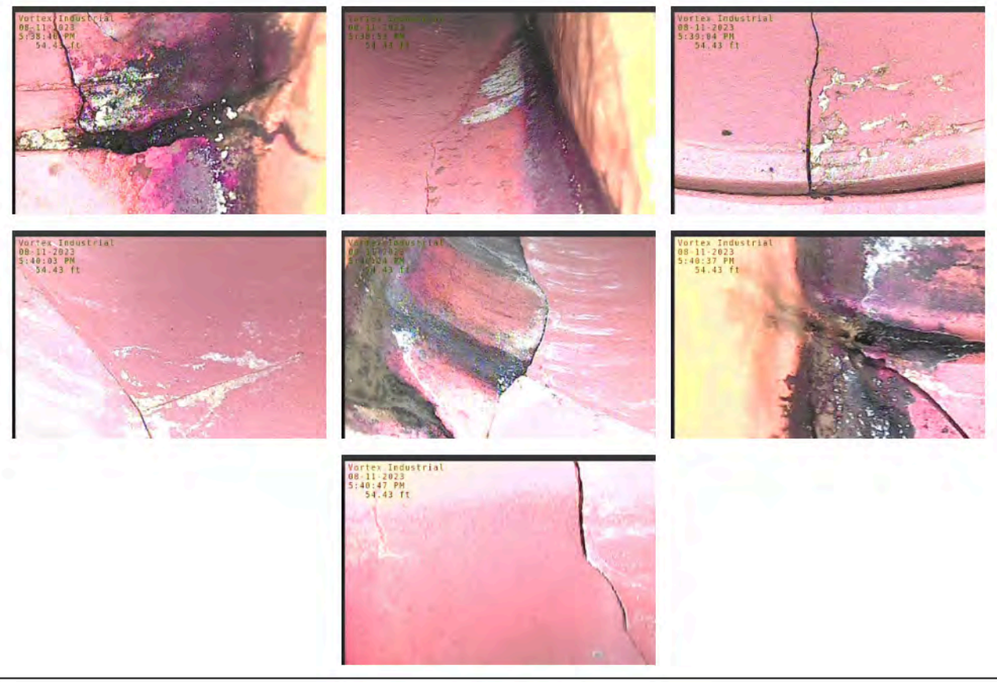
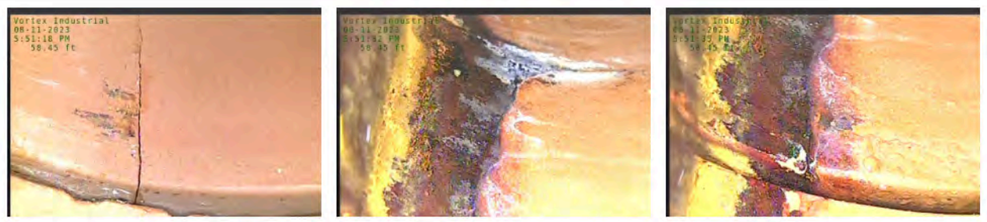
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Circumferential	Point	38.4	Structural	0	6-7	2	0	0	2	Fracture Circumferential	
Crack Spiral	Point	38.4	Structural	0	7-10	2	0	0	2	Crack Spiral	 
Crack Spiral	Point	38.4	Structural	0	2-5	2	0	0	2	Crack Spiral	  
Crack Spiral	Point	42.2	Structural	0	6-11	2	0	0	2	Crack Spiral	   
Crack Longitudinal	Point	42.2	Structural	0	5	2	0	0	2	Crack Longitudinal	 

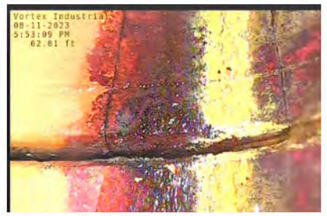
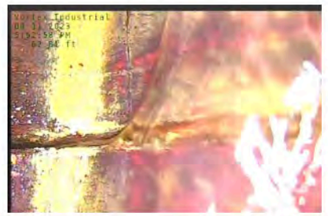
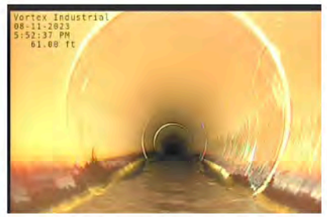
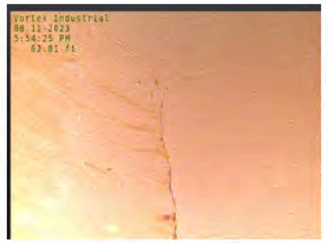
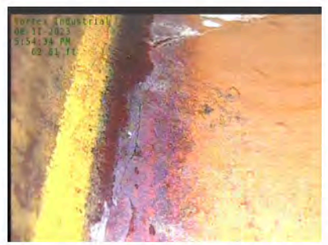
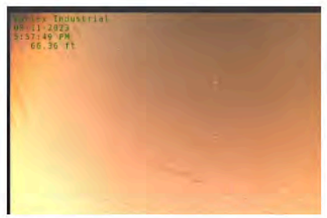
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	46.3	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Multiple	Point	50.4	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Spiral	Point	54	Structural	0	12-5	2	0	0	2	Crack Spiral	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Multiple	Point	54.4	Structural	0	12-12	3	0	0	3	Fracture Multiple	
Crack Longitudinal	Point	58.5	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Spiral	Point	58.5	Structural	0	2-6	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	58.5	Structural	0	10	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	62.8	Structural	0	7	2	0	0	2	Crack Longitudinal	 
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	   
Crack Spiral	Point	66.4	Structural	0	11-5	2	0	0	2	Crack Spiral	 
Crack Spiral	Point	66.4	Structural	0	6-8	2	0	0	2	Crack Spiral	

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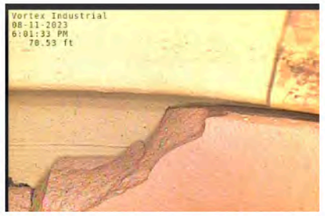
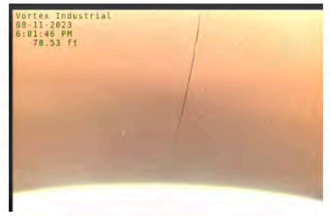
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Joint Offset Medium	Point	70.3	Structural	0		3	0	0	1	Joint Offset Medium	
Fracture Circumferential	Point	70.5	Structural	0	10-11	4	0	0	2	Fracture Circumferential	  
Fracture Spiral	Point	70.5	Structural	0	7-9	3	0	0	2	Fracture Spiral	  
Crack Multiple	Point	70.5	Structural	0	3-5	3	0	0	2	Crack Multiple	    

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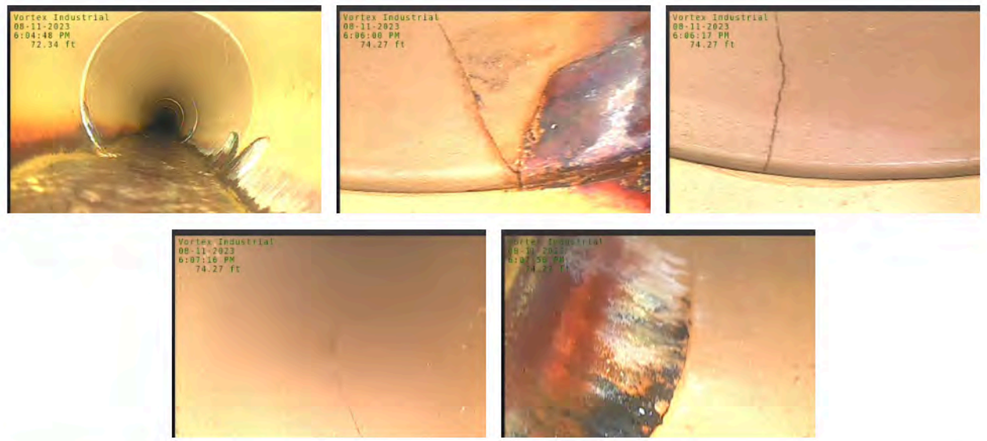
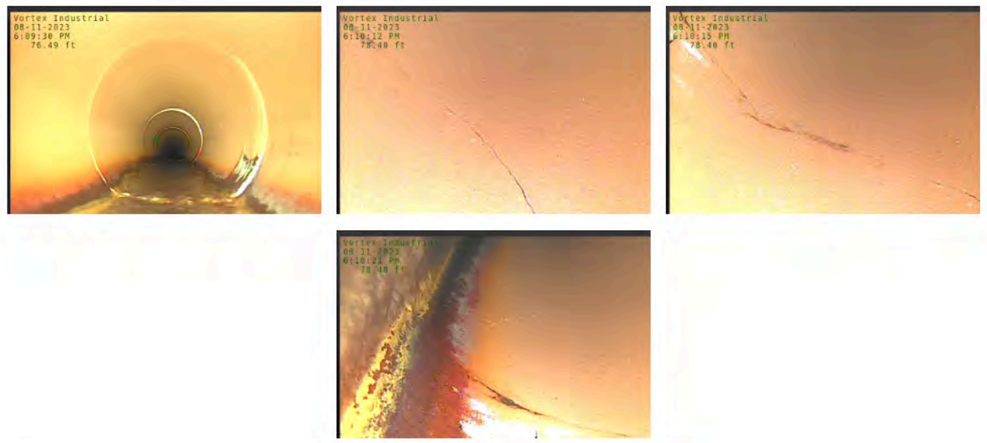
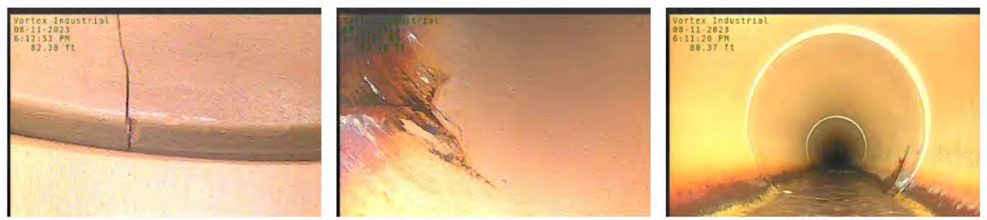
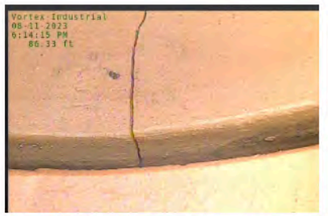
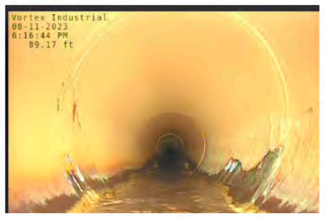
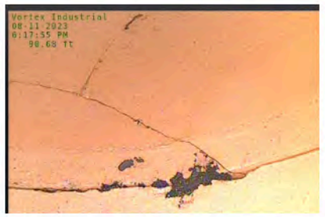
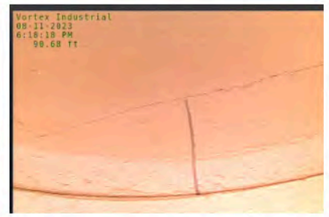
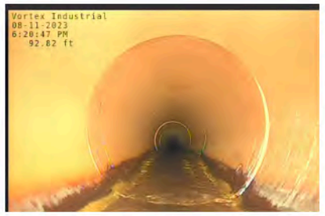
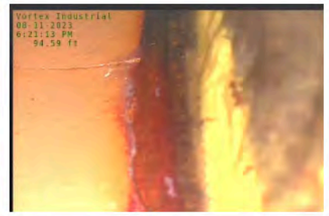
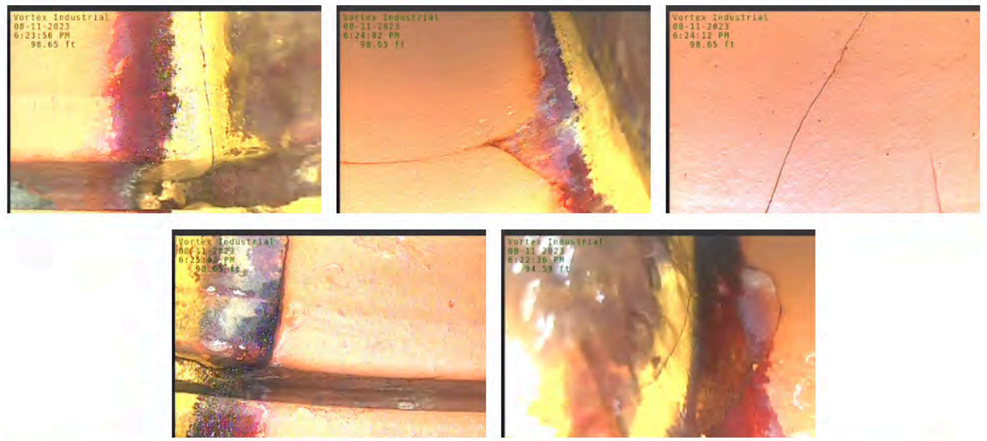
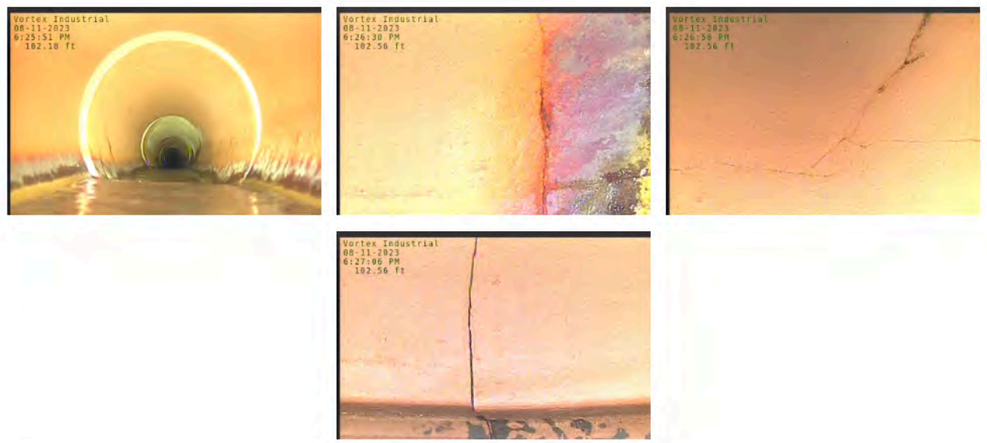
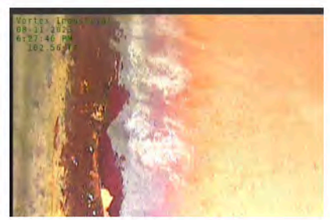
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	74.3	Structural	0	12-12	2	0	0	2	Crack Spiral	
Crack Spiral	Point	78	Structural	0	12-8	2	0	0	2	Crack Spiral	
Crack Spiral	Point	82.4	Structural	0	2-5	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	82.4	Structural	0	7	2	0	0	2	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	86.3	Structural	0	5	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	86.3	Structural	0	9	2	0	0	2	Crack Longitudinal	 
Crack Multiple	Point	90.7	Structural	0	12-12	3	0	0	2	Crack Multiple	     
Crack Spiral	Point	94.6	Structural	0	12-12	2	0	0	2	Crack Spiral	    

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	98.7	Structural	0	5-1	2	0	0	2	Crack Spiral	
Crack Spiral	Point	102.5	Structural	0	6-1	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	102.7	Structural	0	5	2	0	0	2	Crack Longitudinal	
Fracture Longitudinal	Point	106.7	Structural	0	5	2	0	0	2	Fracture Longitudinal	

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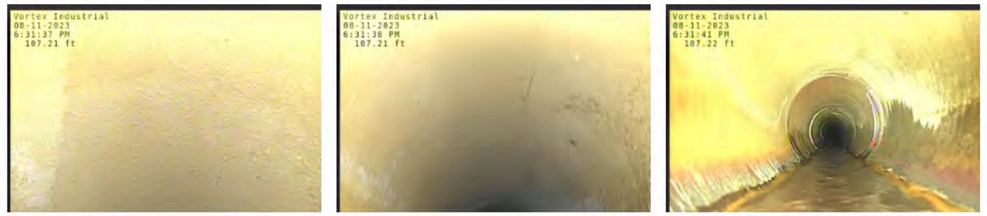
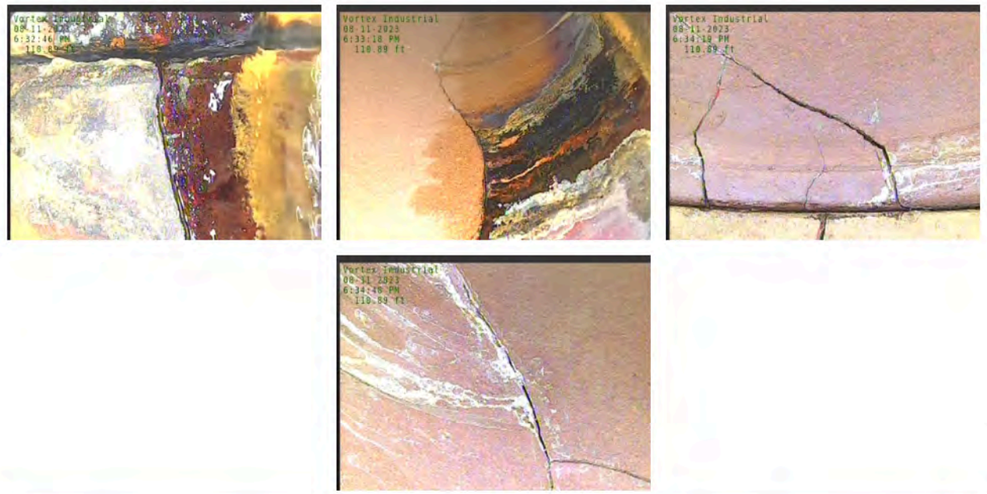
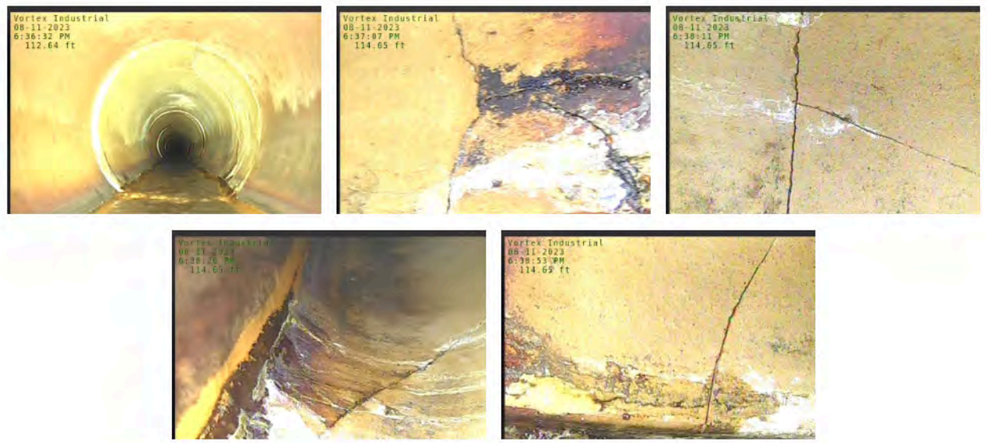
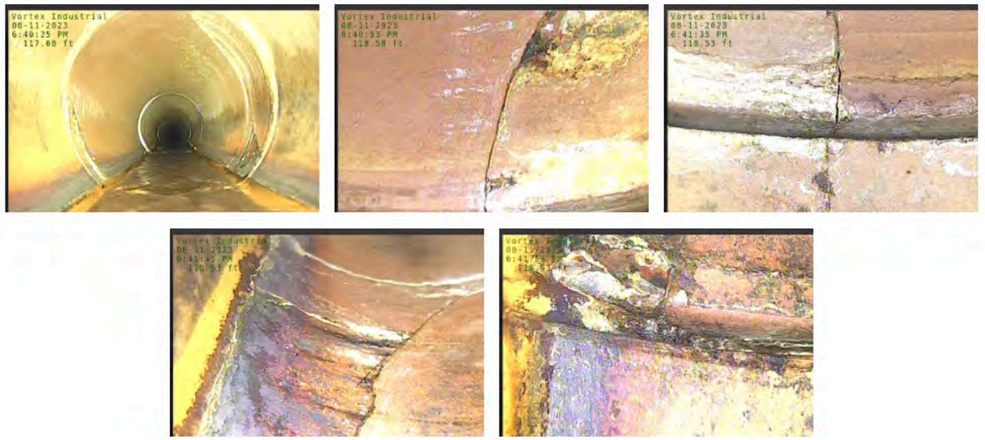
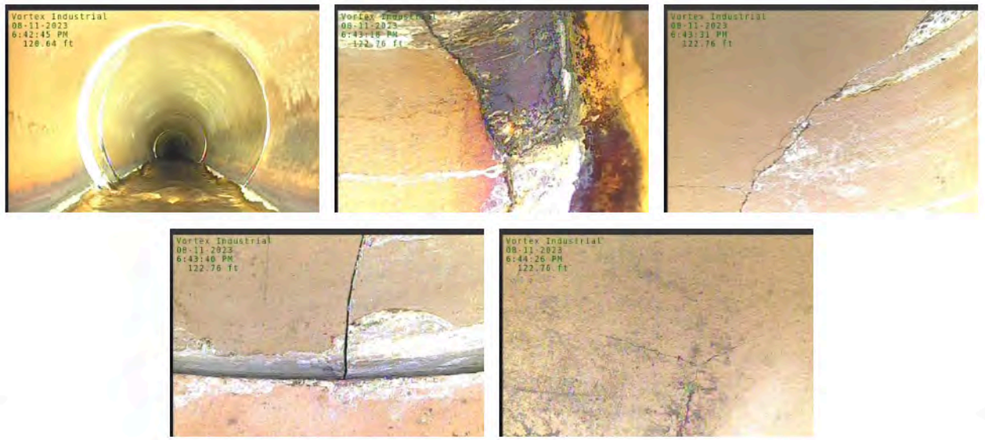
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Continuous	107.2 - 110.9	Structural	0	12	2	0	0	2	Crack Longitudinal	
Fracture Multiple	Point	111	Structural	0	12-9	3	0	0	3	Fracture Multiple	
Crack Multiple	Point	114.7	Structural	0	12-12	2	0	0	2	Crack Multiple	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	118.5	Structural	0	12-9	3	0	0	2	Crack Multiple	
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	
Joint Offset Medium	Point	122.8	Structural	0		3	0	0	1	Joint Offset Medium	

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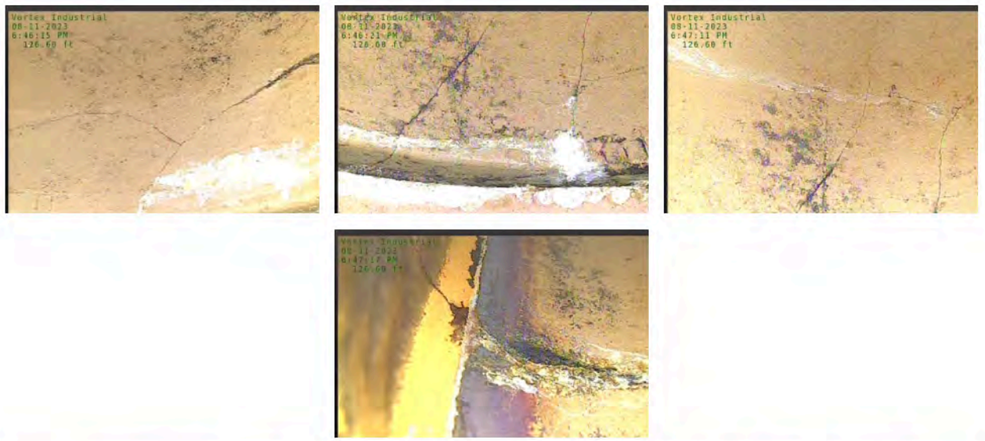
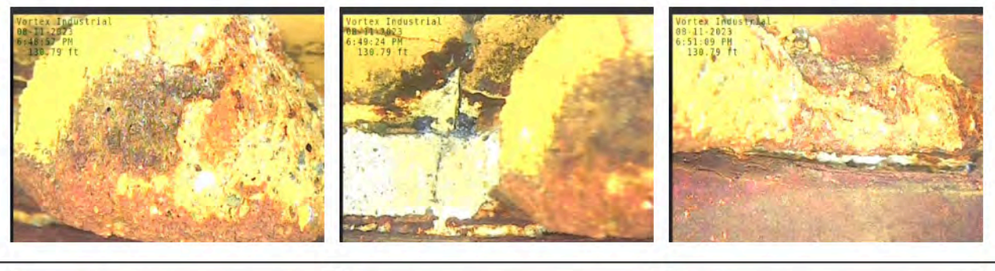
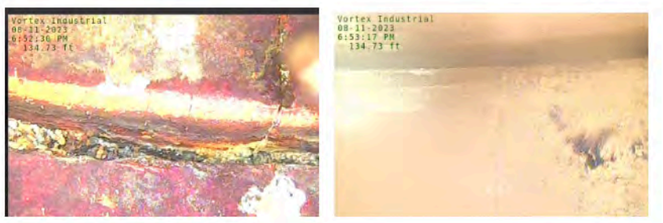
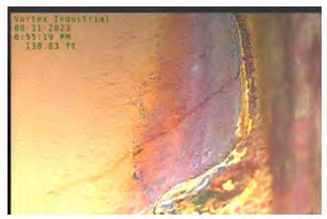
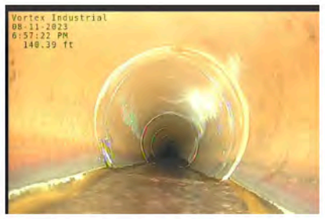
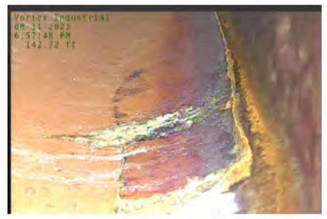
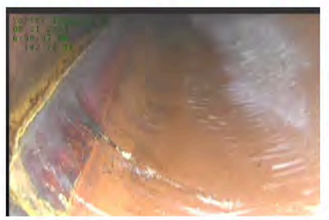
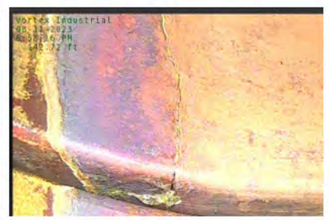
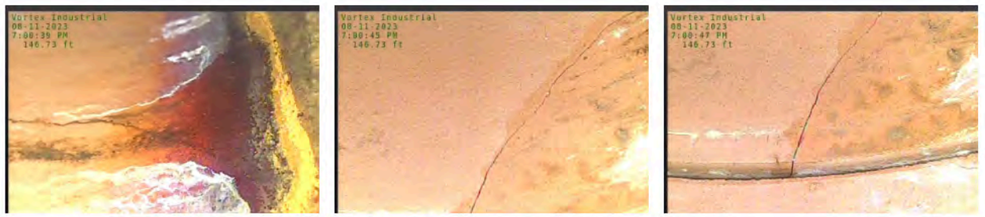
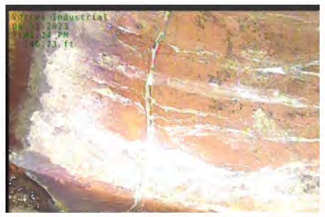
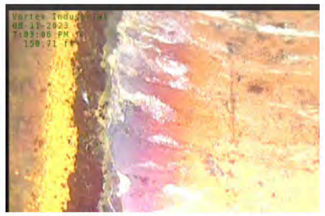
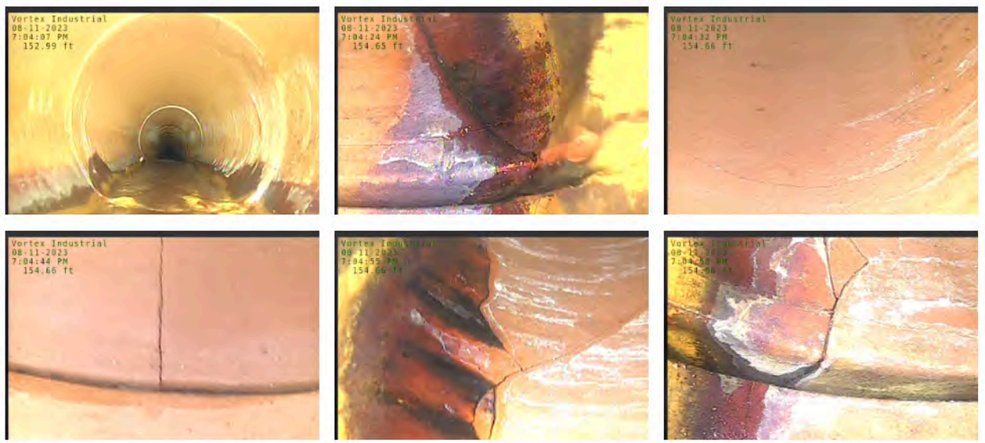
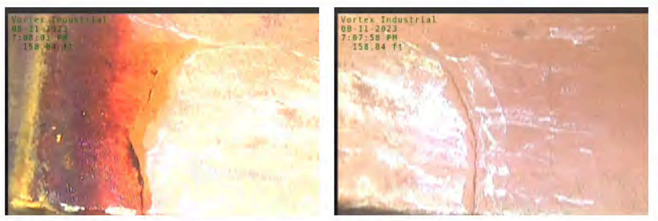
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	126.6	Structural	0	12-12	3	0	0	2	Crack Multiple	
Obstruction Rocks	Point	130.8	O&M	10	6	0	2	0	0	Obstruction Rocks	
Crack Multiple	Point	130.8	Structural	0	12-12	3	0	0	1	Crack Multiple	
Crack Spiral	Point	134	Structural	0	1-6	2	0	0	2	Crack Spiral	
Crack Hinge 2	Point	134.7	Structural	0	6, 9	2	0	0	2	Crack Hinge 2	

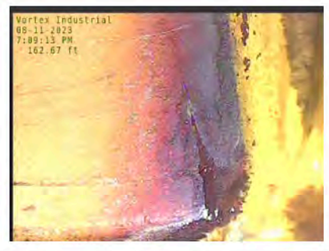
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	135.5	Structural	0	7-10	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	138.8	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	138.8	Structural	0	12-2	1	0	0	2	Crack Circumferential	 
Crack Spiral	Point	138.8	Structural	0	7-12	2	0	0	2	Crack Spiral	  
Crack Multiple	Point	142.7	Structural	0	12-12	3	0	0	2	Crack Multiple	    

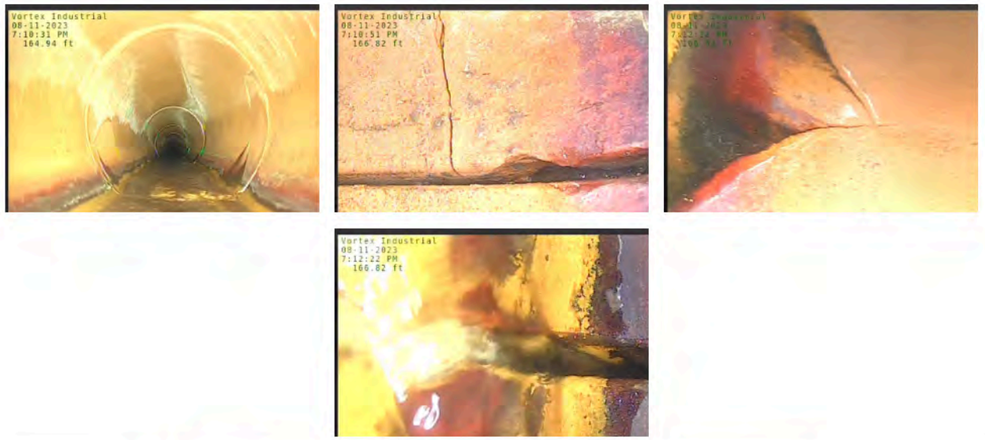
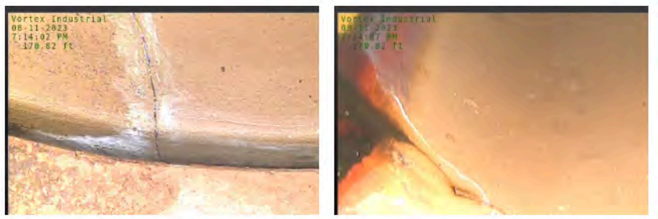
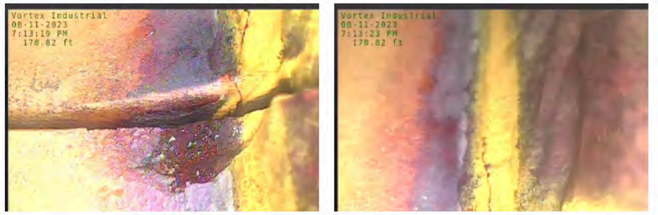
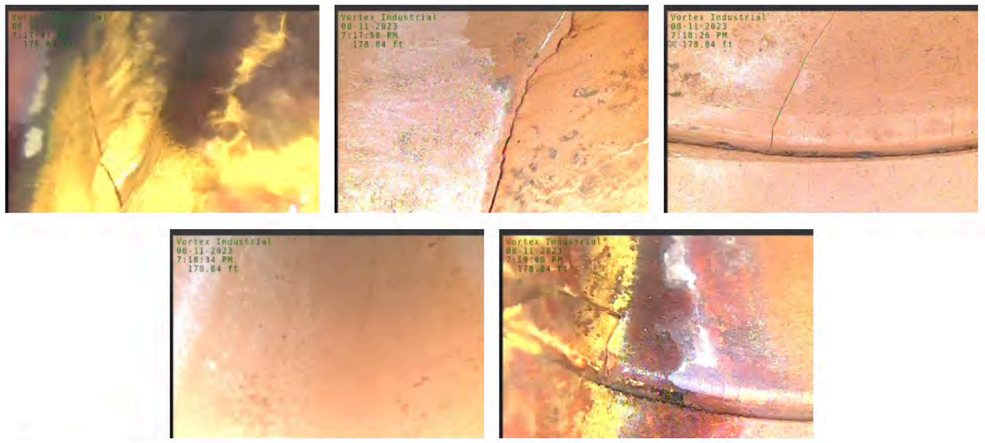
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	146.7	Structural	0	7-9	2	0	0	2	Crack Spiral	
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	
Crack Multiple	Point	154.7	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Spiral	Point	158.8	Structural	0	4-5	2	0	0	2	Crack Spiral	

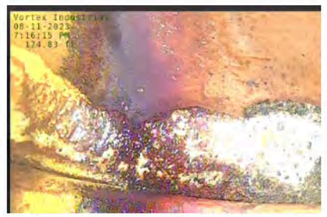
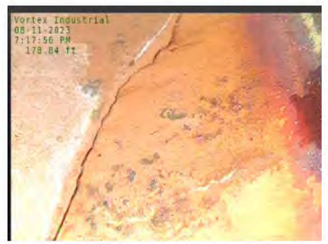
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	158.8	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	158.8	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	162.7	Structural	0	7	2	0	0	2	Crack Longitudinal	
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	
Fracture Circumferential	Point	166.8	Structural	0	10-11	2	0	0	2	Fracture Circumferential	 

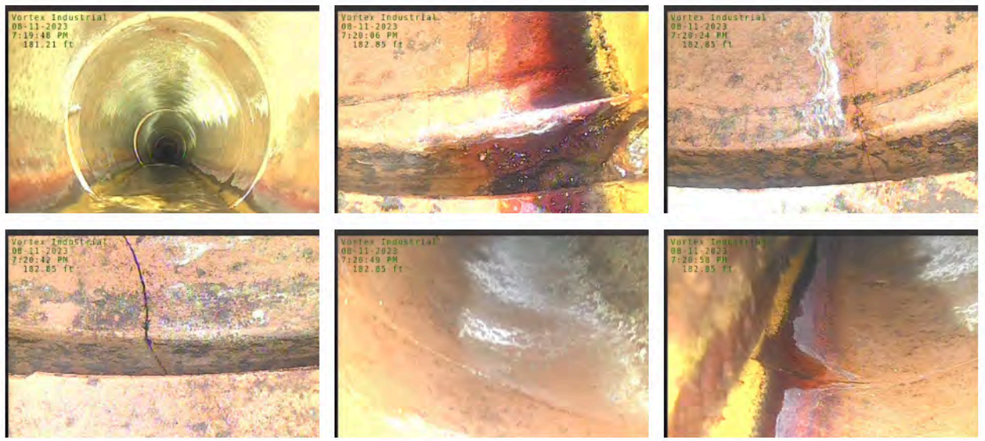
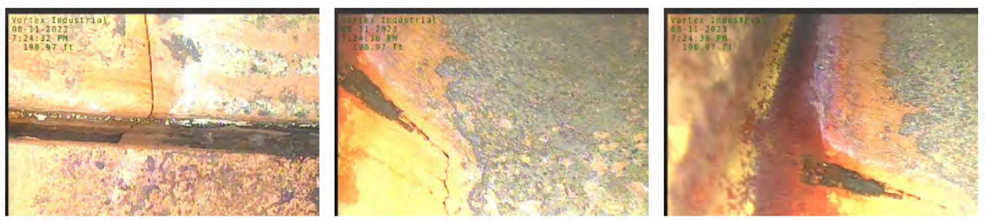
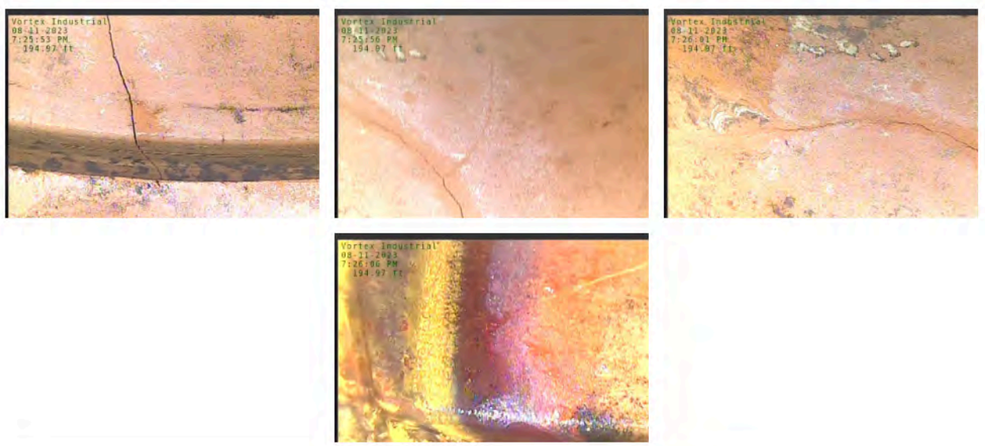
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	166.8	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Spiral	Point	170.8	Structural	0	3-5	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	170.8	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Multiple	Point	174.8	Structural	0	12-12	3	0	0	2	Crack Multiple	

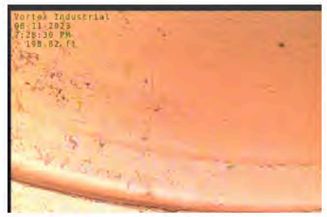
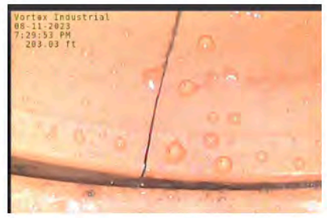
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Deposits Settled Hard/Compacted	Point	174.8	O&M	10	5-6	0	2	0	0	Deposits Settled Hard/Compacted	 
Crack Longitudinal	Point	174.8	Structural	0	8	2	0	0	2	Crack Longitudinal	 
Fracture Circumferential	Point	178.8	Structural	0	3-4	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	178.8	Structural	0	12	2	0	0	1	Crack Longitudinal	 
Crack Multiple	Point	178.8	Structural	0	6-9	3	0	0	2	Crack Multiple	  

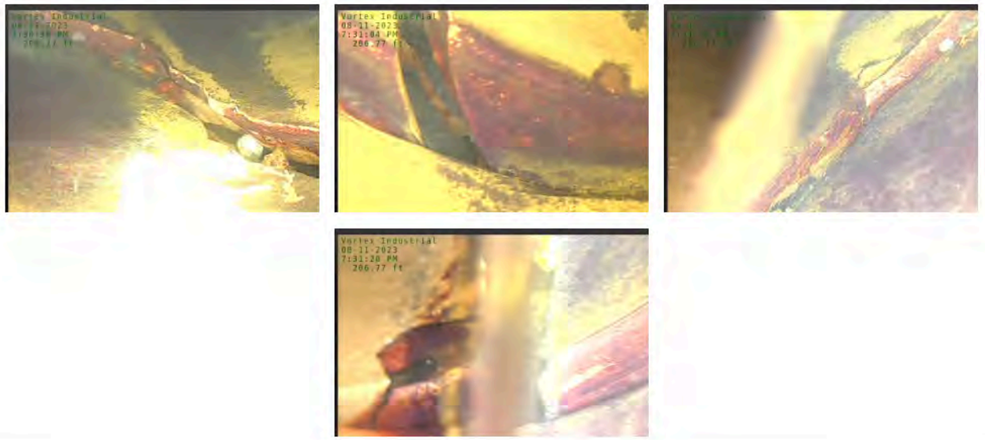
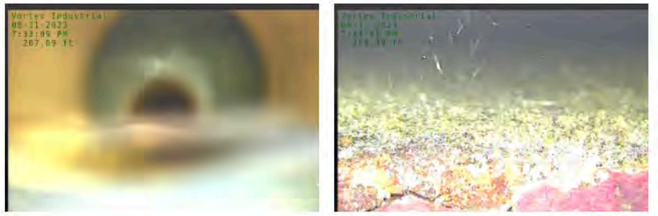
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	182.9	Structural	0	12-9	3	0	0	2	Crack Multiple	
Crack Spiral	Point	190.8	Structural	0	3-5	2	0	0	2	Crack Spiral	
Crack Spiral	Point	190.8	Structural	0	6-10	2	0	0	2	Crack Spiral	
Crack Spiral	Point	195	Structural	0	1-5	2	0	0	2	Crack Spiral	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	198.8	Structural	0	6-7	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	198.8	Structural	0	3	2	0	0	1	Crack Longitudinal	
Joint Offset Medium	Point	198.8	Structural	0		3	0	0	2	Joint Offset Medium	
Miscellaneous Water Level	Point	203	Miscellaneous	30		0	0	0	0	Miscellaneous Water Level	 
Crack Multiple	Point	203	Structural	0	10-5	3	0	0	2	Crack Multiple	  

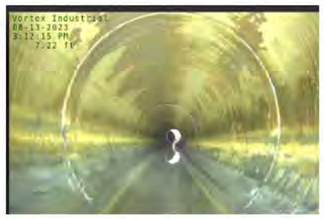
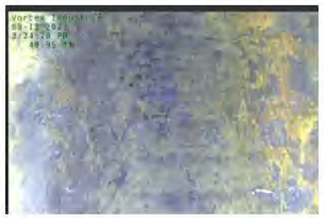
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Broken	Point	206.8	Structural	0	5-8	4	0	0	4	Broken	
Joint Offset Medium	Point	206.8	Structural	0		3	0	0	2	Joint Offset Medium	
Manhole	Point	209.4	Constructional	0		0	0	0	0	B-3	

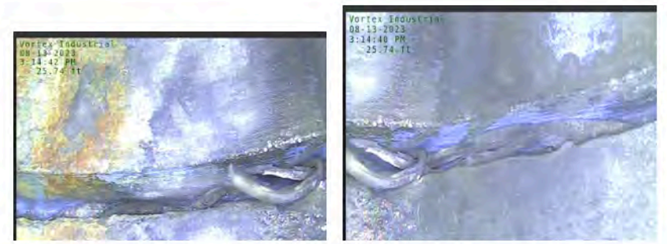
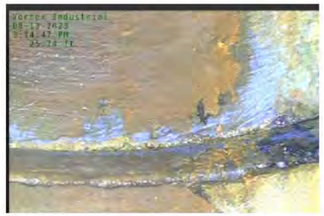
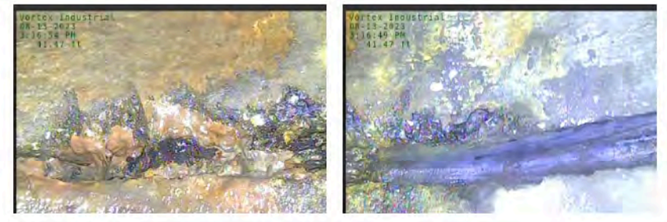
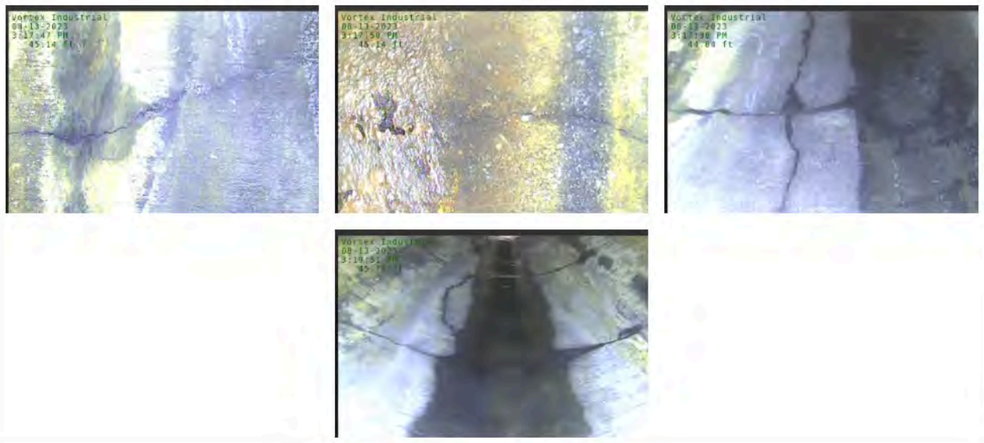
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

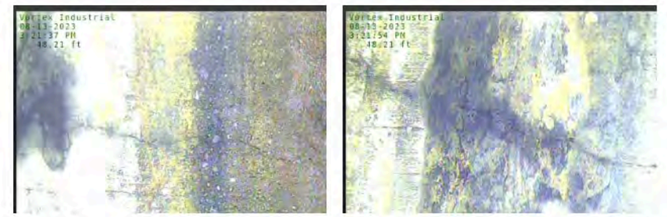
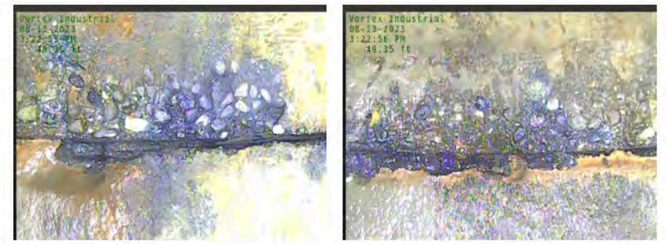
Setup ID	2023-12	Inspection Date	Aug 13, 2023	Inspected Length (ft)	55.7	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	7
Segment ID	B-02:5-P	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	B-02	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	0 - 55.7	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	    

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Intruding Sealing Material Grout	Point	25.7	O&M	10	7-8	0	2	0	0	Intruding Sealing Material Grout	
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	
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	

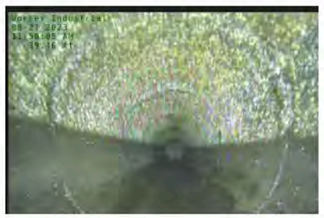
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	48.2	Structural	0	3-7	1	0	0	2	Crack Circumferential	
Surface Damage Aggregate Missing	Point	49.3	Structural	0	7-9	4	0	0	2	Surface Damage Aggregate Missing	
Crack Circumferential	Point	53.5	Structural	0	12-12	1	0	0	2	Crack Circumferential	 
Manhole	Point	55.7	Constructional	0		0	0	0	0	5-P	

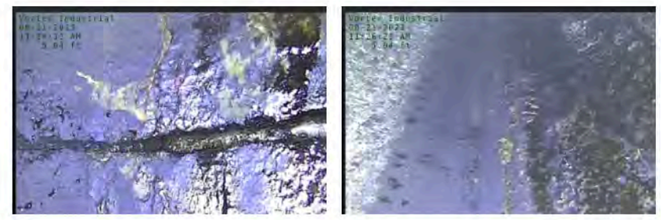
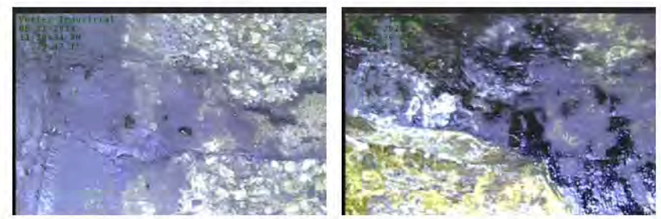
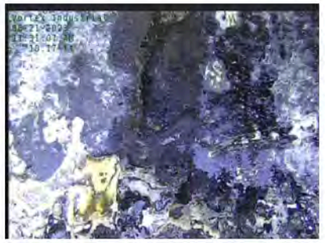
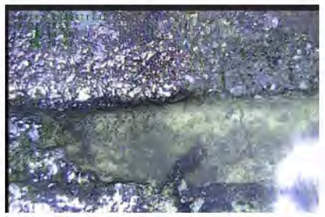
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

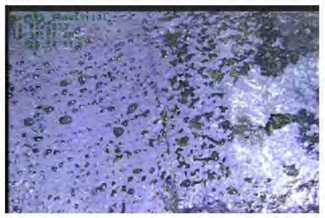
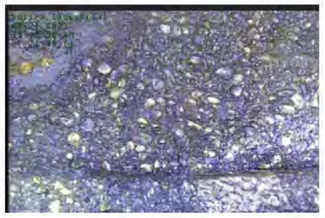
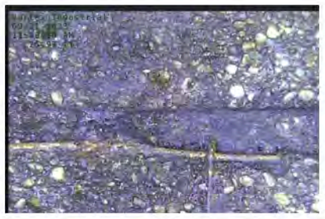
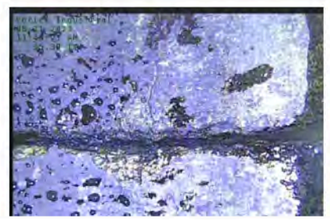
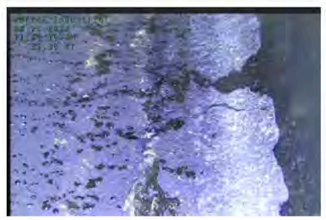
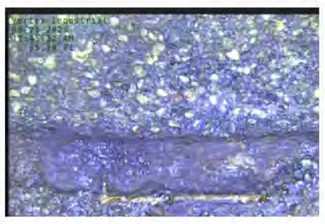
Setup ID	2023-13	Inspection Date	Aug 21, 2023	Inspected Length (ft)	82	Defects Rated ≥3	1	Peak Structural Rating	4	Total PR Defects	26
Segment ID	5-B:5-C	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	3	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-B	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 82	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	    

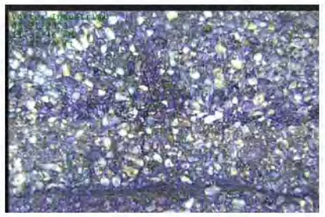
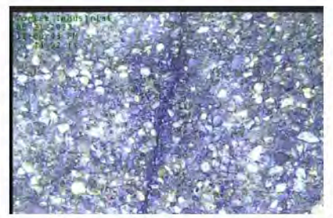
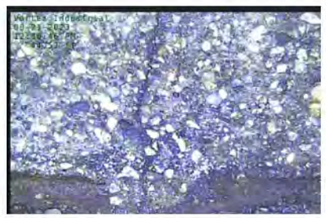
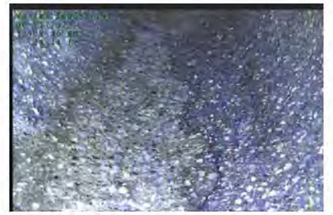
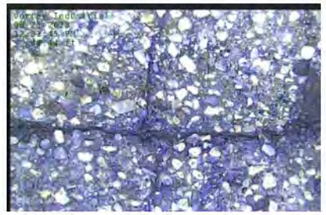
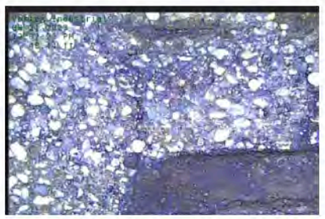
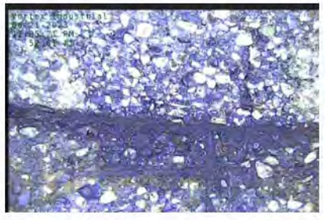
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	5	Structural	0	8	2	0	0	2	Crack Longitudinal	
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	
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	

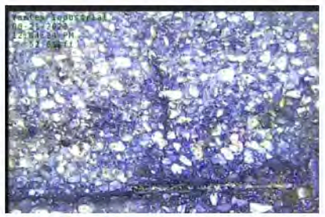
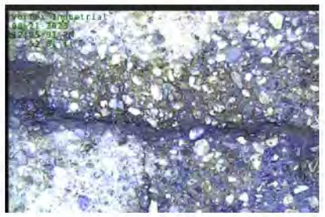
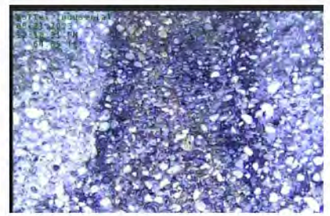
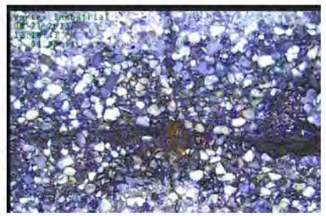
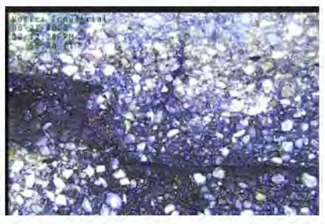
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

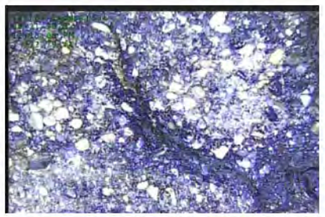
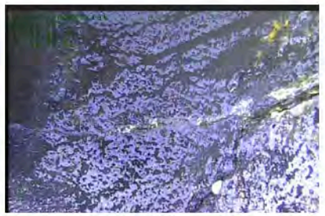
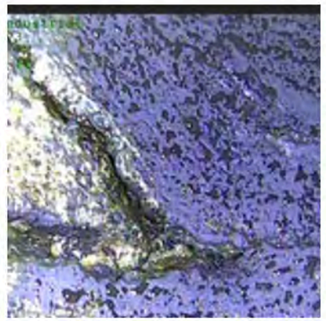
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

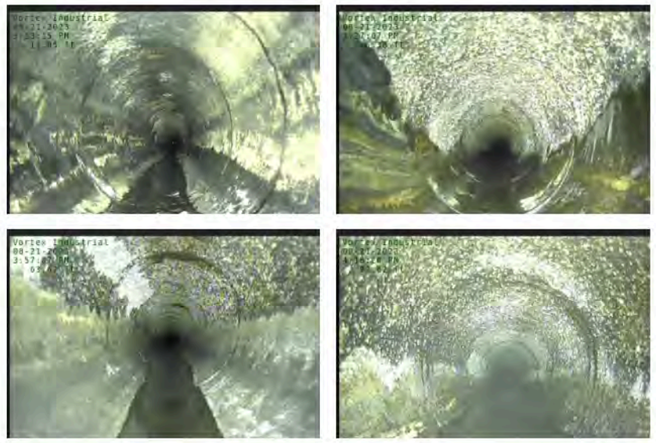
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

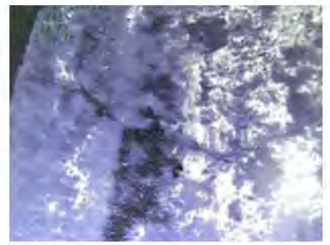
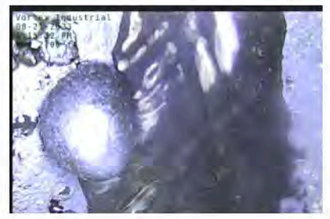
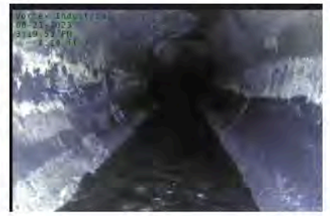
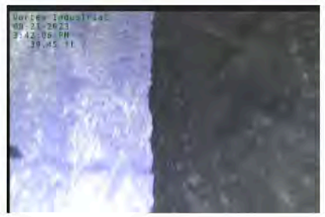
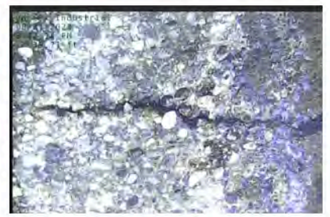
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

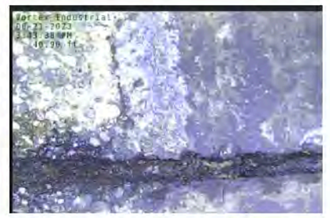
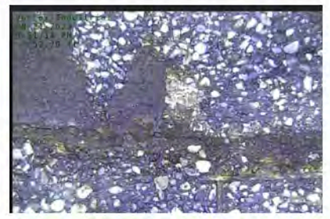
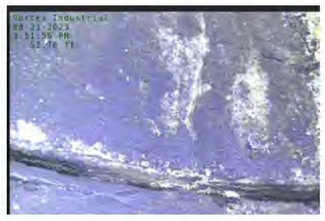
Setup ID	2023-14	Inspection Date	Aug 21, 2023	Inspected Length (ft)	265.3	Defects Rated ≥3	1	Peak Structural Rating	4	Total PR Defects	69
Segment ID	5-C: 5-D	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Aggregate Visible	Continuous	0 - 265.3	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Manhole	Point	0	Constructional	0		0	0	0	0	5-C	

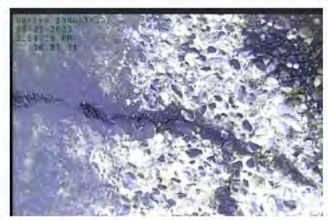
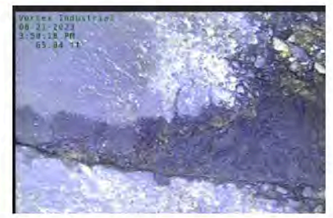
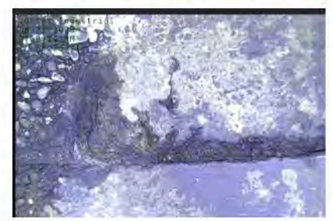
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  

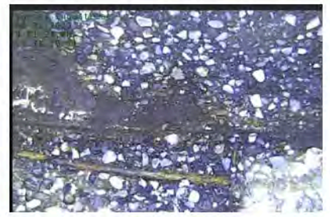
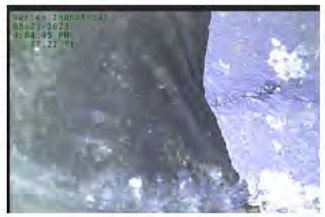
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  
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	

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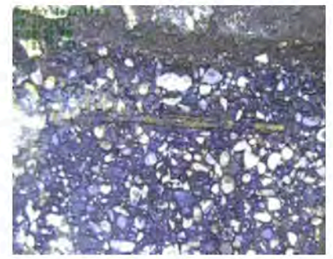
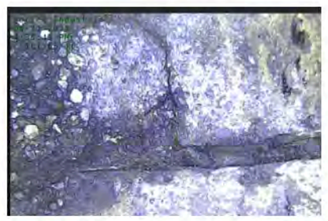
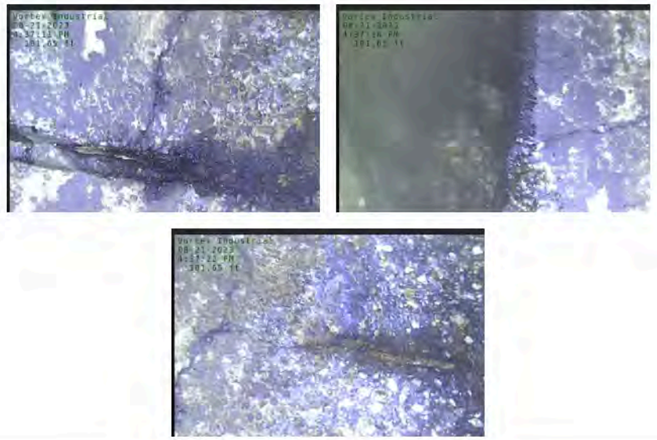
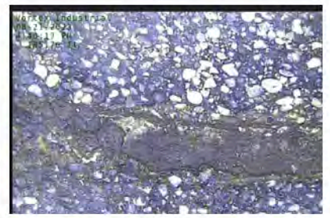
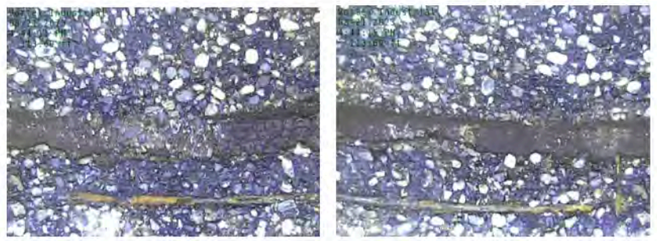
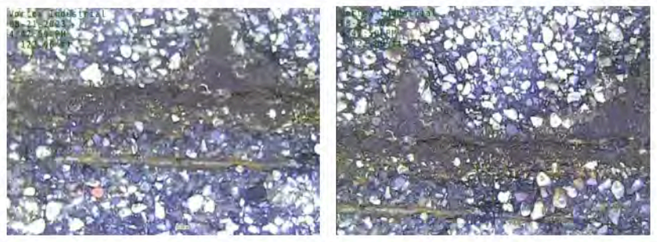
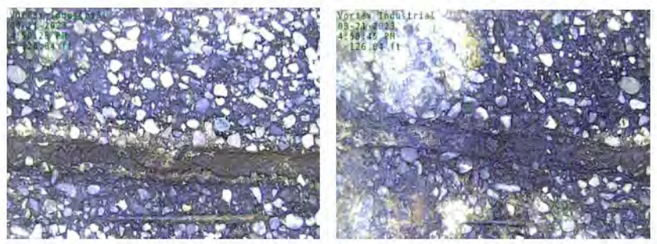
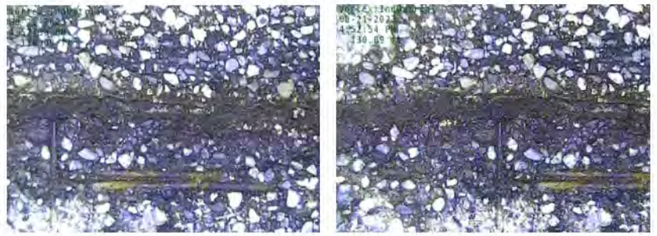
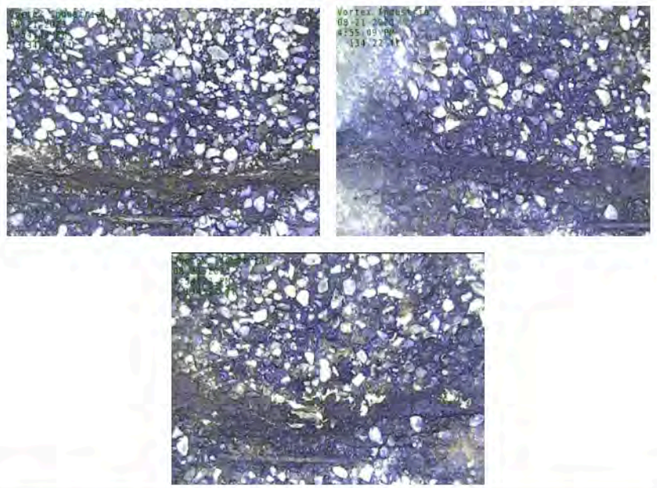
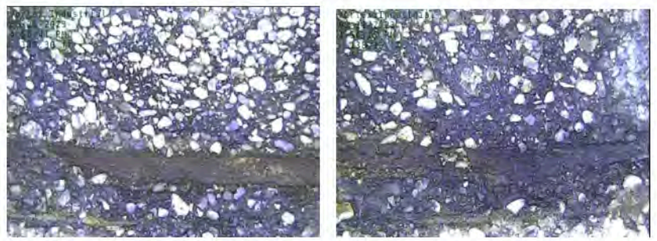
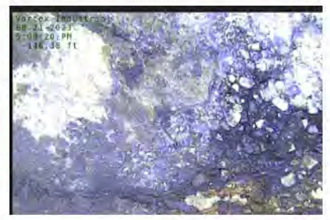
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Reinforcement Visible	Point	85.5	Structural	0	4	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Multiple	Point	89.5	Structural	0	3-4	3	0	0	2	Crack Multiple	
Crack Circumferential	Point	97.4	Structural	0	6-7	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	97.4	Structural	0	4-5	1	0	0	2	Crack Circumferential	 
Crack Longitudinal	Point	101.7	Structural	0	8	2	0	0	2	Crack Longitudinal	 

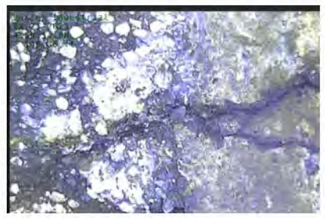
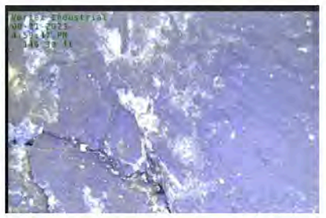
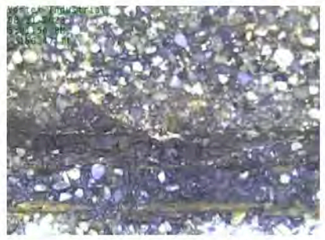
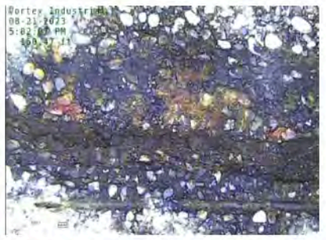
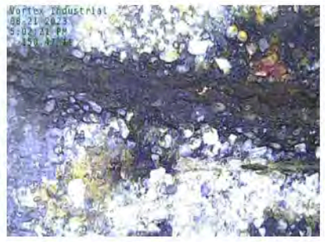
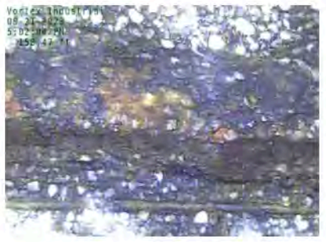
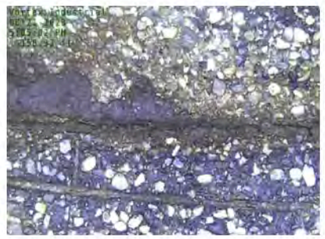
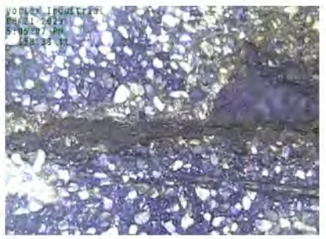
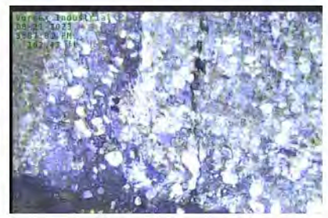
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	101.7	Structural	0	4-6	3	0	0	2	Crack Multiple	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

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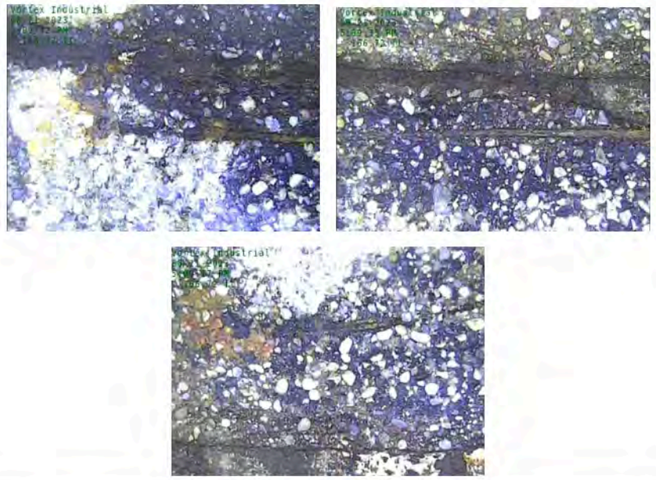
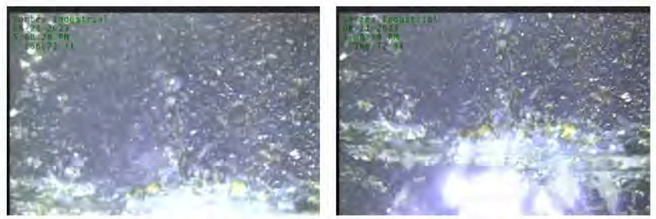
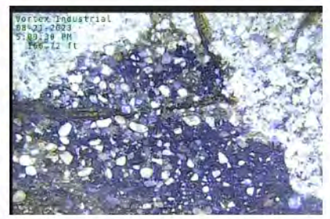
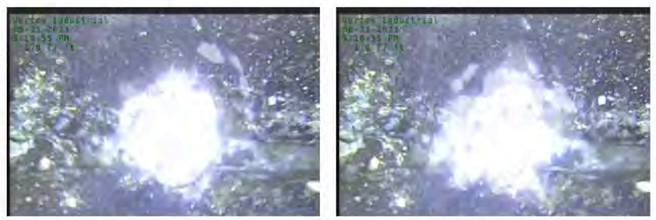
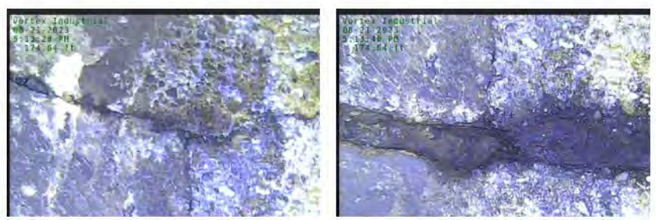
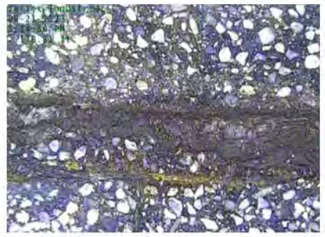
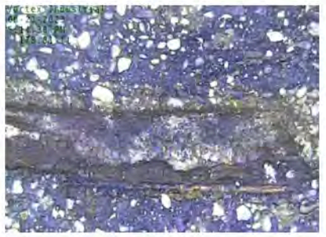
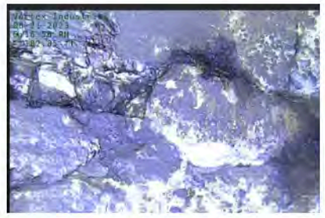
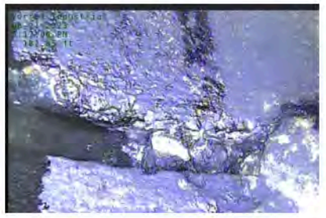
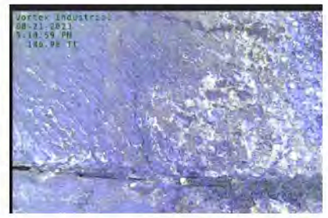
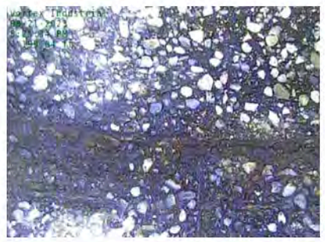
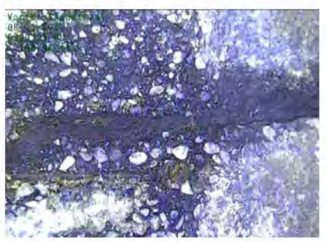
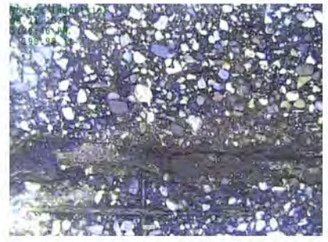
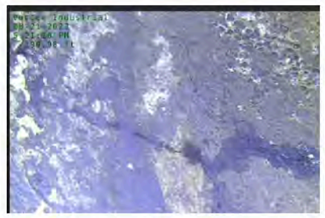
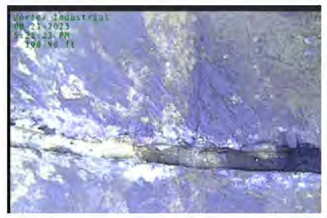
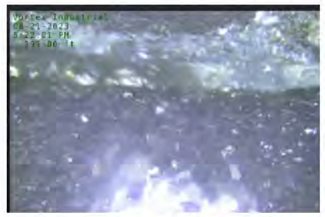
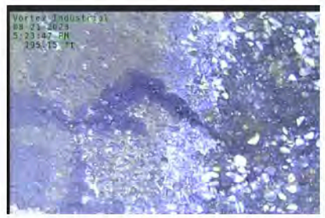
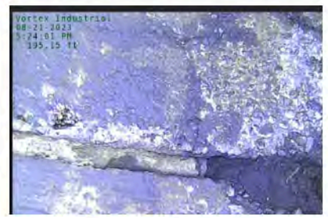
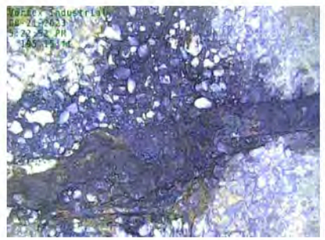
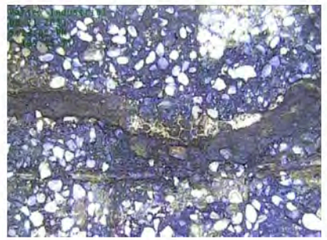
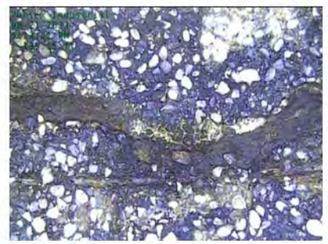
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Reinforcement Visible	Point	166.7	Structural	0	8-1	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Longitudinal	Point	166.7	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Spiral	Point	166.7	Structural	0	9-10	2	0	0	2	Crack Spiral	
Crack Longitudinal	Point	170.8	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	174.6	Structural	0	3-5	3	0	0	2	Crack Multiple	

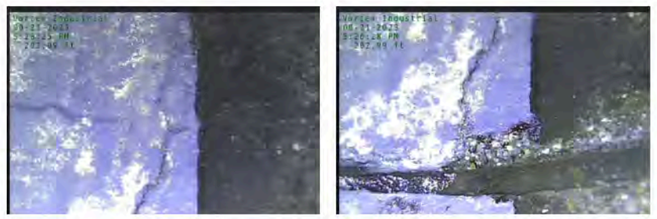
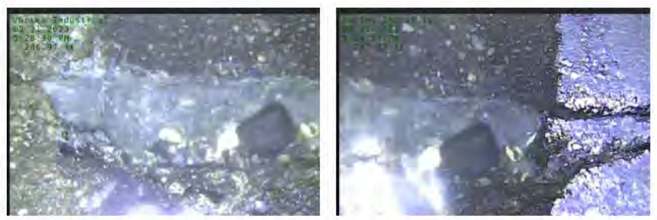
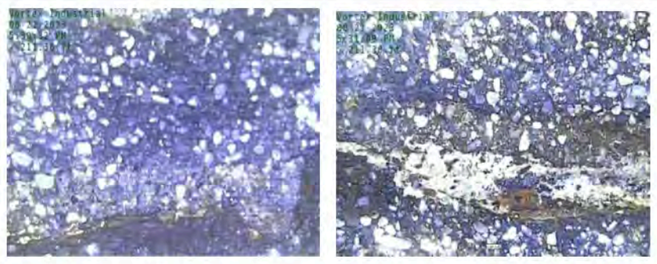
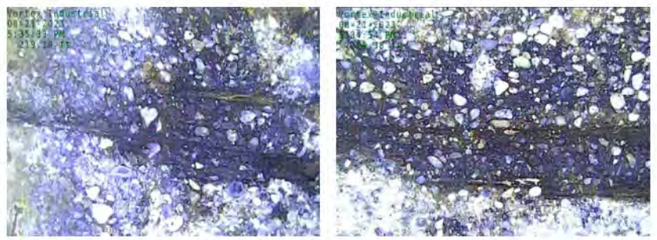
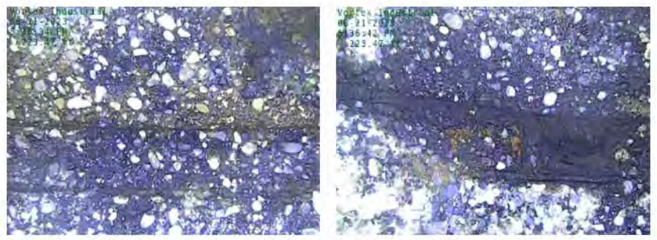
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  

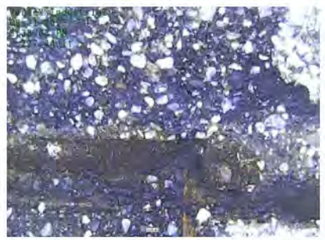
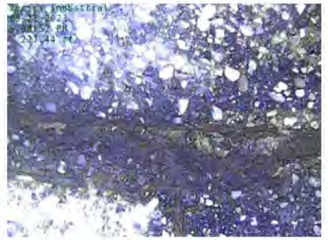
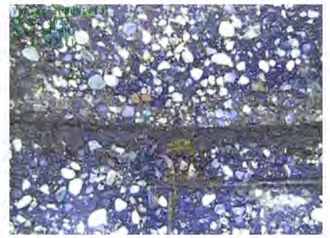
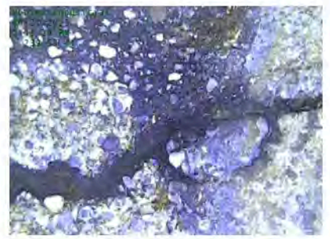
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	191	Structural	0	3-5	3	0	0	2	Crack Multiple	 
Crack Longitudinal	Point	195.2	Structural	0	6	2	0	0	1	Crack Longitudinal	 
Crack Multiple	Point	195.2	Structural	0	3-5	3	0	0	2	Crack Multiple	  
Surface Damage Reinforcement Visible	Point	195.2	Structural	0	5-9	4	0	0	2	Surface Damage Reinforcement Visible	  

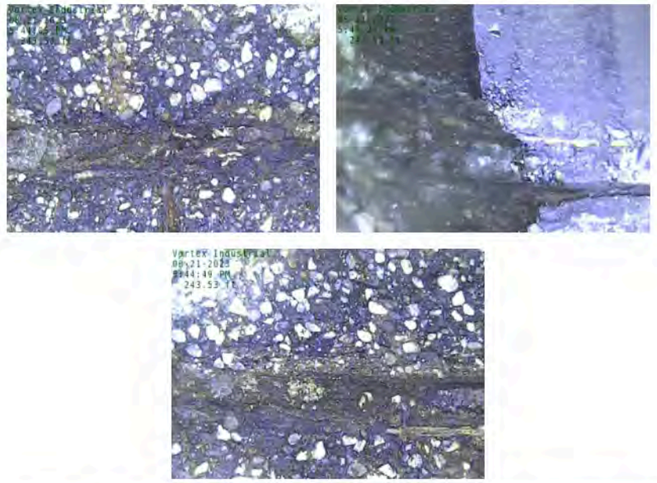
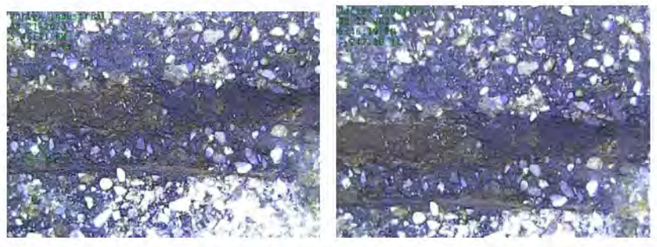
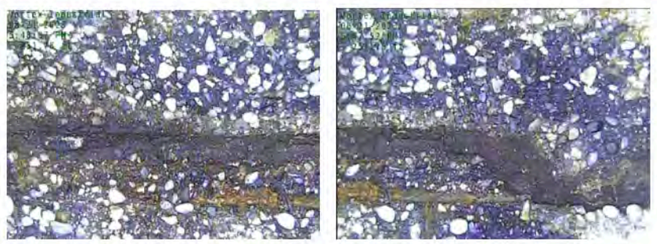
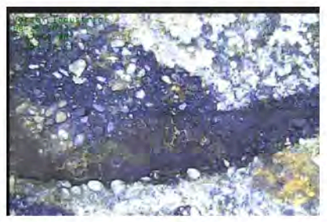
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	203	Structural	0	7	2	0	0	2	Crack Longitudinal	
Fracture Circumferential	Point	207	Structural	0	5-6	2	0	0	2	Fracture Circumferential	
Surface Damage Reinforcement Visible	Point	215.3	Structural	0	5-10	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	219.4	Structural	0	1-4	4	0	0	2	Surface Damage Reinforcement Visible	
Surface Damage Reinforcement Visible	Point	223.5	Structural	0	6-10	4	0	0	2	Surface Damage Reinforcement Visible	

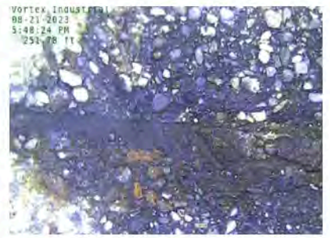
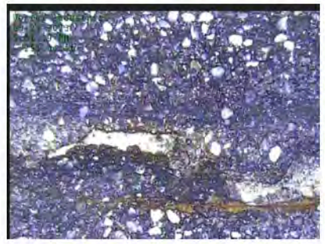
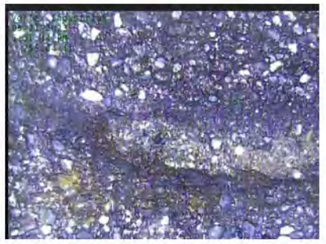
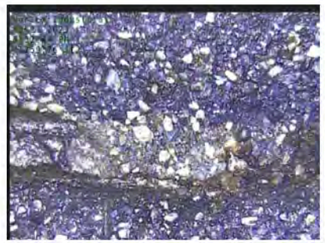
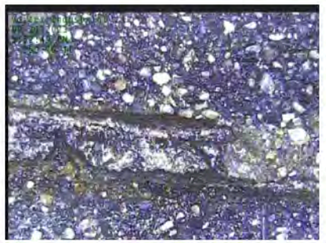
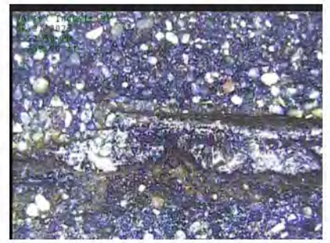
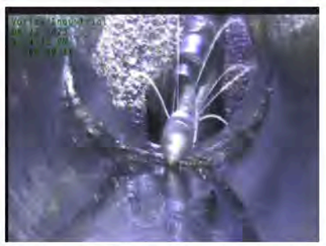
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

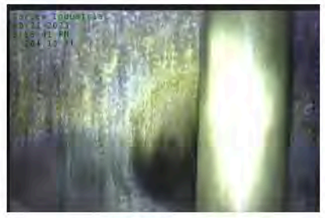
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

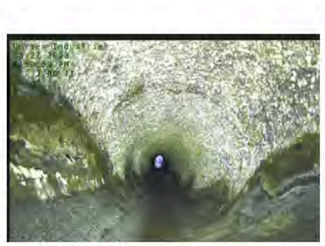
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	265.3	Constructional	0		0	0	0	0	5-D	 

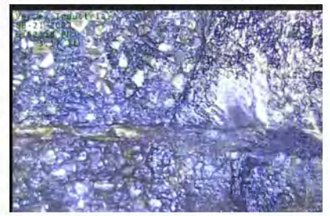
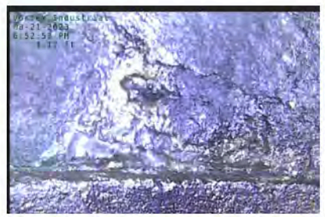
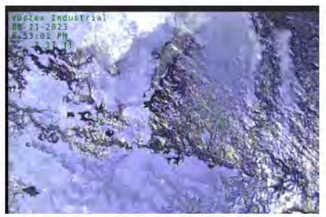
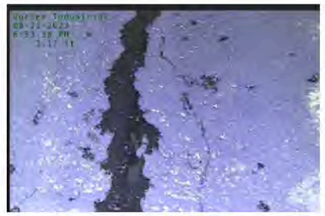
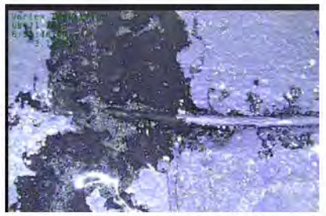
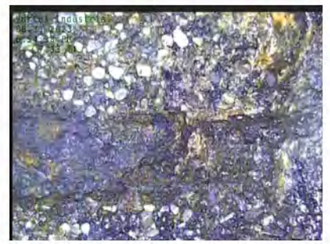
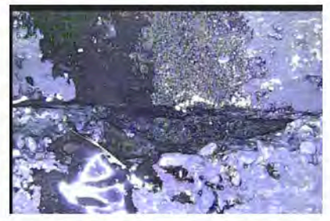
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

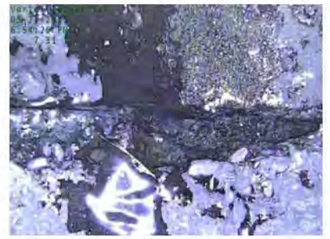
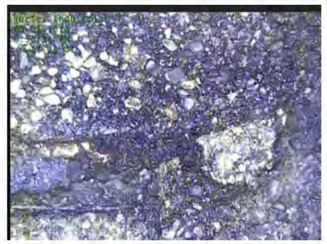
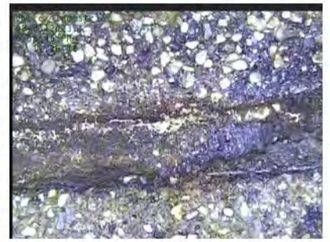
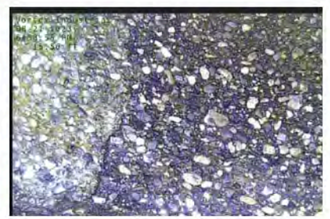
Setup ID	2023-15	Inspection Date	Aug 21, 2023	Inspected Length (ft)	89.5	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	31
Segment ID	5-D: 5-E	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	2	0	5-D	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 89.5	Structural	0	9-4	2	0	0	2	Surface Damage Aggregate Visible	   

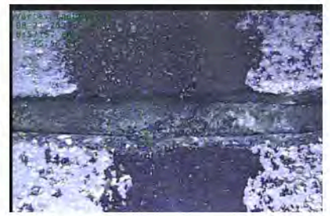
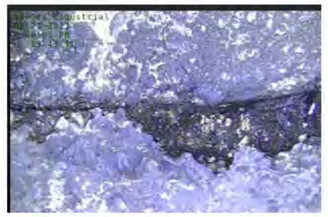
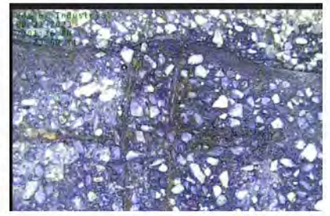
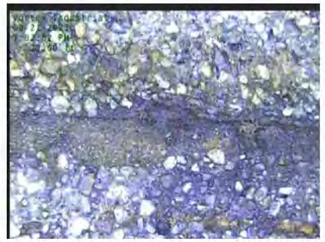
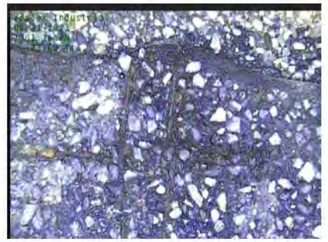
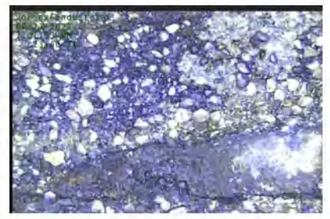
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
Crack Longitudinal	Point	3.2	Structural	0	6	2	0	0	1	Crack Longitudinal	 
Surface Damage Reinforcement Visible	Point	7.3	Structural	0	2-4	4	0	0	2	Surface Damage Reinforcement Visible	  
Fracture Circumferential	Point	7.3	Structural	0	5-6	2	0	0	2	Fracture Circumferential	

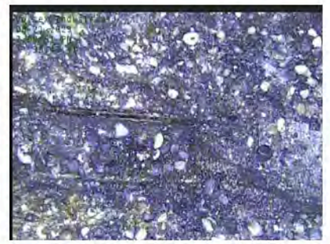
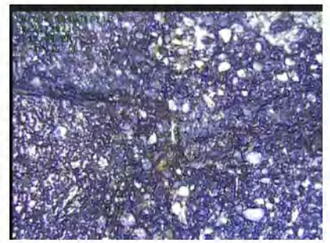
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  
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	 
Crack Longitudinal	Point	15.6	Structural	0	2	2	0	0	2	Crack Longitudinal	

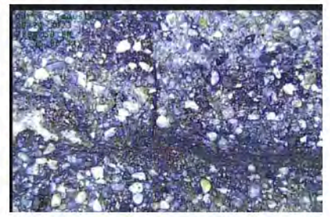
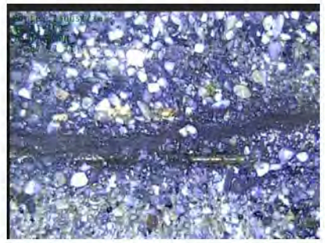
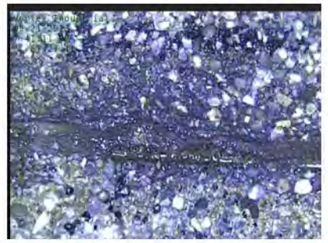
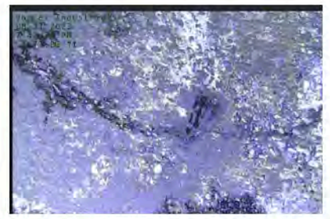
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
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	

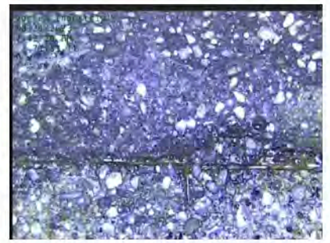
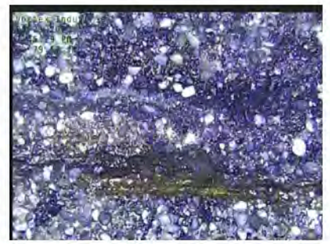
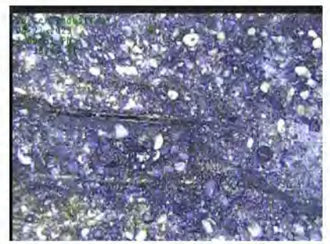
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

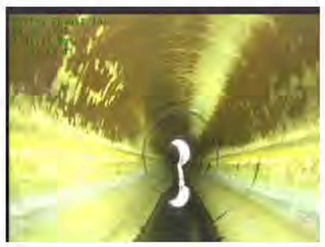
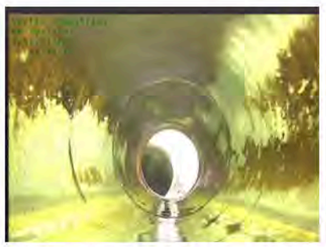
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

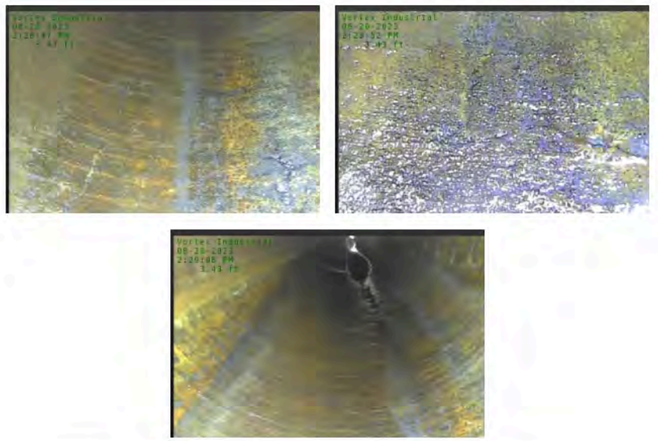
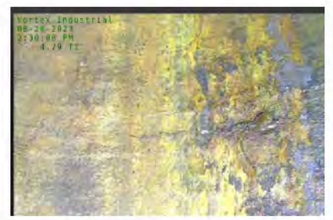
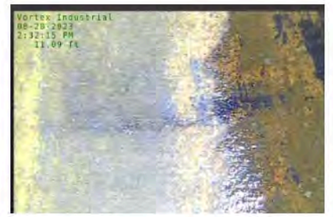
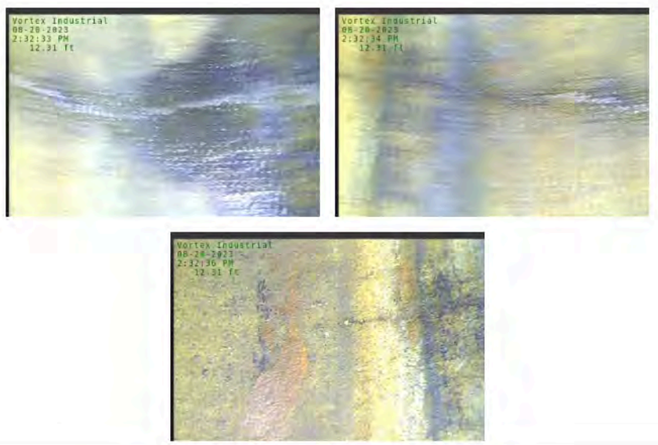
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

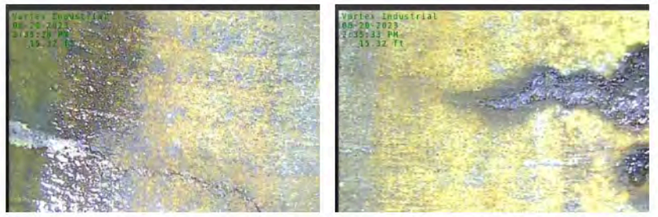
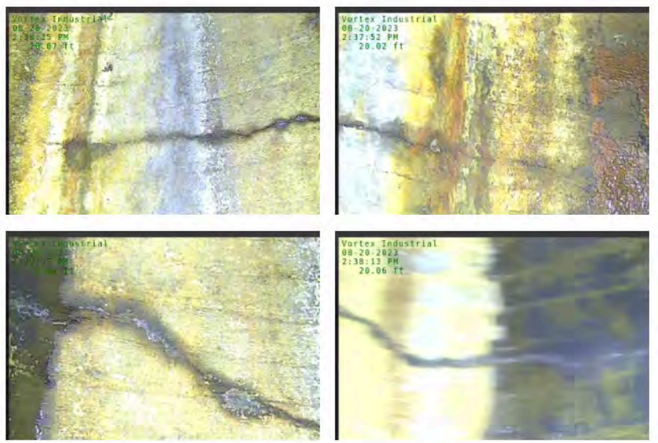
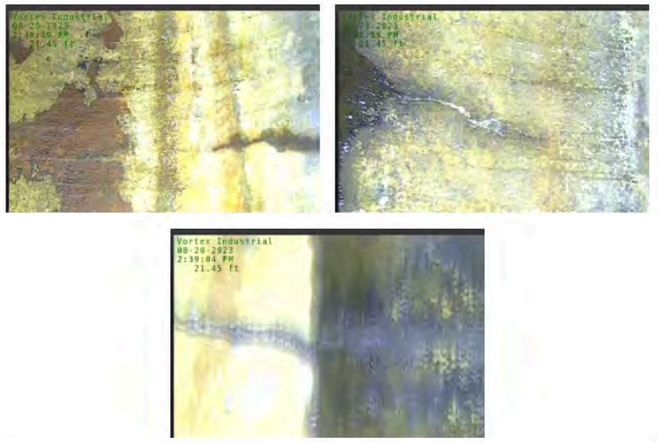
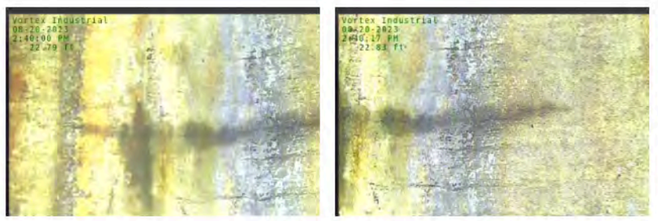
Setup ID	2023-16	Inspection Date	Aug 20, 2023	Inspected Length (ft)	55.2	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	16
Segment ID	B-02:5-P	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	2	0	B-02	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	0 - 55.2	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	 

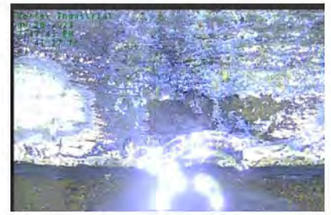
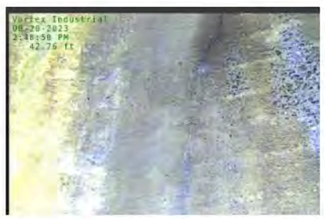
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

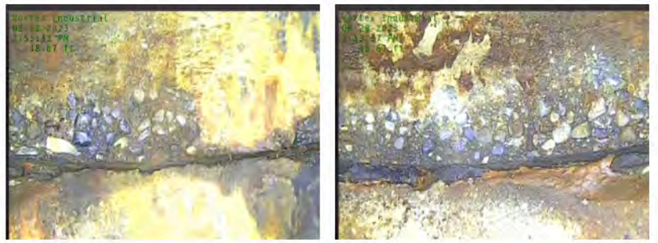
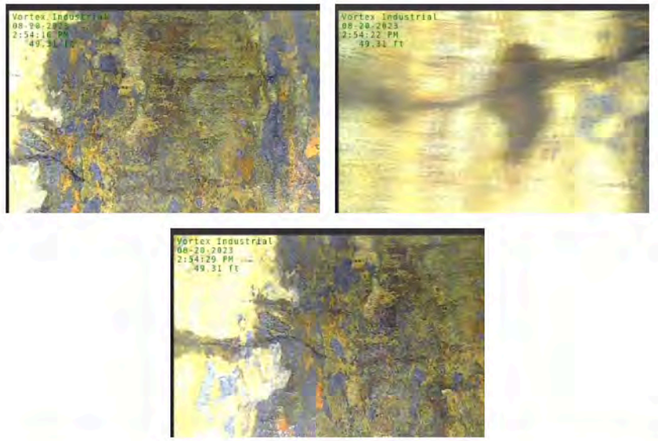
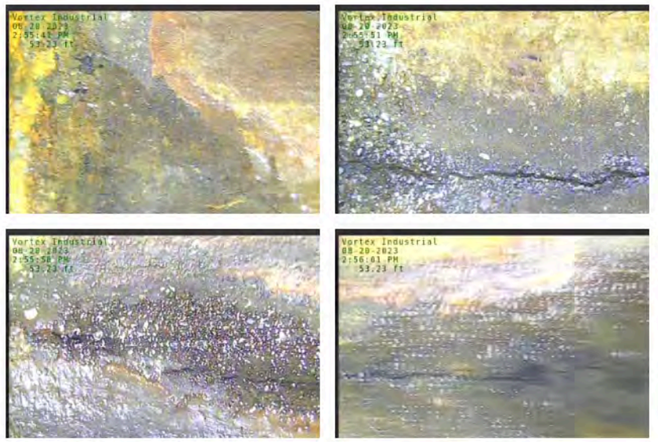
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Circumferential	Point	22.8	Structural	0	8-9	1	0	0	2	Crack Circumferential	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
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	  

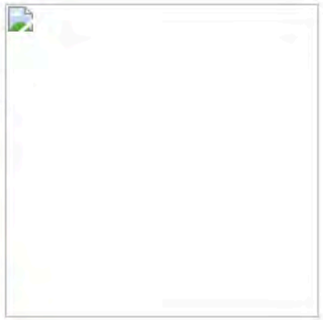
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Aggregate Missing	Point	48.7	Structural	0	12-12	4	0	0	2	Surface Damage Aggregate Missing	
Crack Circumferential	Point	49.3	Structural	0	6-8	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	53.2	Structural	0	8-5	1	0	0	2	Crack Circumferential	
Manhole	Point	55.2	Constructional	0		0	0	0	0	5-P	

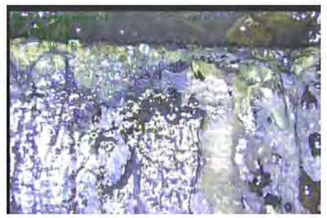
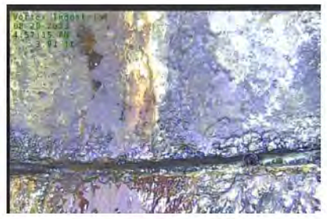
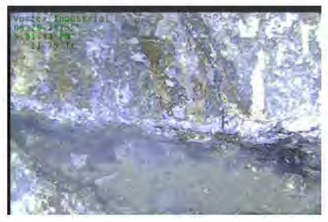
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

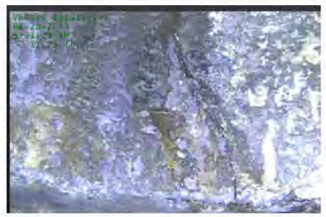
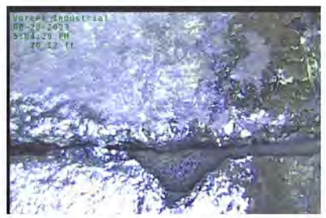
Setup ID	2023-17	Inspection Date	Aug 20, 2023	Inspected Length (ft)	133.2	Defects Rated ≥3	0	Peak Structural Rating	4	Total PR Defects	55
Segment ID	23-4: 5-B	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Aggregate Visible	Continuous	0 - 133.2	Structural	0	12-12	2	0	0	1	Surface Aggregate Visible	     
Manhole	Point	0	Constructional	0		0	0	0	0	23-4	

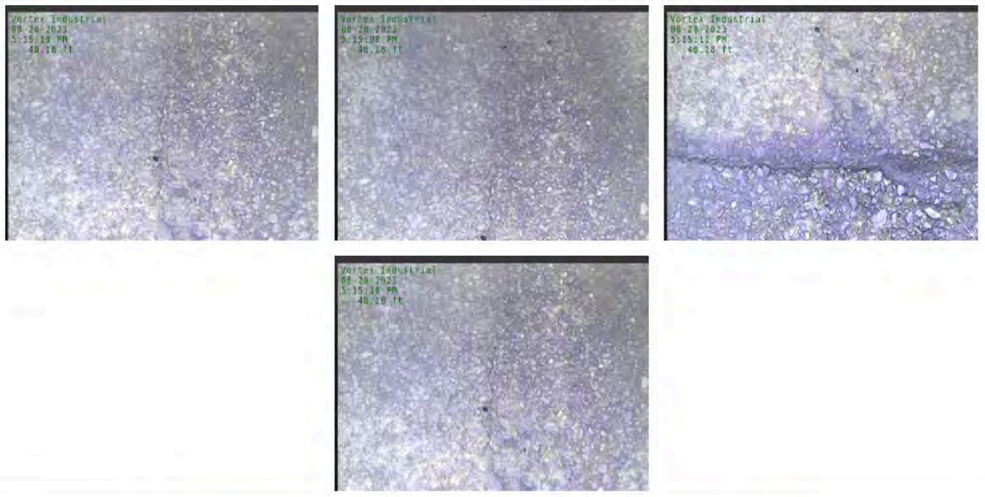
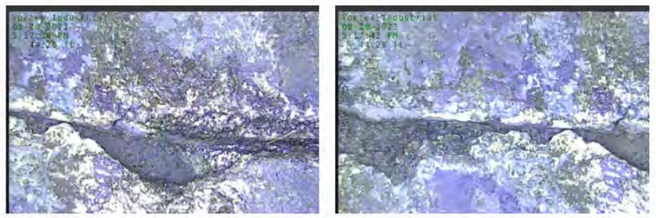
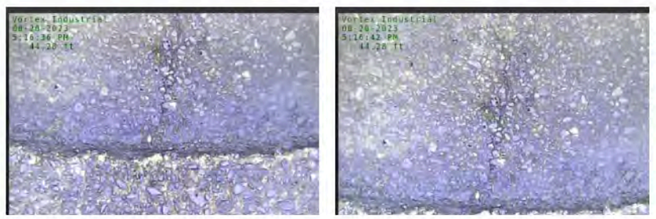
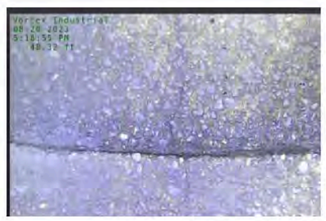
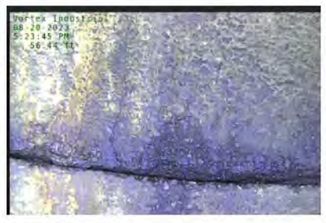
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Longitudinal	Point	7.9	Structural	0	11	2	0	0	1	Crack Longitudinal	 
Fracture Circumferential	Point	11.8	Structural	0	5-6	2	0	0	2	Fracture Circumferential	 

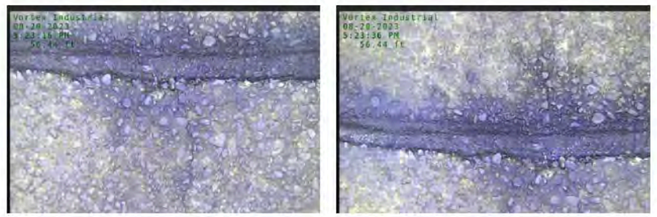
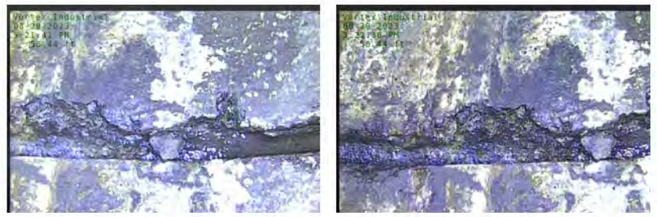
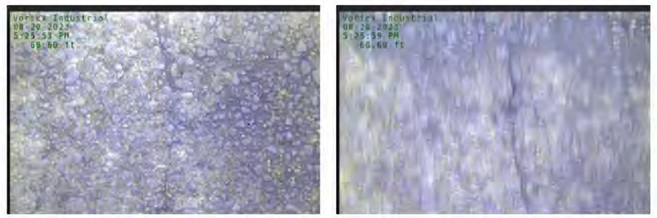
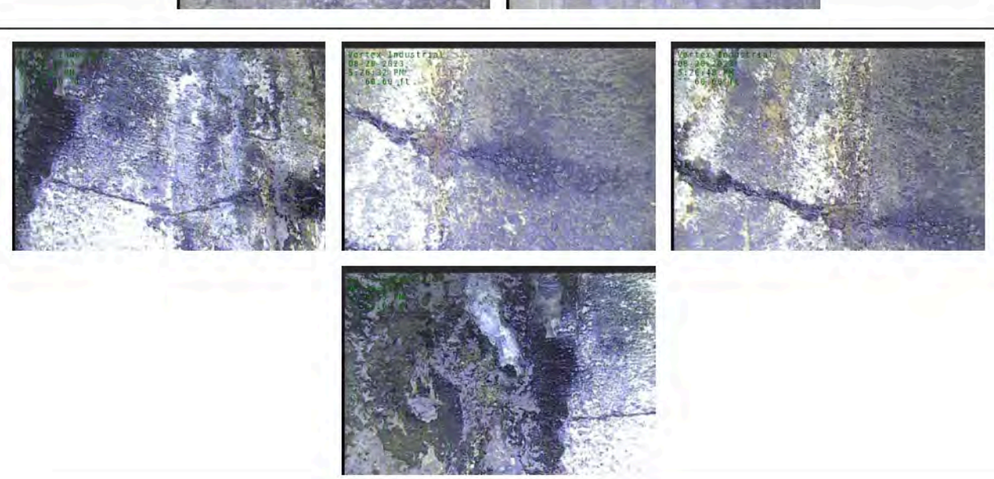
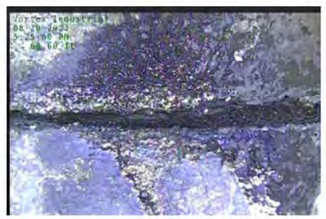
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	11.8	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	15.5	Structural	0	5	2	0	0	2	Crack Longitudinal	
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	
Crack Longitudinal	Point	28.1	Structural	0	6	2	0	0	2	Crack Longitudinal	

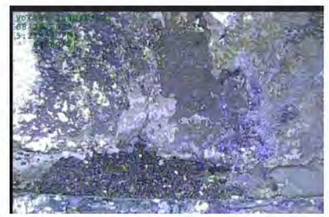
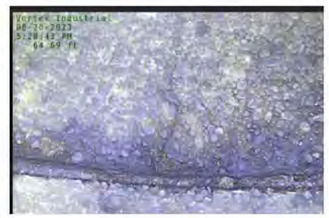
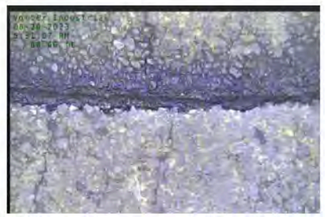
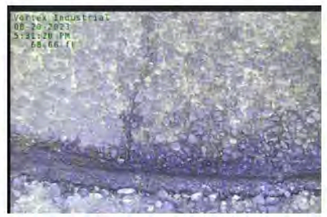
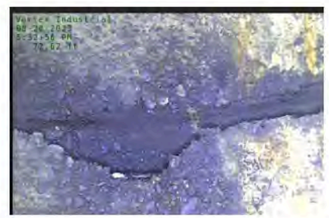
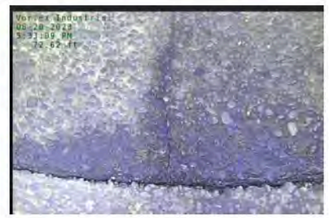
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	40.2	Structural	0	8	2	0	0	1	Crack Longitudinal	
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	
Crack Longitudinal	Point	48.3	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	56.4	Structural	0	4	2	0	0	1	Crack Longitudinal	

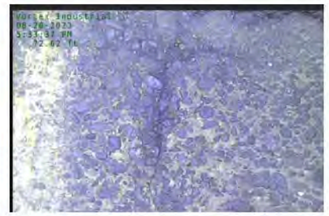
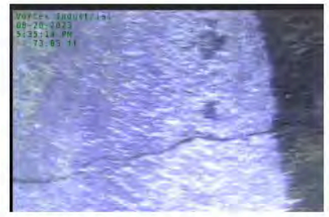
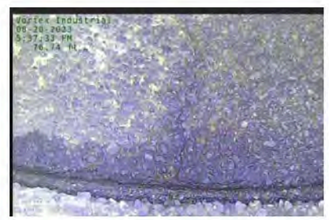
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	56.4	Structural	0	2	2	0	0	1	Crack Longitudinal	
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	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Multiple	Point	68.7	Structural	0	12-1	3	0	0	1	Crack Multiple	 
Fracture Circumferential	Point	72.6	Structural	0	8-9	2	0	0	2	Fracture Circumferential	
Crack Longitudinal	Point	72.6	Structural	0	12	2	0	0	2	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

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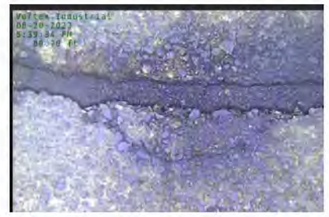
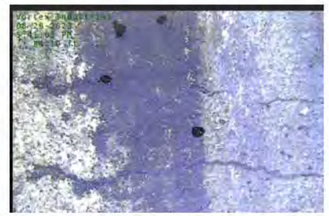
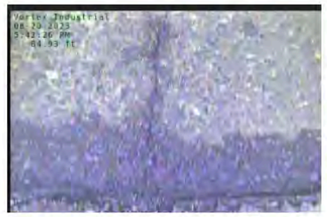
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	80.7	Structural	0	1-2	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	84.2	Structural	0	7-9	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	84.9	Structural	0	6	2	0	0	1	Crack Longitudinal	 
Crack Longitudinal	Point	84.9	Structural	0	12	2	0	0	1	Crack Longitudinal	 
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	

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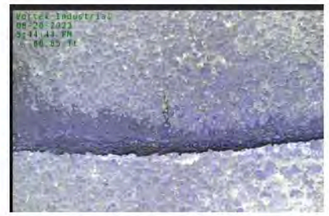
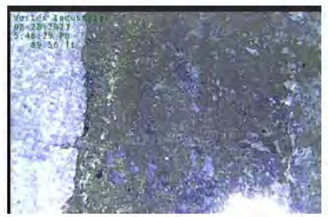
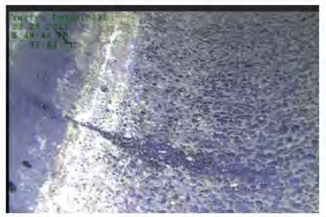
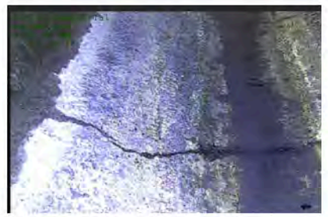
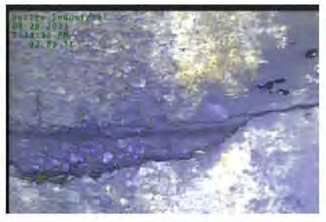
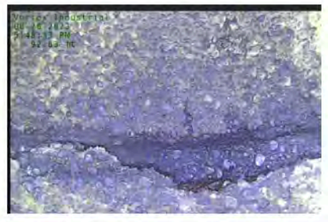
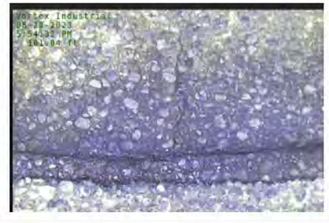
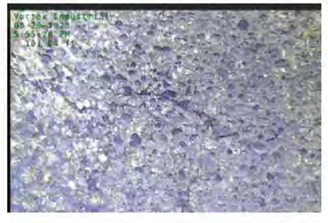
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	88.5	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	89.6	Structural	0	6-10	1	0	0	2	Crack Circumferential	 
Fracture Circumferential	Point	92.8	Structural	0	3-5	1	0	0	2	Fracture Circumferential	 
Fracture Circumferential	Point	92.8	Structural	0	9-10	2	0	0	2	Fracture Circumferential	 
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	 

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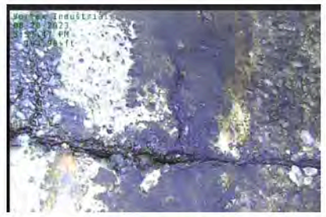
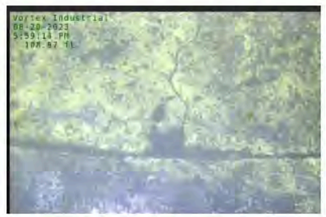
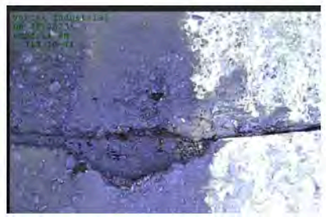
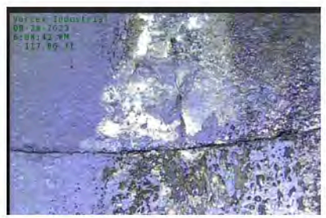
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	105	Structural	0	4	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	109	Structural	0	6	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	113.1	Structural	0	6	2	0	0	2	Crack Longitudinal	
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	
Crack Longitudinal	Point	117	Structural	0	5	2	0	0	1	Crack Longitudinal	 

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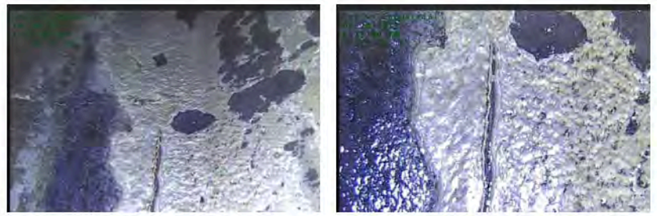
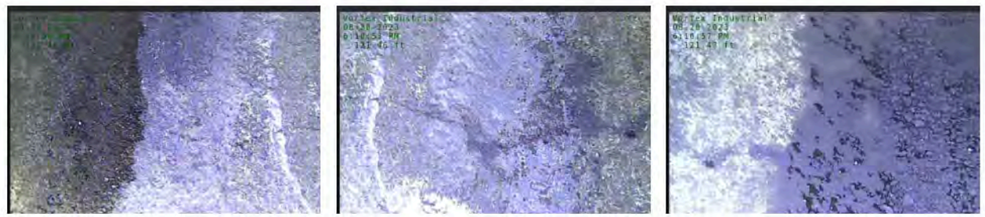
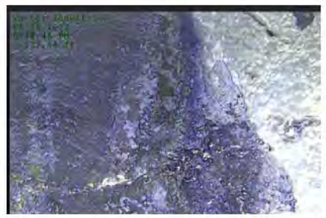
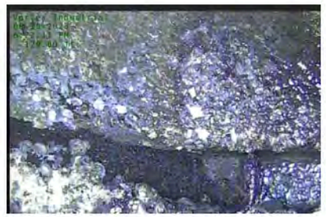
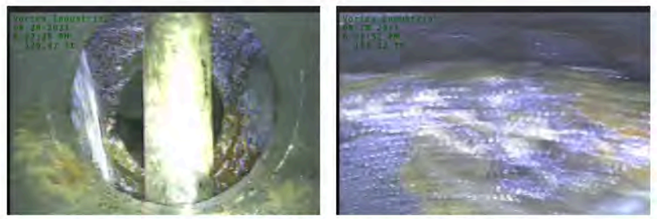
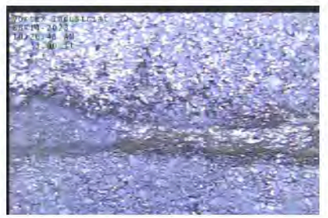
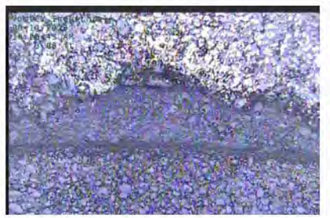
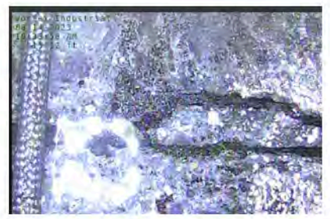
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	120.4	Structural	0	7	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	121.5	Structural	0	4-5	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	127.4	Structural	0	7	2	0	0	2	Crack 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	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-18	Inspection Date	Aug 14, 2023	Inspected Length (ft)	38.7	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	6
Segment ID	23-1:5-A	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	23-1	
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 Circumferential	 
Crack Circumferential	Point	15.1	Structural	0	6-7	1	0	0	2	Crack Circumferential	

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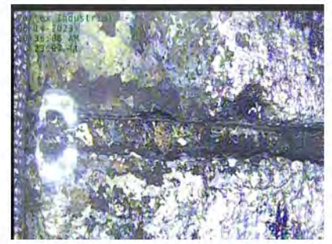
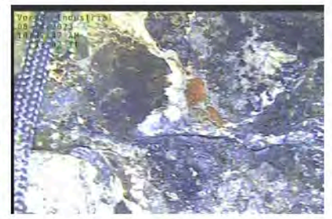
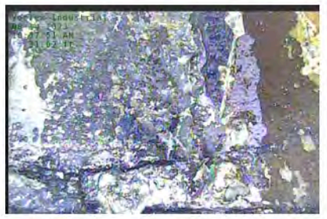
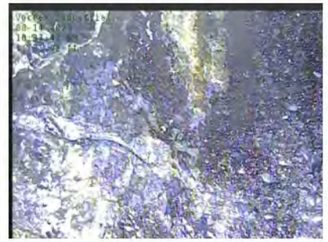
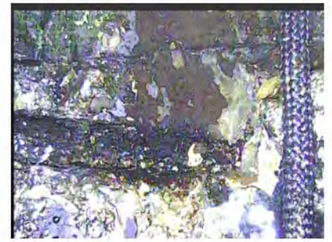
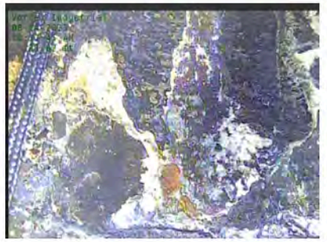
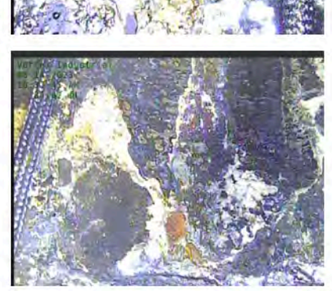
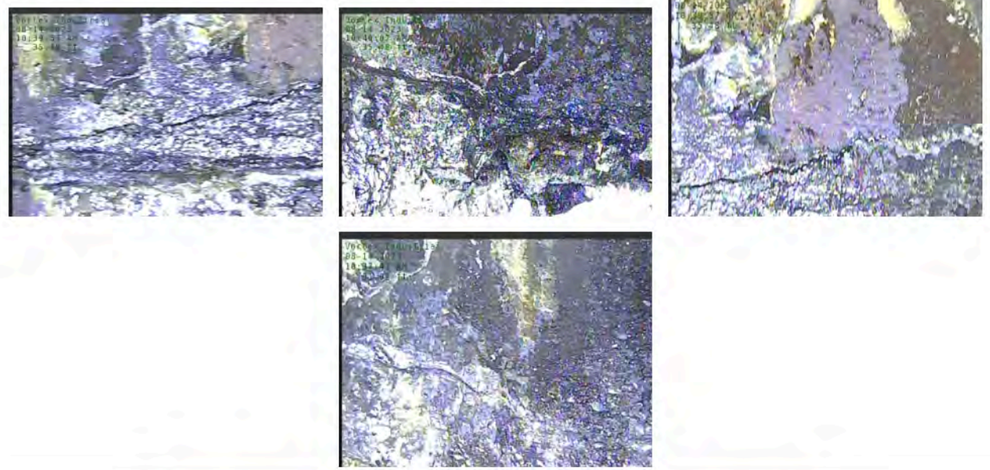
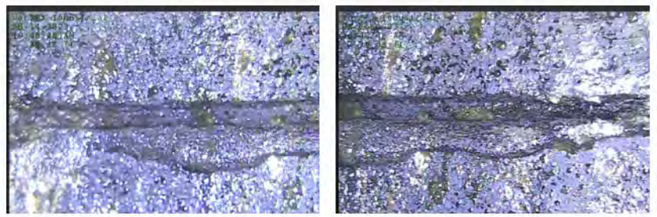
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	23.1	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	31	Structural	0	6-8	1	0	0	2	Crack Circumferential	      

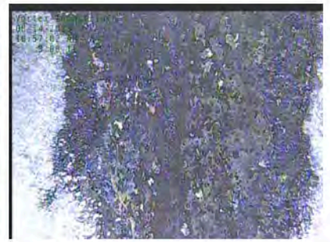
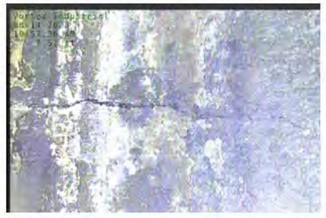
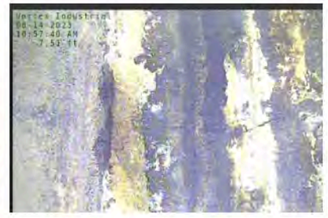
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	35.5	Structural	0	4-6	3	0	0	2	Crack Multiple	
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	

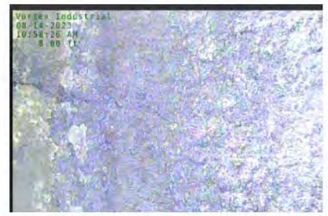
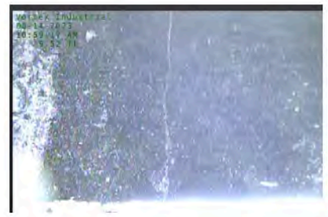
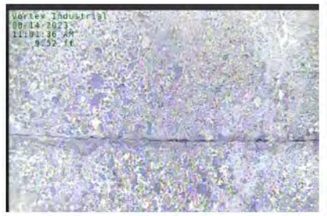
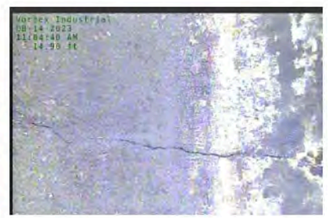
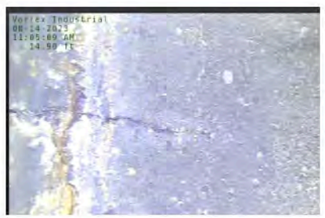
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

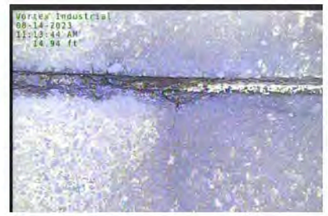
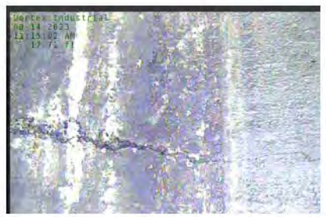
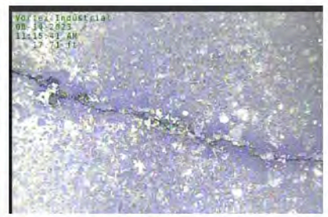
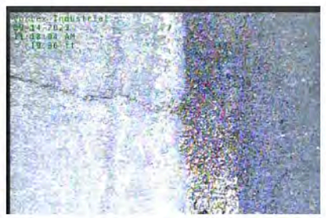
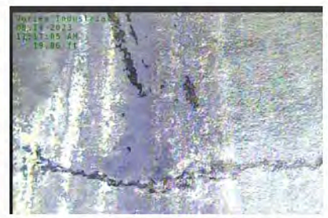
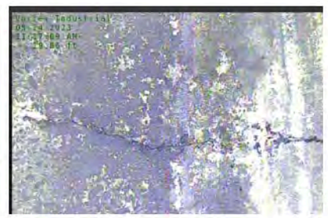
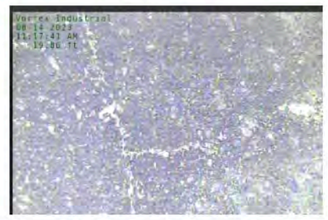
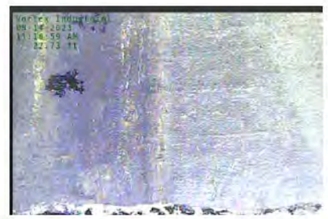
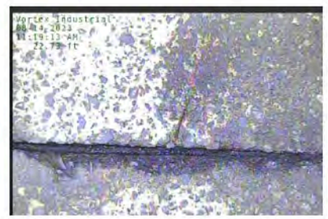
Setup ID	2023-19	Inspection Date	Aug 14, 2023	Inspected Length (ft)	26.6	Defects Rated ≥3	0	Peak Structural Rating	2	Total PR Defects	13
Segment ID	23-1:23-2	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Miscellaneous	0		0	0	0	0	23-1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Crack Longitudinal	Point	5.1	Structural	0	6	2	0	0	1	Crack Longitudinal	  
Crack Circumferential	Point	7.5	Structural	0	7-9	1	0	0	2	Crack Circumferential	  

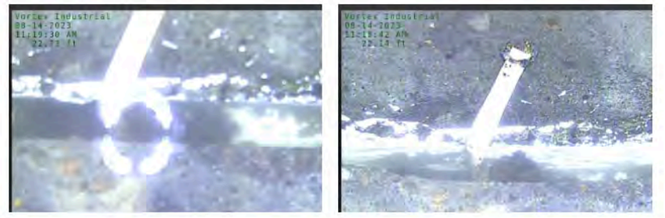
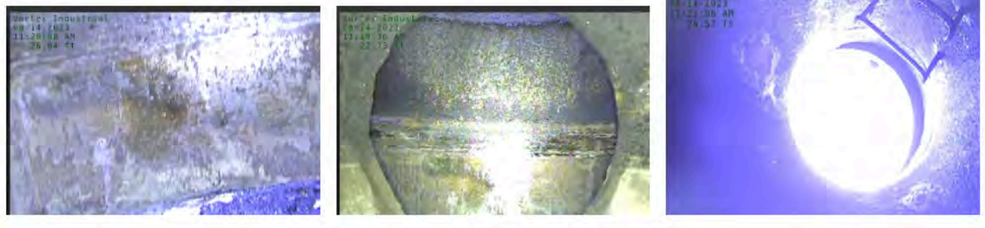
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	8	Structural	0	8-9	1	0	0	1	Crack Circumferential	
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	 
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	    

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	14.9	Structural	0	11	2	0	0	2	Crack Longitudinal	
Crack Circumferential	Point	17.7	Structural	0	6-5	1	0	0	2	Crack Circumferential	  
Crack Circumferential	Point	19.9	Structural	0	7-11	1	0	0	2	Crack Circumferential	  
Crack Longitudinal	Point	19.9	Structural	0	11	2	0	0	1	Crack Longitudinal	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous General Photograph	Point	22.7	Miscellaneous	0	6	0	0	0	0	Object in Joint	
Manhole	Point	26.6	Constructional	0		0	0	0	0	23-2	

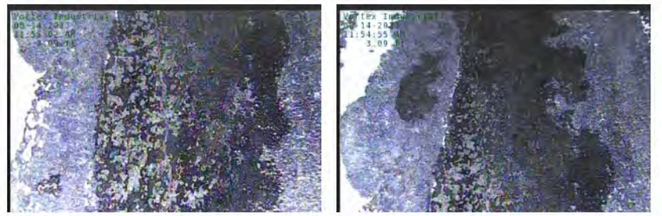
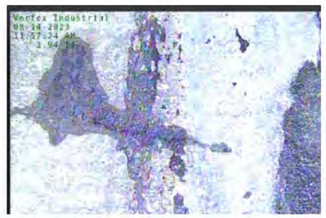
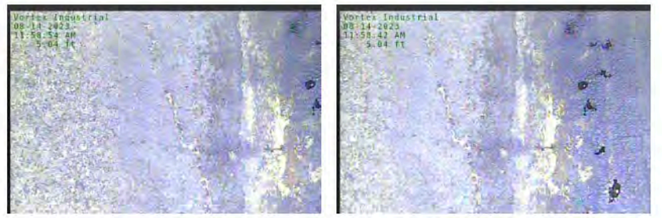
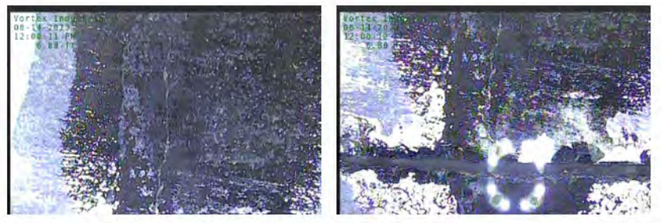
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

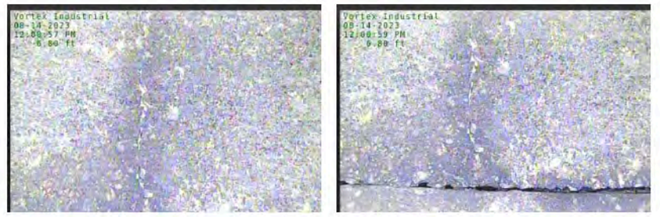
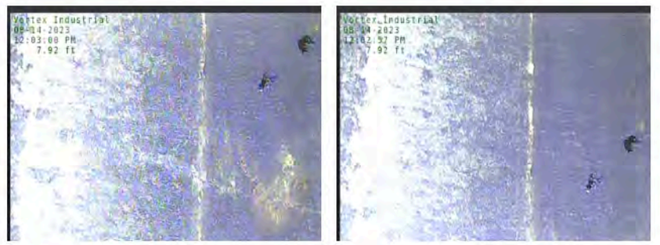
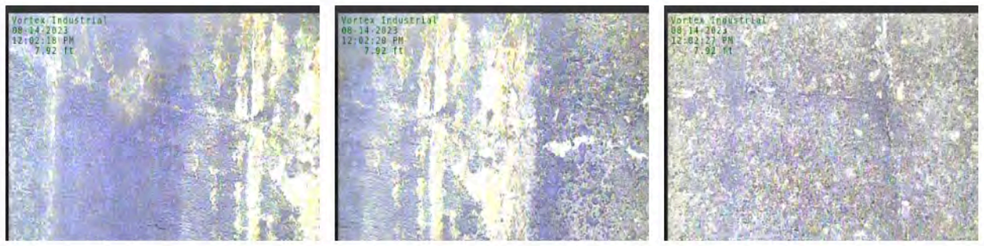
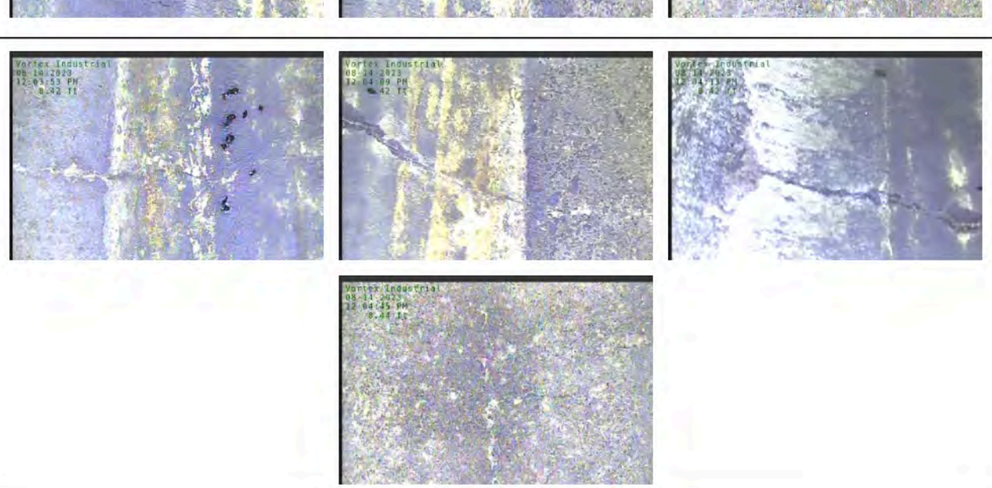
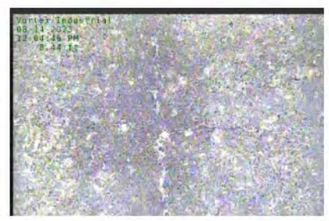
Setup ID	2023-20	Inspection Date	Aug 14, 2023	Inspected Length (ft)	52.6	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	25
Segment ID	23-2:23-3	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	23-2	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 52.6	Structural	0	10-2	2	0	0	1	Surface Damage Aggregate Visible	    

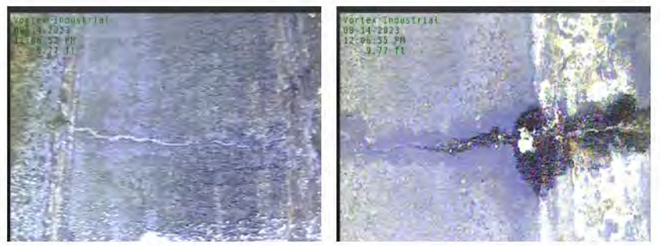
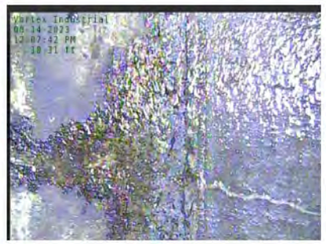
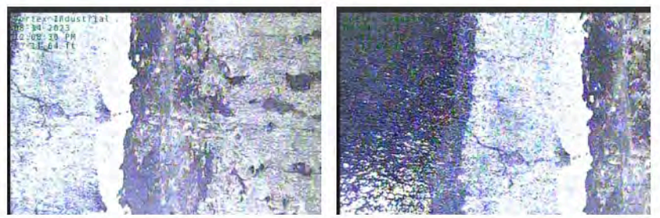
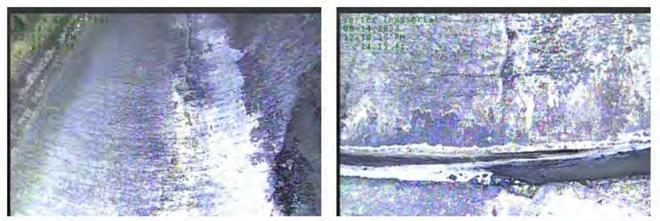
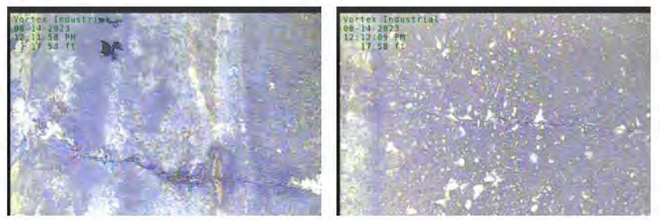
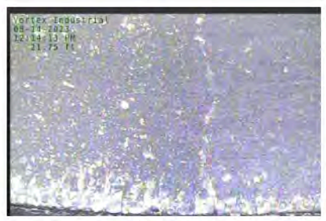
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	
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	

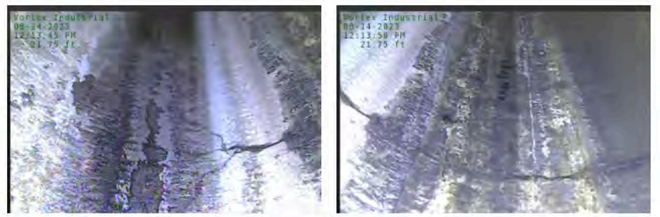
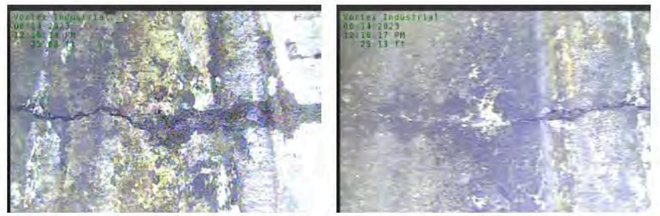
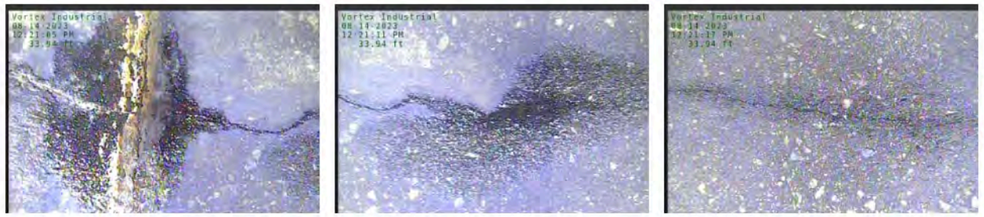
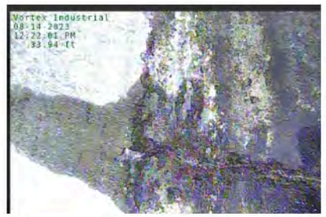
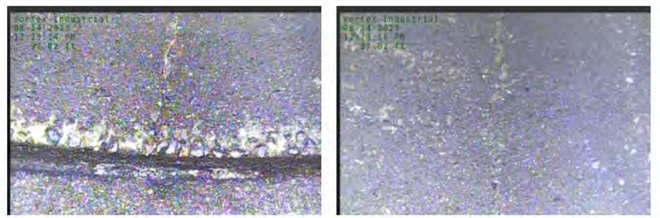
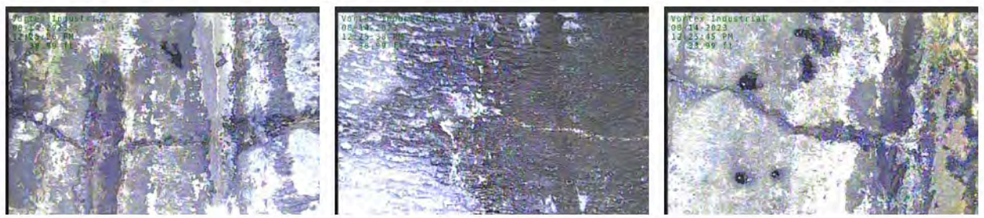
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	6.8	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	7.9	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	7.9	Structural	0	1-5	3	0	0	2	Crack Multiple	
Crack Circumferential	Point	8.4	Structural	0	10-5	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	8.5	Structural	0	1	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	9.8	Structural	0	5-8	1	0	0	2	Crack Circumferential	
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	
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	
Crack Longitudinal	Point	21.7	Structural	0	2	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	22	Structural	0	7-6	3	0	0	2	Crack Multiple	
Crack Circumferential	Point	25.1	Structural	0	6-10	1	0	0	2	Crack Circumferential	
Crack Circumferential	Point	33.9	Structural	0	12-5	1	0	0	2	Crack Circumferential	
Crack Longitudinal	Point	33.9	Structural	0	4	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	37	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	39	Structural	0	3-9	1	0	0	2	Crack Circumferential	

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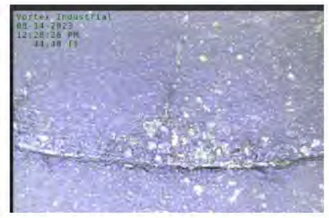
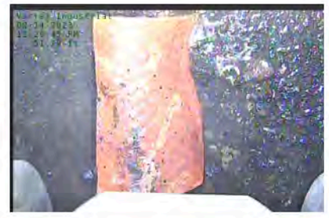
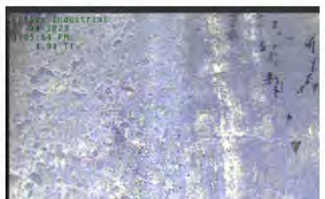
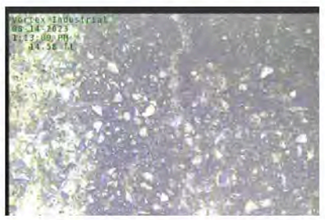
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	40.5	Miscellaneous	10		0	0	0	0	Miscellaneous Water Level	
Crack Longitudinal	Point	44.4	Structural	0	12	2	0	0	1	Crack Longitudinal	
Miscellaneous General Photograph	Point	51.7	Miscellaneous	0	6	0	0	0	0	Miscellaneous General Photograph	
Manhole	Point	52.6	Constructional	0		0	0	0	0	23-3	 

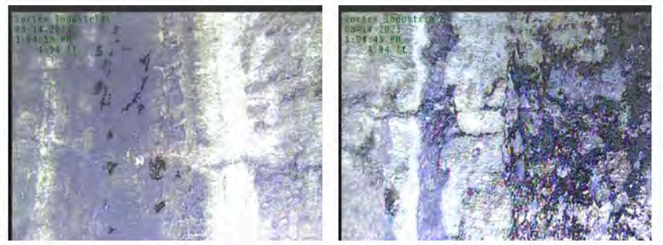
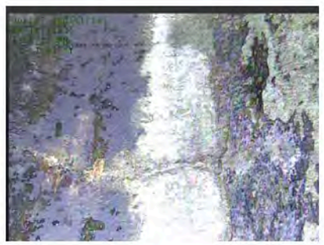
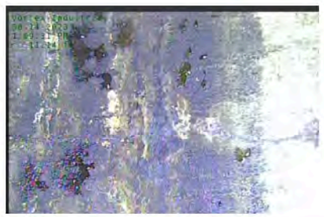
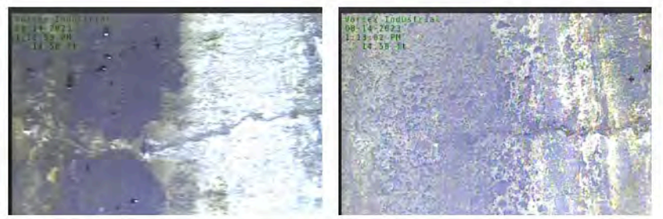
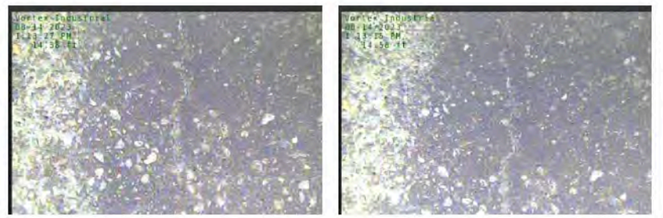
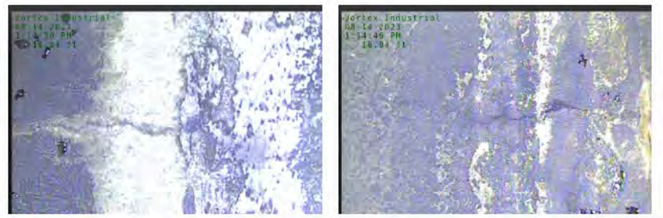
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

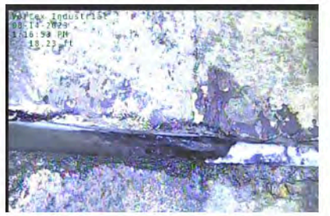
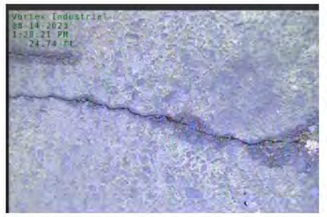
Setup ID	2023-21	Inspection Date	Aug 14, 2023	Inspected Length (ft)	26.1	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	9
Segment ID	23-3:23-4	Primary Pipe Material	RCP	Pipe Diameter (in)	18	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 26.1	Structural	0	12-12	1	0	0	1	Surface Damage Aggregate Visible	    
Manhole	Point	0	Constructional	0		0	0	0	0	23-3	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Longitudinal	Point	14.6	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	16	Structural	0	6-8	3	0	0	2	Crack Multiple	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	18.2	Structural	0	5	2	0	0	1	Crack Longitudinal	 
Crack Multiple	Point	23.7	Structural	0	10-6	3	0	0	2	Crack Multiple	   
Manhole	Point	26.1	Structural	0		0	0	0	0	23-4	 

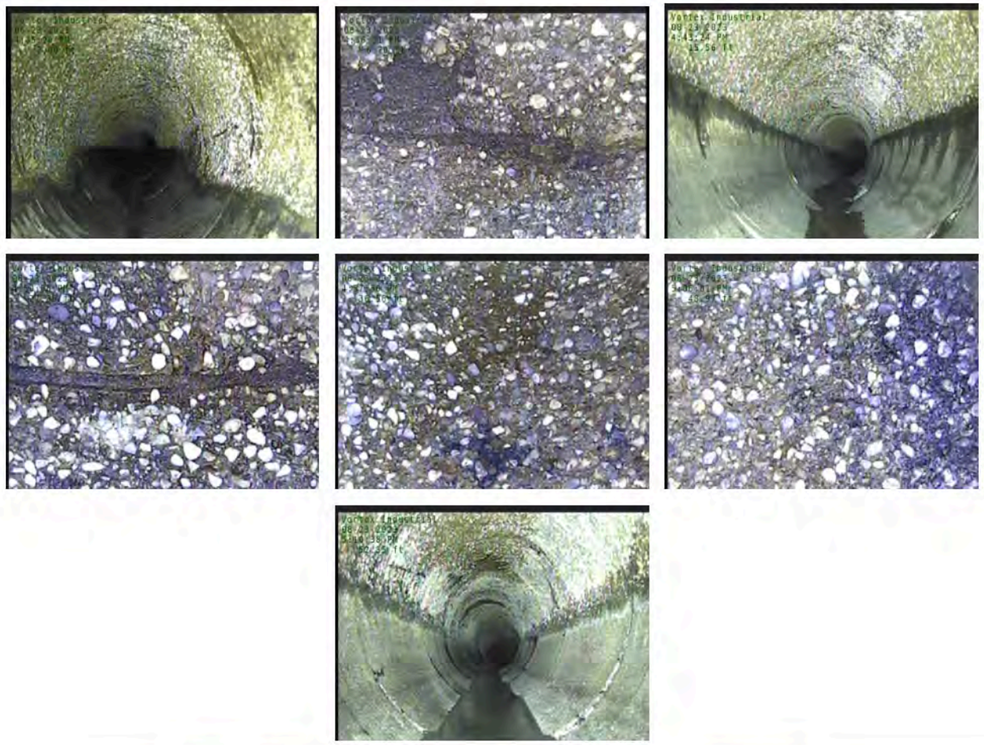
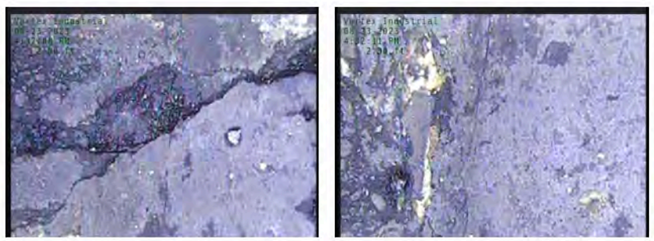
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

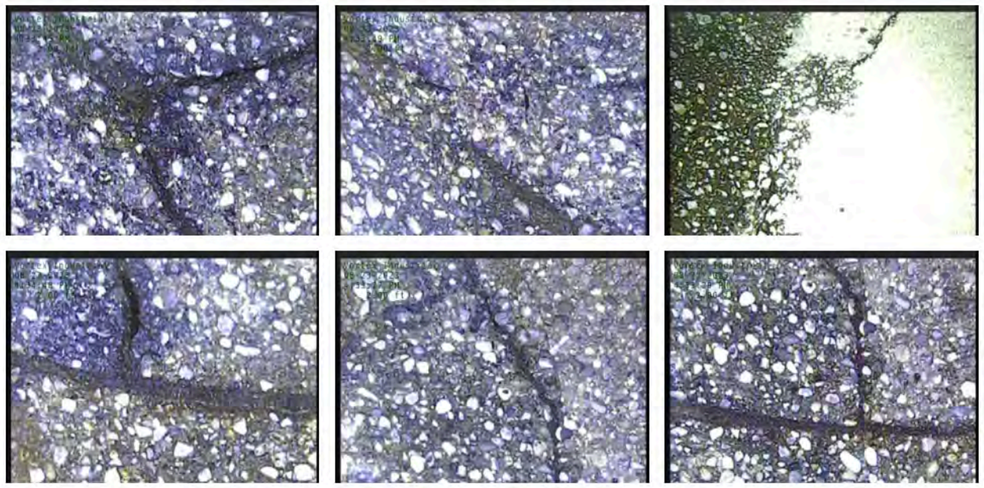
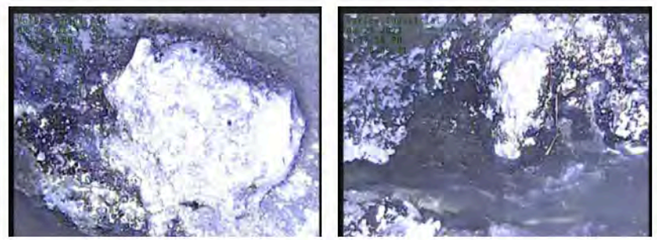
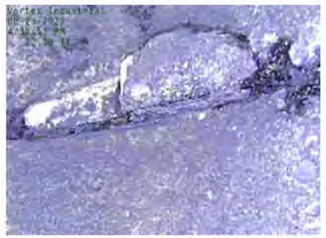
Setup ID	2023-22	Inspection Date	Aug 23, 2023	Inspected Length (ft)	134.5	Defects Rated ≥3	2	Peak Structural Rating	4	Total PR Defects	41
Segment ID	5-F:D-12	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Manhole	Point	0	Constructional	0		0	0	0	0	5-F	
Surface Damage Aggregate Visible	Point	0	Structural	0	6	2	0	0	1	Surface Damage Aggregate Visible	

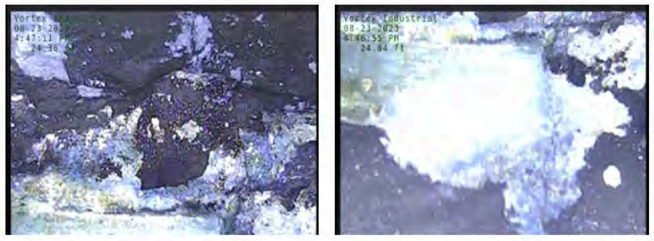
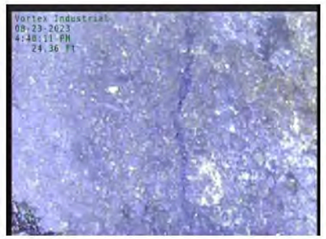
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

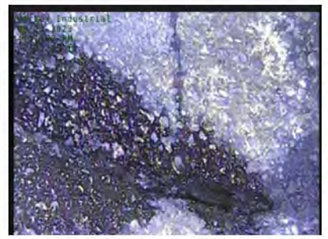
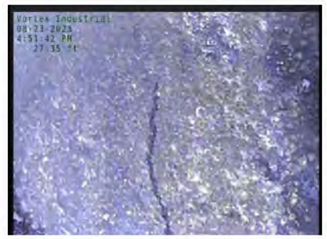
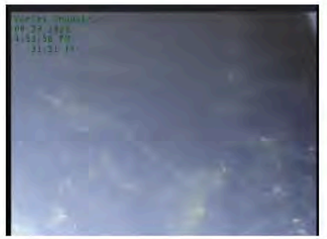
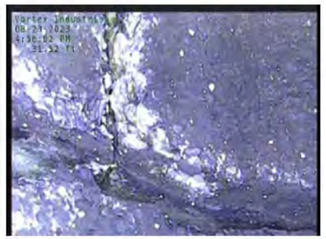
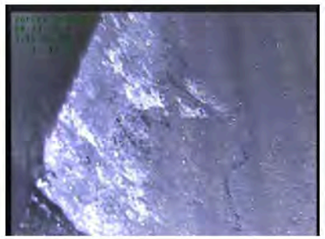
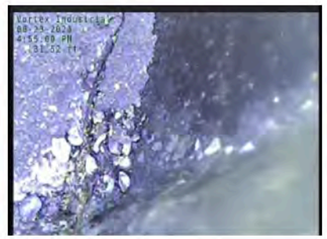
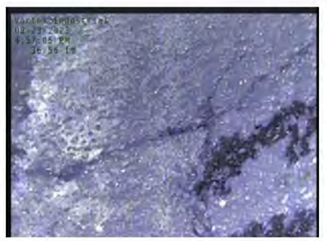
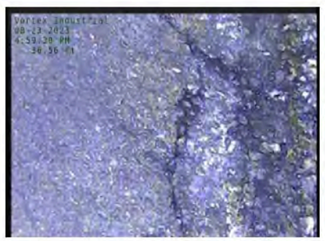
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Fracture Multiple	Point	12.4	Structural	0	7-8	0	0	0	2	Fracture Multiple	

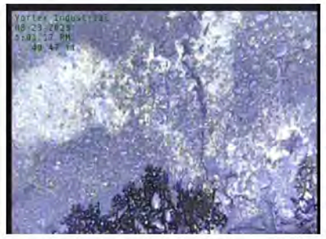
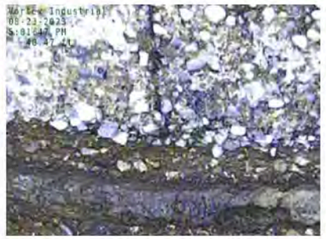
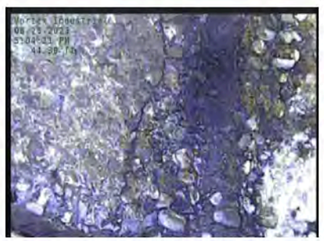
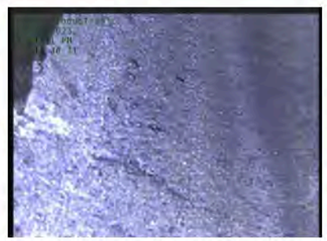
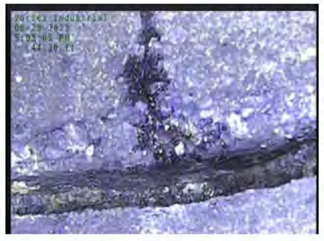
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	15.5	Structural	0	6-7	3	0	0	2	Crack Multiple	
Crack Spiral	Point	21.4	Structural	0	7-8	2	0	0	1	Crack Spiral	
Crack Multiple	Point	24.3	Structural	0	6-7	2	0	0	2	Crack Multiple	
Crack Longitudinal	Point	24.3	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	25.5	Structural	0	7-8	1	0	0	1	Crack Circumferential	

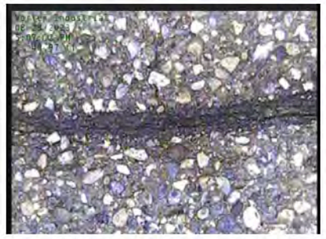
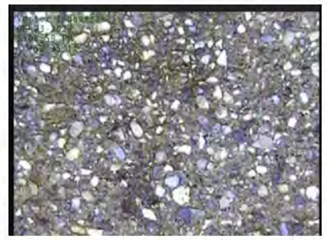
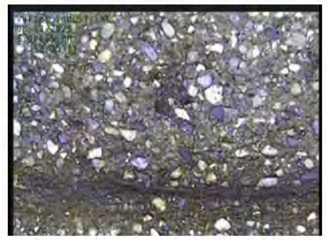
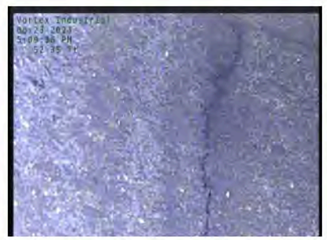
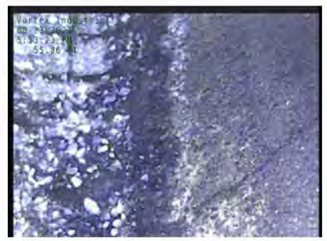
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	27.3	Structural	0	8-9	2	0	0	2	Crack Spiral	
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	  
Crack Longitudinal	Point	31.5	Structural	0	7	2	0	0	2	Crack Longitudinal	 
Crack Multiple	Point	36.5	Structural	0	3-9	3	0	0	2	Crack Multiple	  

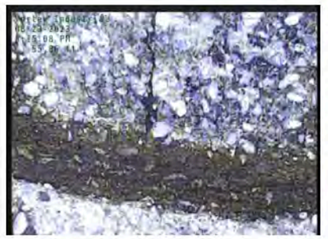
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	40.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	40.4	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	40.5	Structural	0	1	2	0	0	2	Crack Longitudinal	
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	 

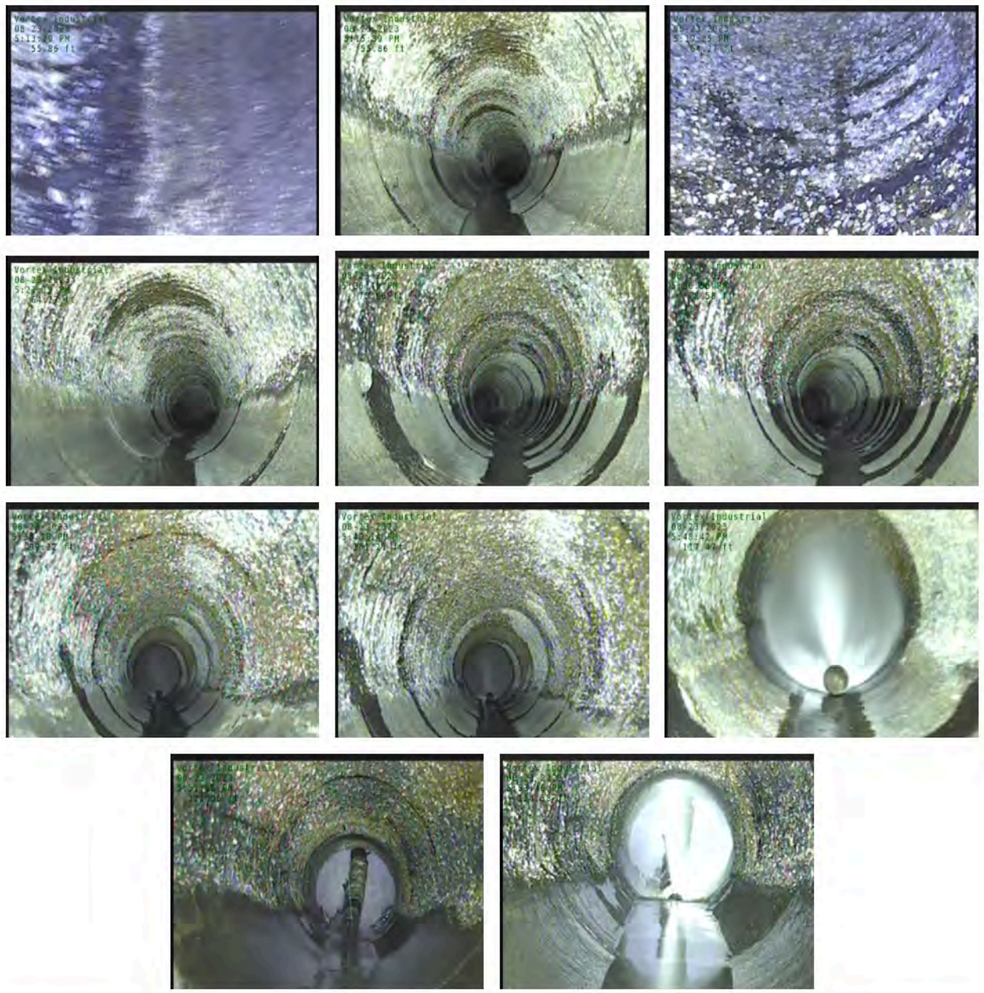
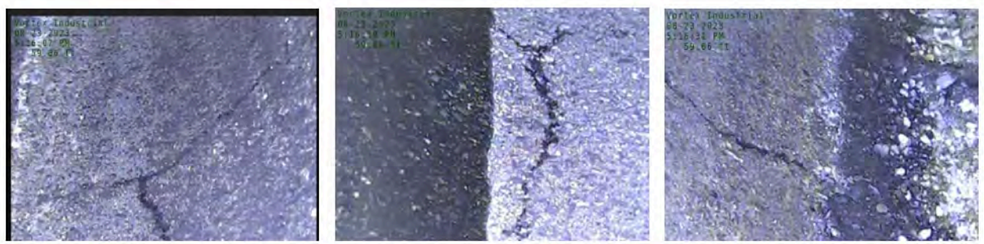
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	48.9	Structural	0	7-8	1	0	0	1	Crack Circumferential	
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	 
Crack Multiple	Point	55.8	Structural	0	7-8	3	0	0	2	Crack Multiple	 

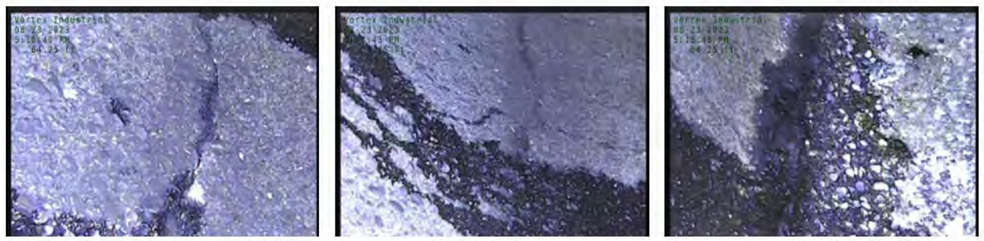
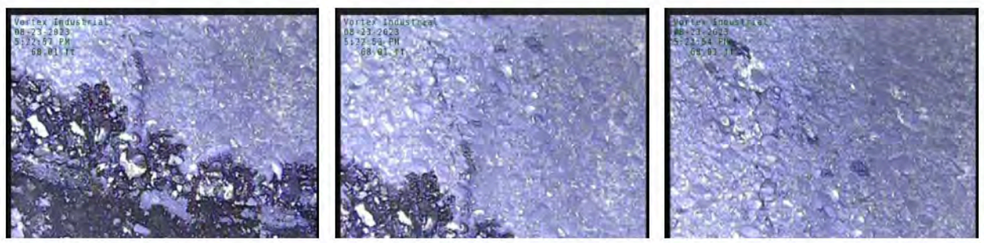
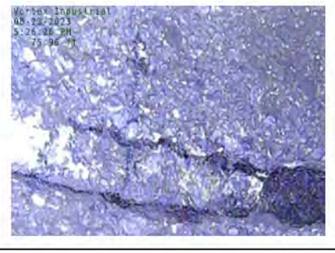
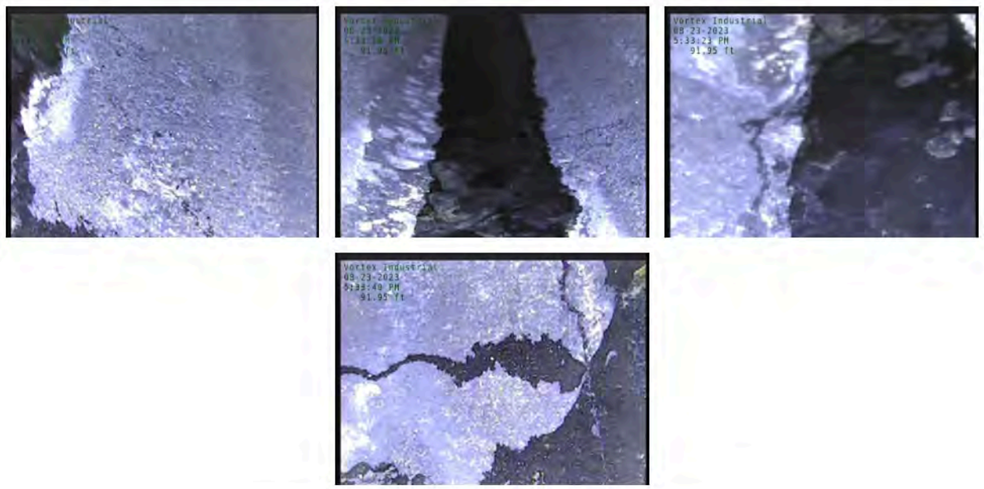
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

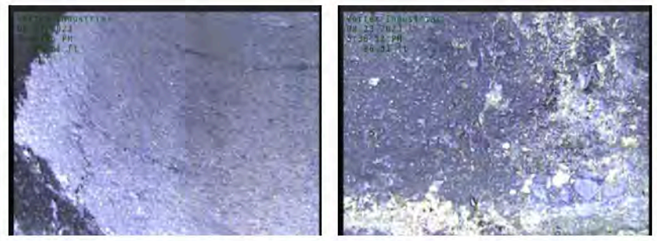
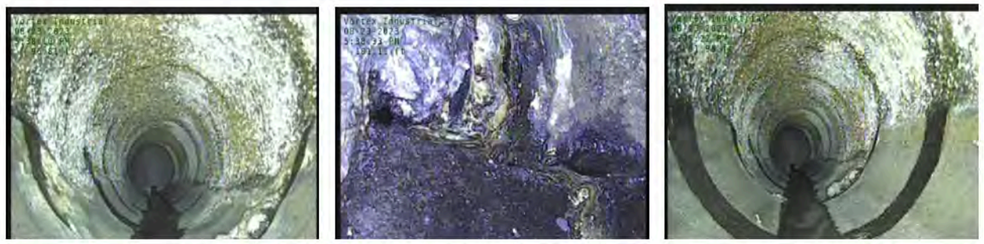
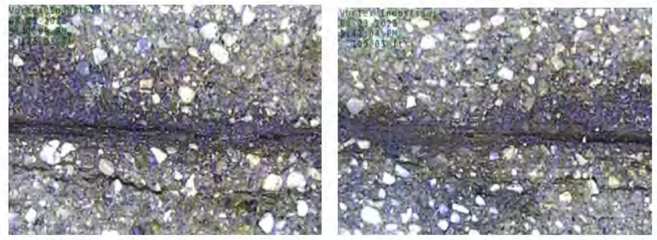
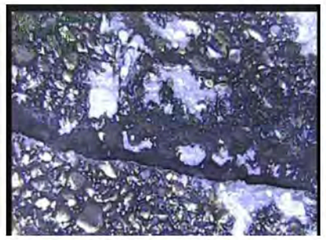
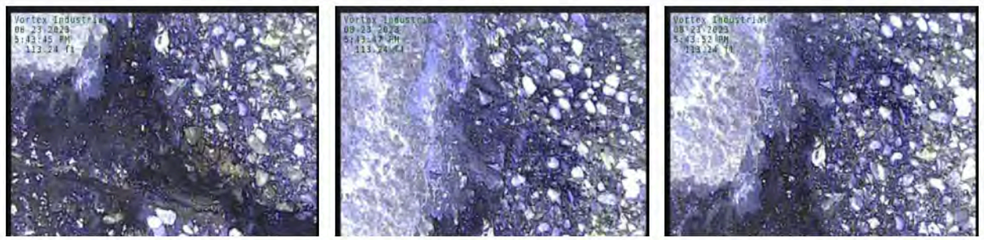
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

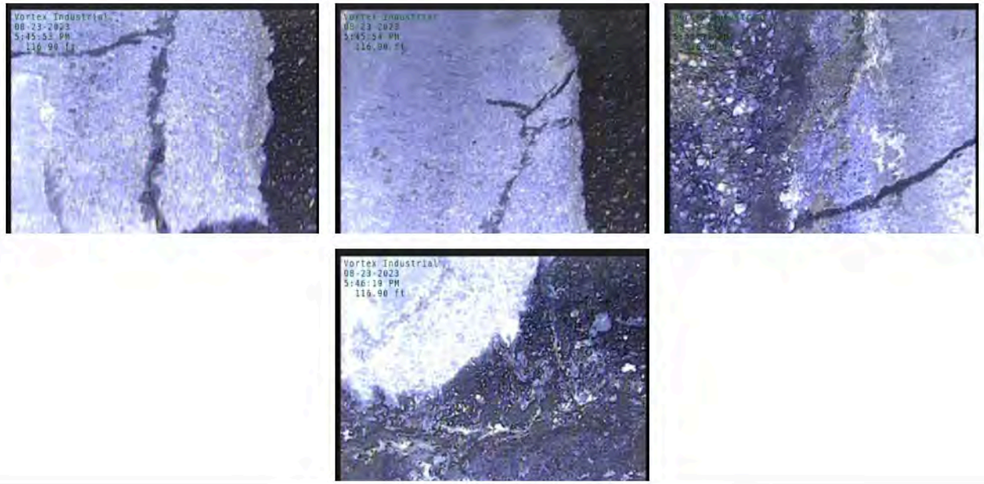
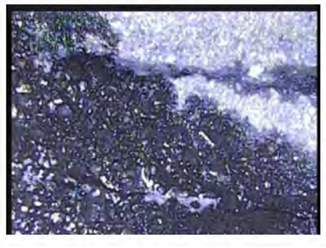
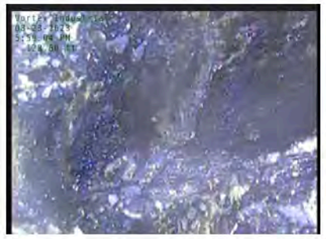
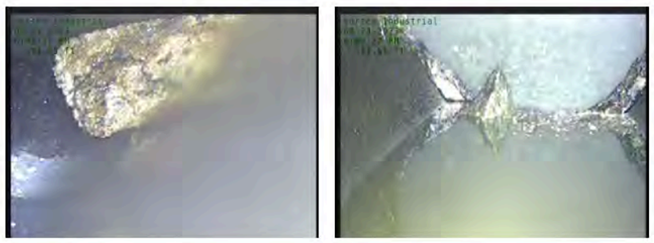
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	64.2	Structural	0	3-5	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	68	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	75.9	Structural	0	4-5	0	0	0	1	Crack Circumferential	
Crack Multiple	Point	91.9	Structural	0	5-8	3	0	0	2	Crack Multiple	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	116.9	Structural	0	7-8	3	0	0	2	Crack Multiple	
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	
Obstruction Rocks	Point	132.6	O&M	10	7	0	0	0	0	Obstruction Rocks	

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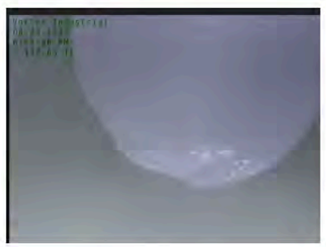
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Survey Abandoned	Point	134.5	Miscellaneous	0		0	0	0	0	Inspection ended due to tap at bottom of pipe	
Tap Factory	Point	134.5	Constructional	0	5-7	0	0	0	0	Tap Factory	   

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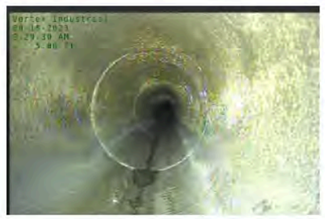
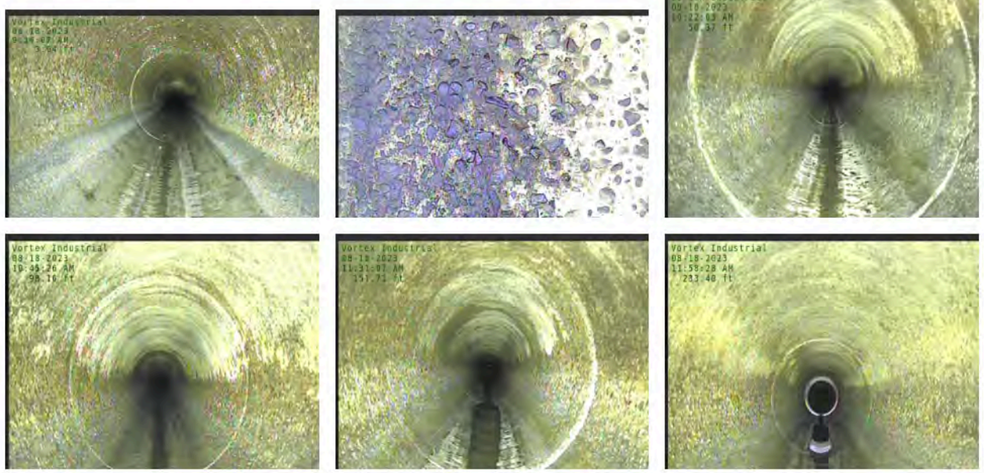
Process Segment Inspection Summary Report

Setup ID	2023-23	Inspection Date	Aug 18, 2023	Inspected Length (ft)	253.1	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	29
Segment ID	D-1.1:D-2.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-1.1	
Surface Damage Aggregate Visible	Continuous	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	

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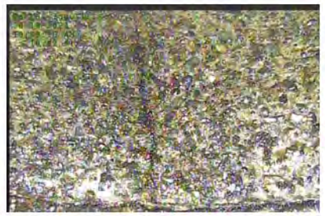
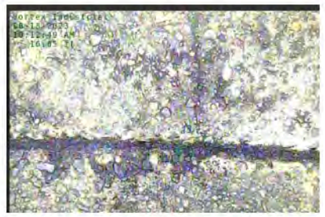
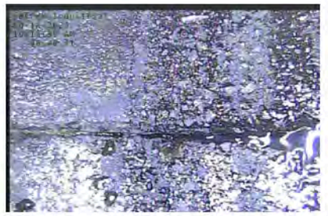
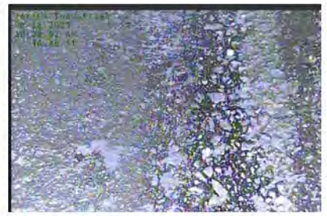
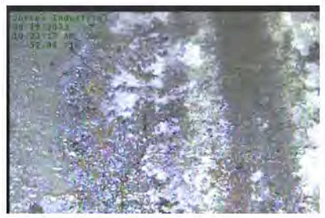
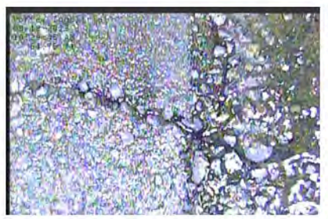
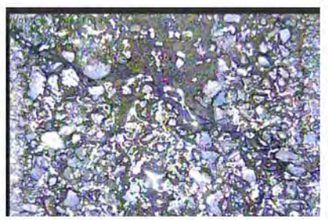
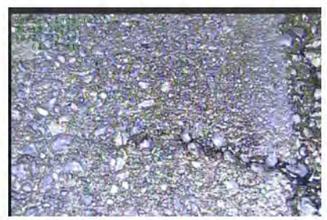
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	10.2	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	16.7	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	46.5	Structural	0	6	2	0	0	1	Crack Longitudinal	 
Crack Longitudinal	Point	52	Structural	0	6	2	0	0	1	Crack Longitudinal	
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	 

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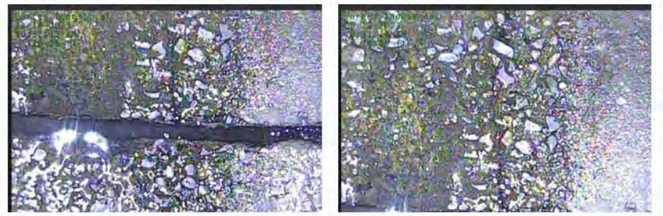
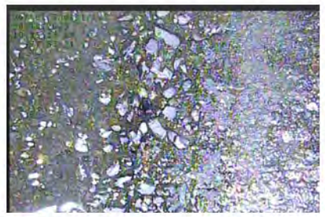
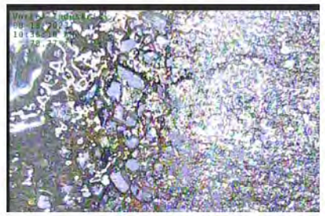
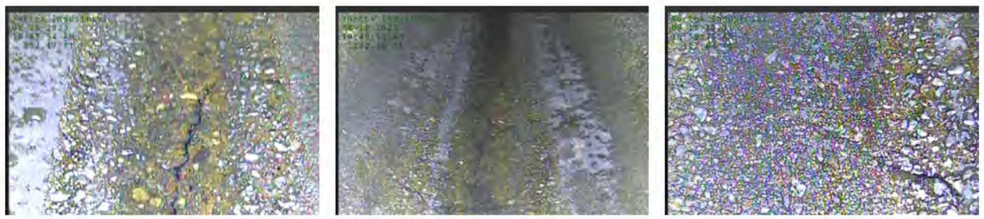
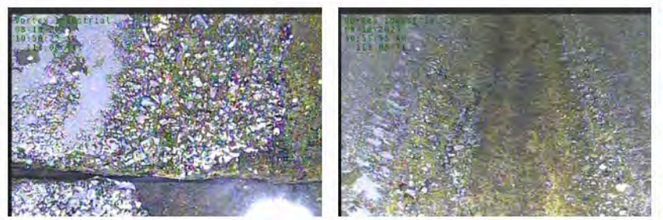
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	70.3	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	77.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	78.8	Structural	0	5-6	1	0	0	1	Crack Circumferential	
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	

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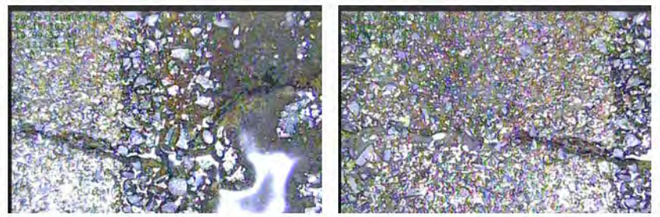
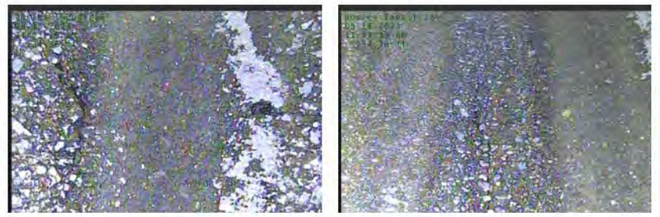
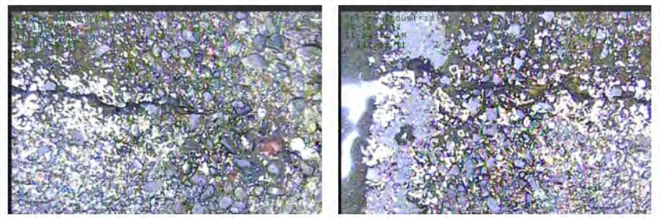
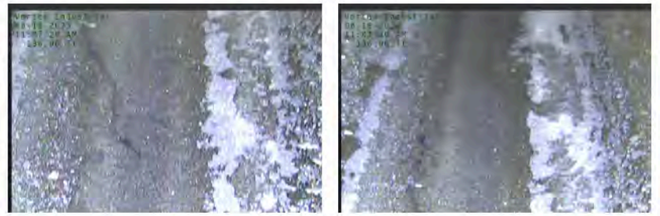
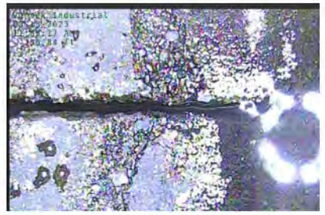
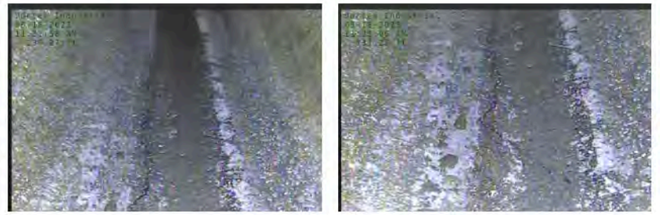
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	121.8	Structural	0	5-7	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	134.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	134.7	Structural	0	5-6	1	0	0	2	Crack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

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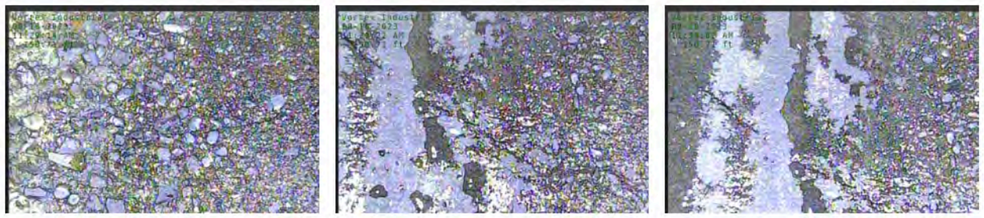
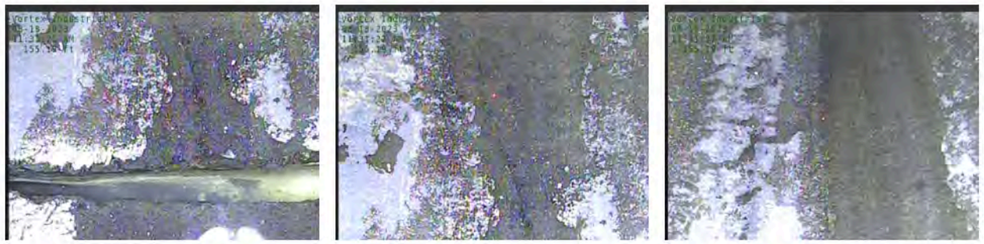
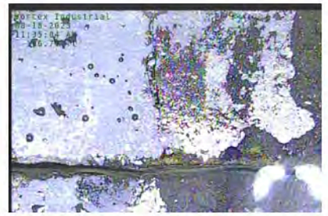
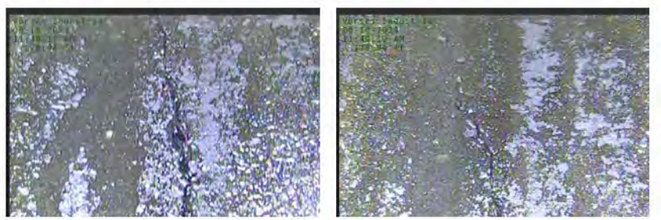
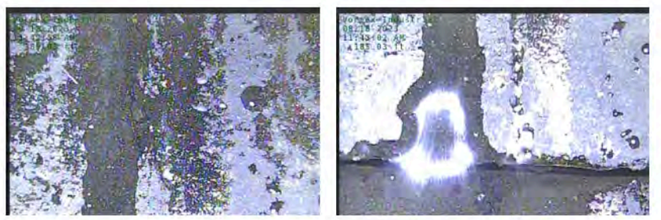
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	150.7	Structural	0	5-8	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	155.2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	166.8	Structural	0	6	2	0	0	1	Crack Longitudinal	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

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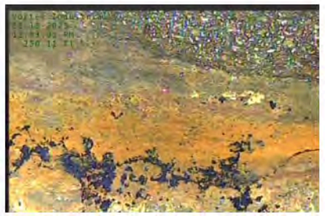
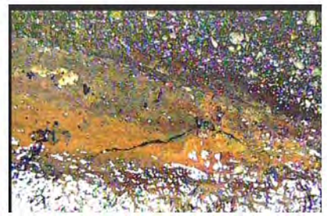
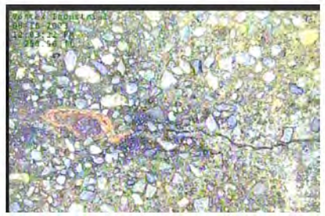
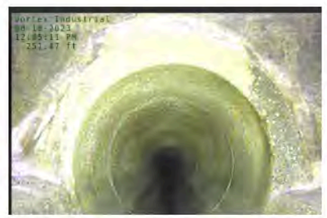
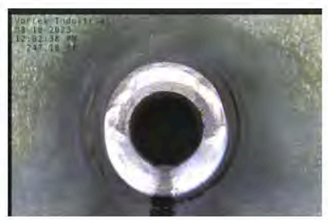
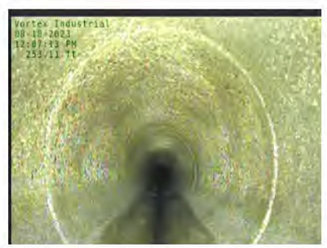
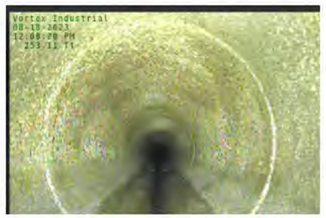
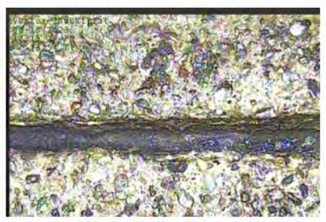
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	227.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	245.6	Structural	0	6	2	0	0	1	Crack Longitudinal	
Fracture Circumferential	Point	245.6	Structural	0	5-6	2	0	0	2	Fracture 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	 

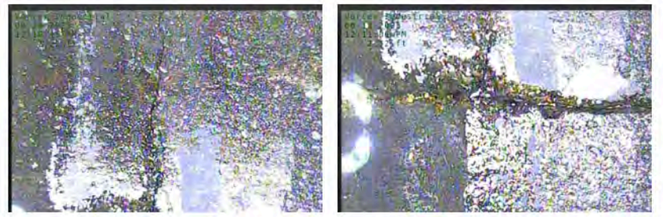
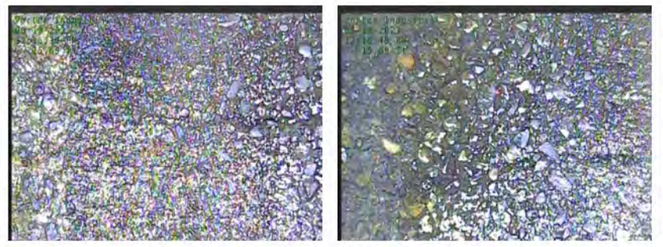
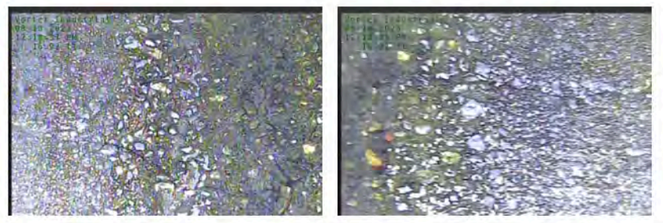
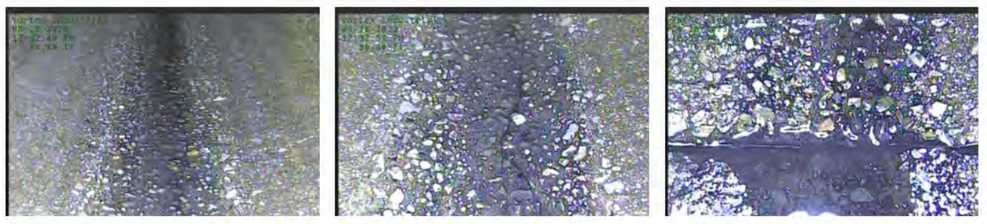
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

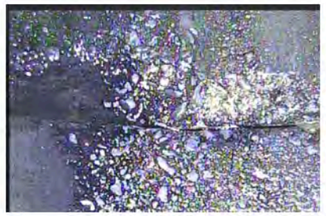
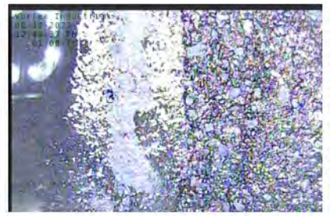
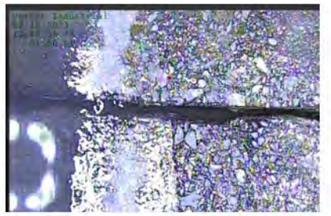
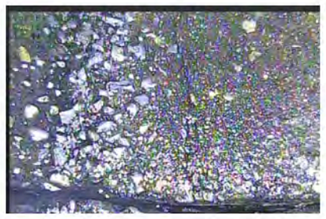
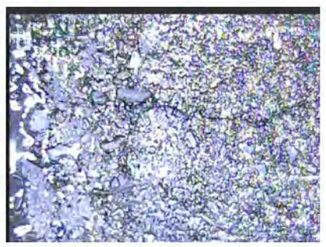
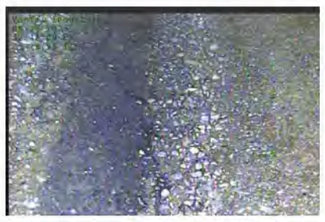
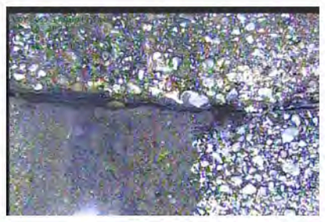
Setup ID	2023-24	Inspection Date	Aug 19, 2023	Inspected Length (ft)	253.3	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	31
Segment ID	D-2.1:D-3.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-2.1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 253.3	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	    

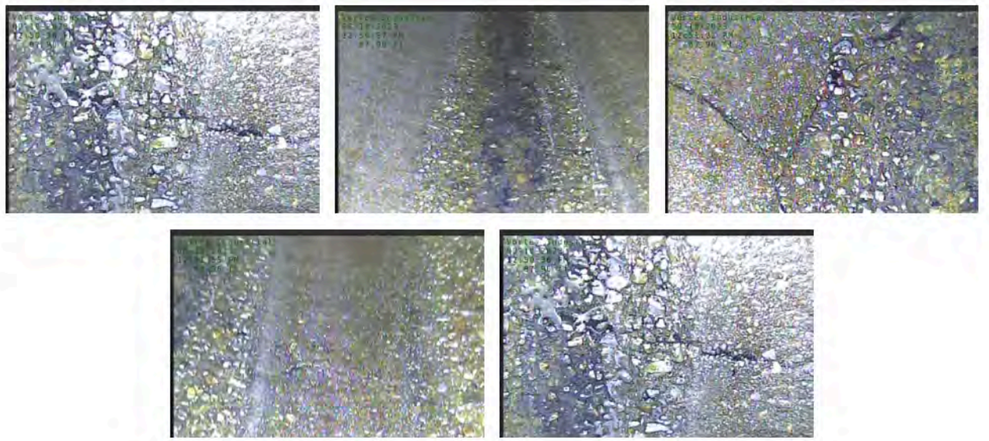
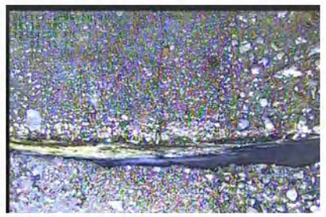
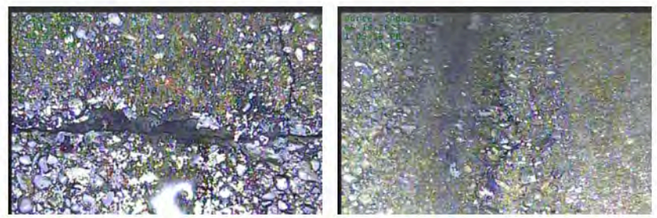
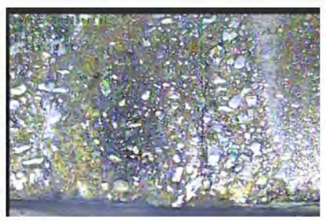
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

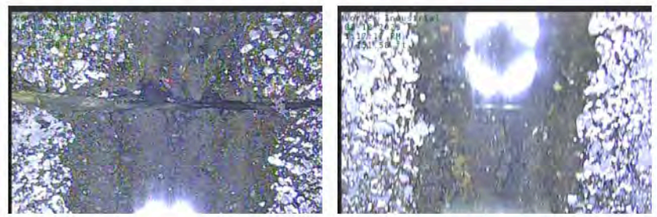
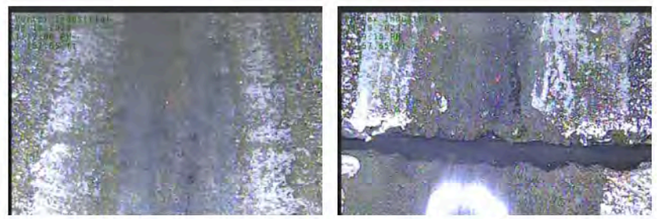
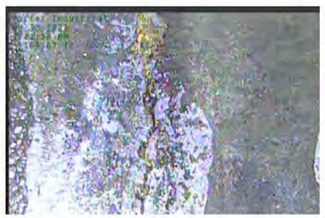
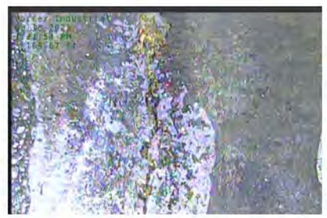
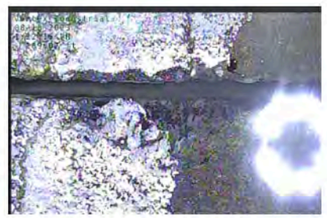
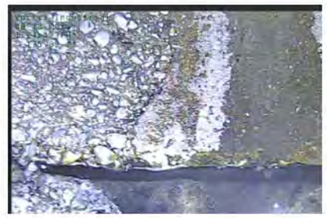
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  

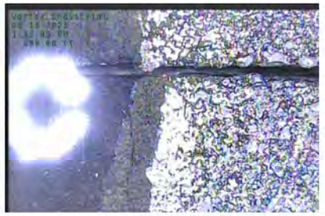
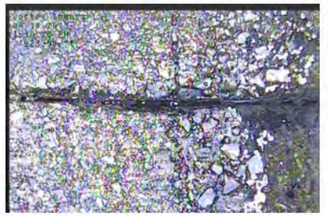
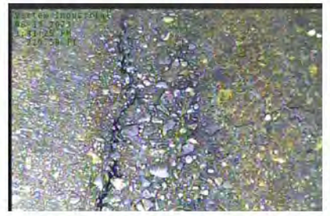
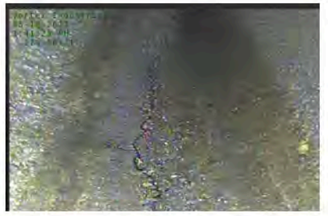
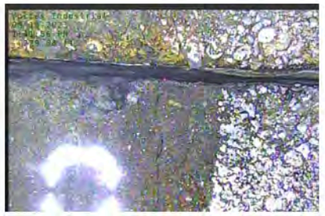
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

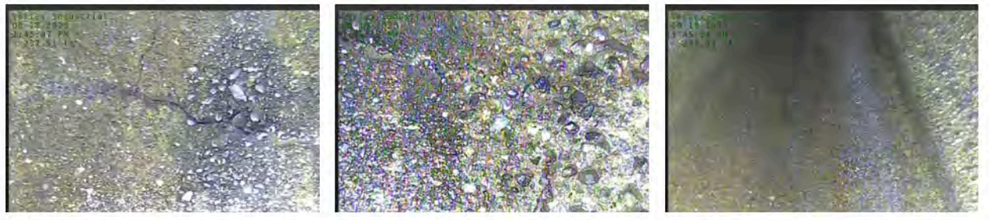
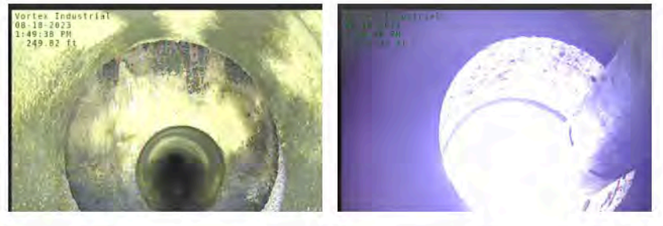
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
Crack Longitudinal	Point	225.5	Structural	0	6	2	0	0	2	Crack Longitudinal	 
Crack Longitudinal	Point	229.9	Structural	0	6	2	0	0	1	Crack Longitudinal	

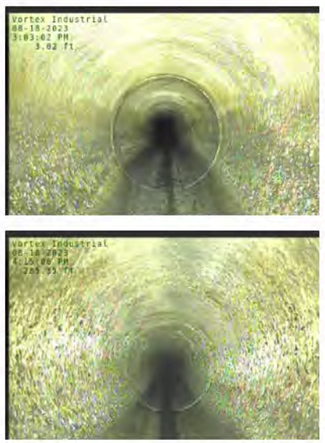
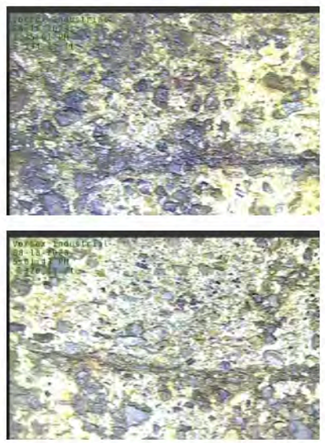
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	237.5	Structural	0	5-6	3	0	0	1	Crack Multiple	
Manhole	Point	253.3	Constructional	0		0	0	0	0	D-3.1	

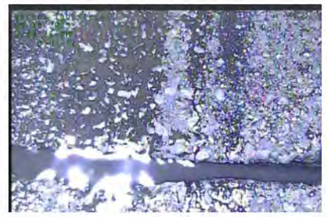
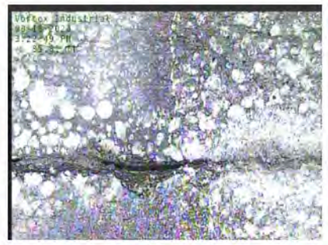
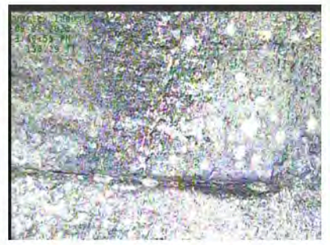
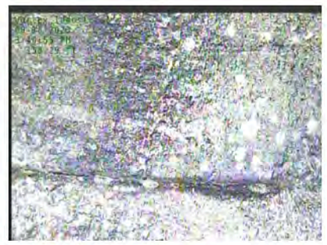
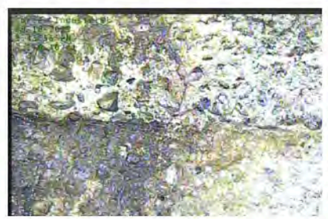
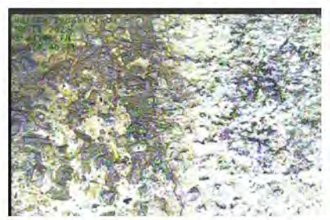
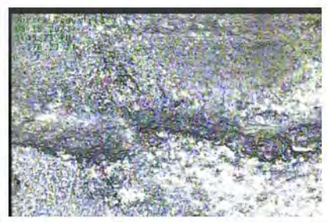
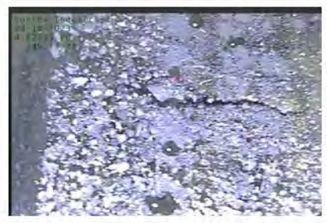
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

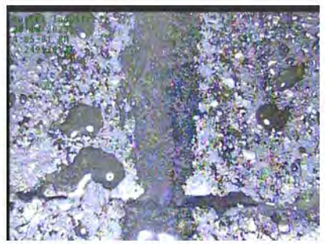
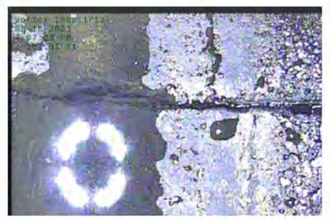
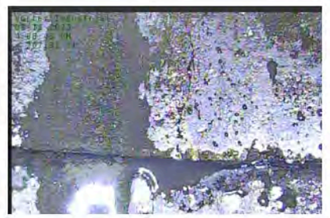
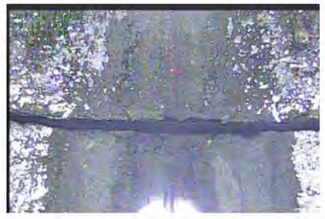
Setup ID	2023-25	Inspection Date	Aug 19, 2023	Inspected Length (ft)	412	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	44
Segment ID	D-3.1:D-4.1	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 412	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	  
Manhole	Point	0	Constructional	0		0	0	0	0	D-3.1	

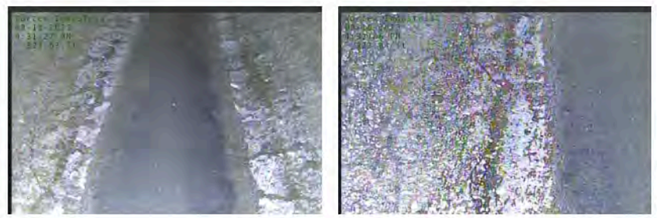
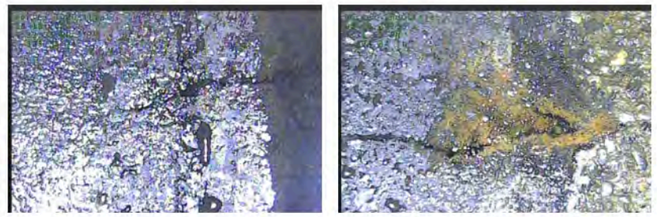
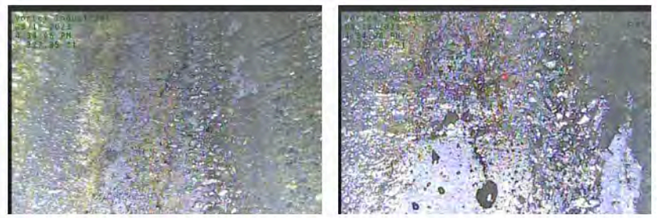
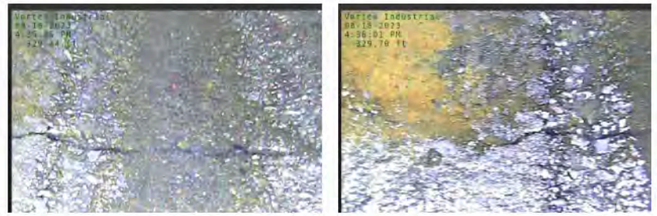
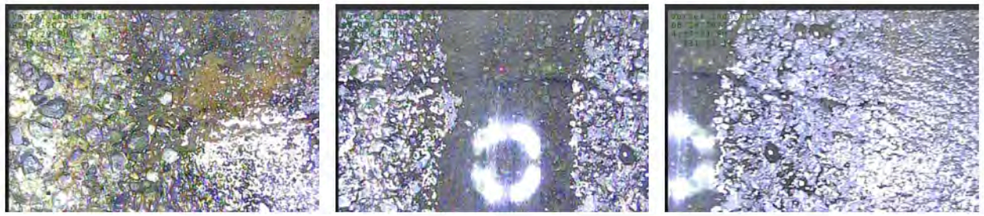
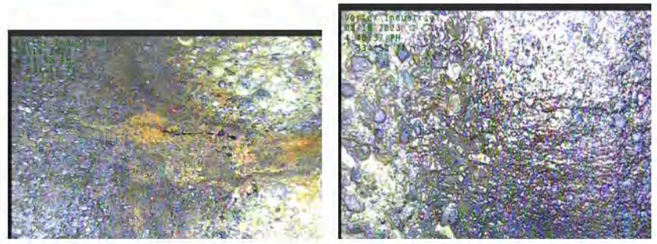
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

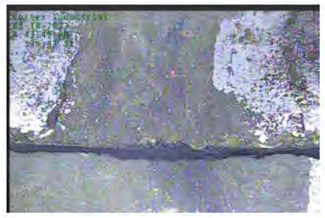
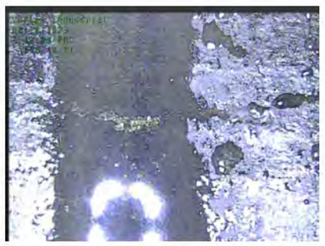
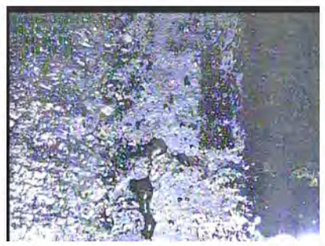
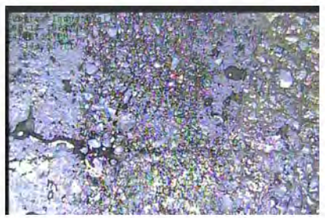
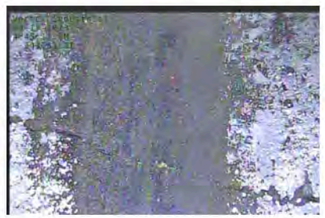
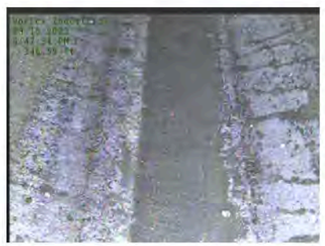
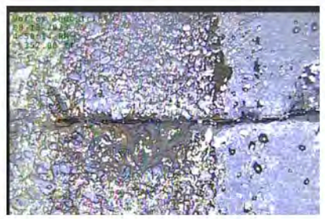
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	
Crack Longitudinal	Point	303.3	Structural	0	6	2	0	0	1	Crack Longitudinal	

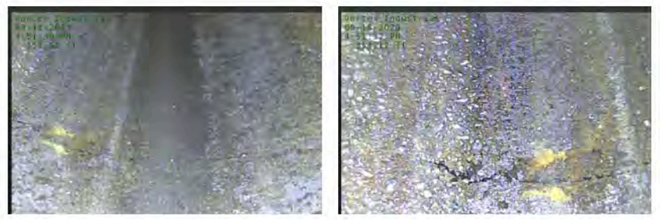
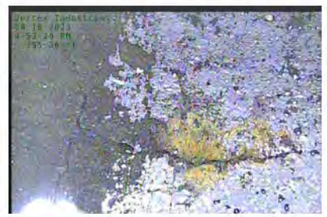
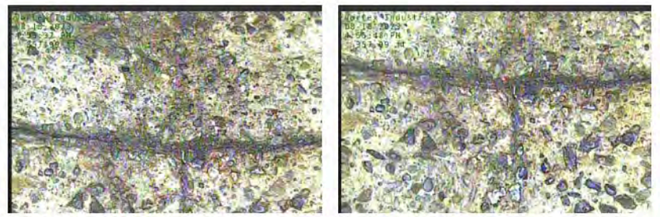
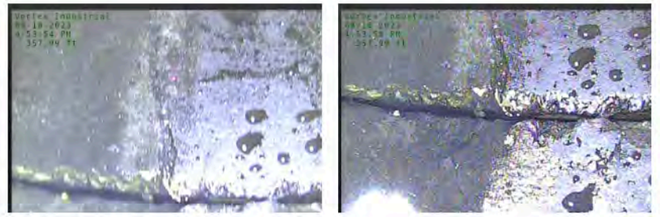
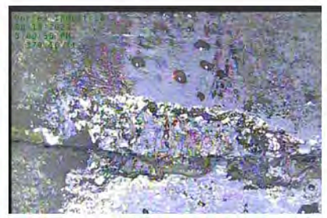
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

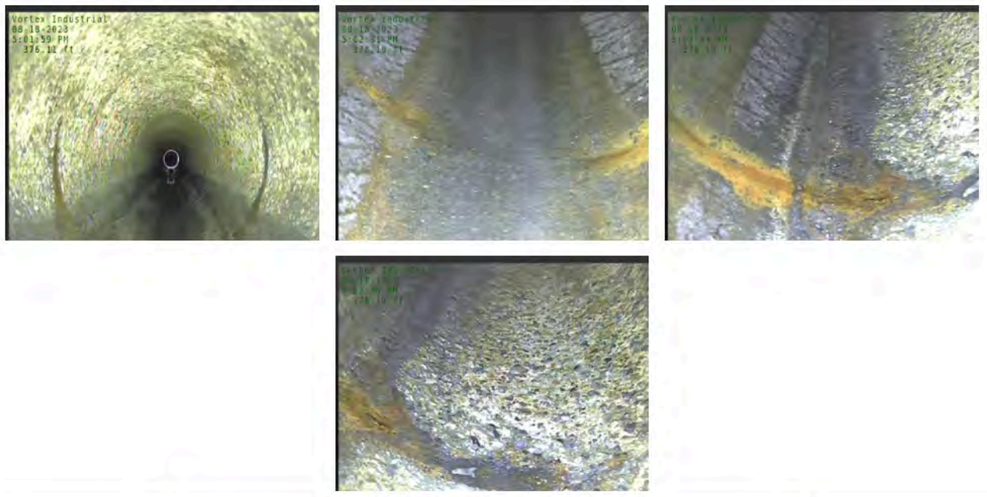
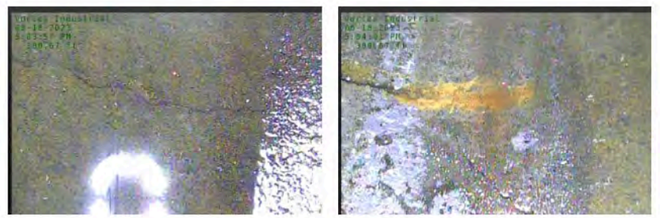
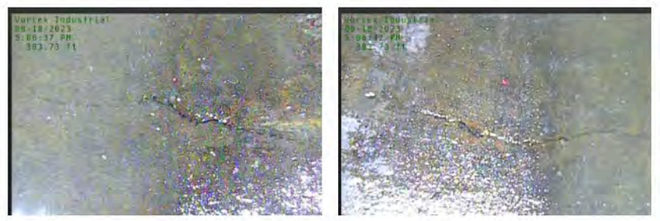
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	378.2	Structural	0	2-10	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	380.7	Structural	0	5-7	1	0	0	1	Crack Circumferential	
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	
Crack Multiple	Point	385.5	Structural	0	5-6	3	0	0	2	Crack Multiple	

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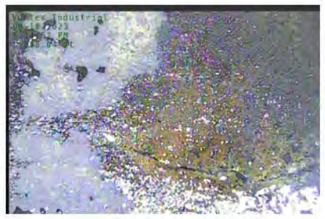
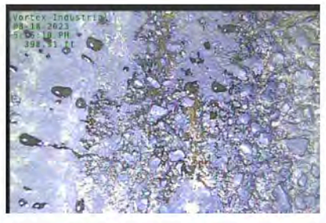
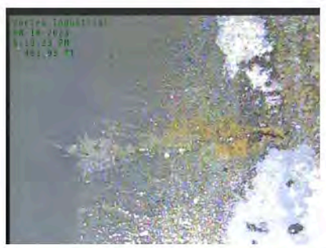
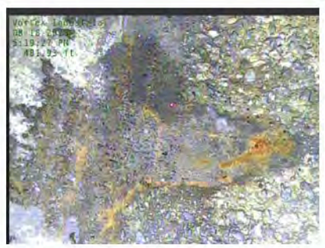
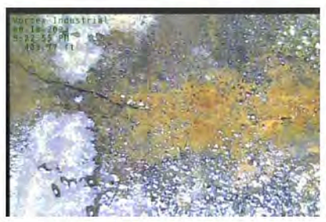
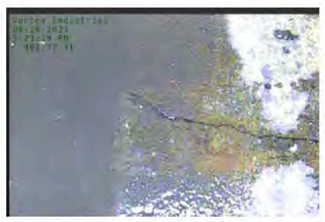
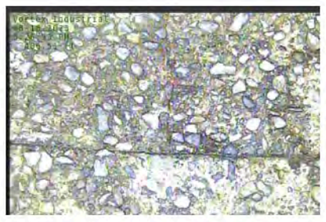
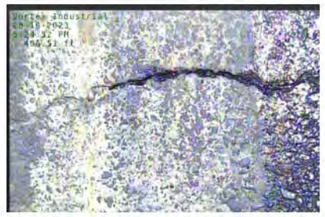
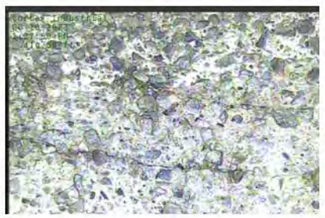
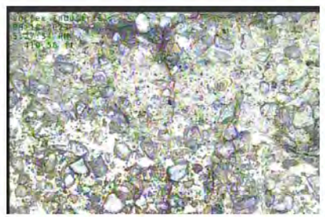
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	394.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	398	Structural	0	5-7	3	0	0	2	Crack Multiple	  
Crack Multiple	Point	398.8	Structural	0	4-6	3	0	0	1	Crack Multiple	 
Crack Circumferential	Point	401.9	Structural	0	4-6	1	0	0	1	Crack Circumferential	 
Crack Circumferential	Point	403.8	Structural	0	5-6	1	0	0	1	Crack Circumferential	 
Crack Longitudinal	Point	406.5	Structural	0	2	2	0	0	1	Crack Longitudinal	 

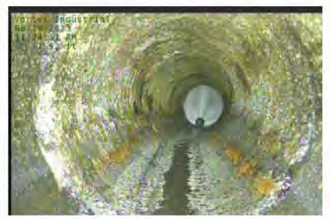
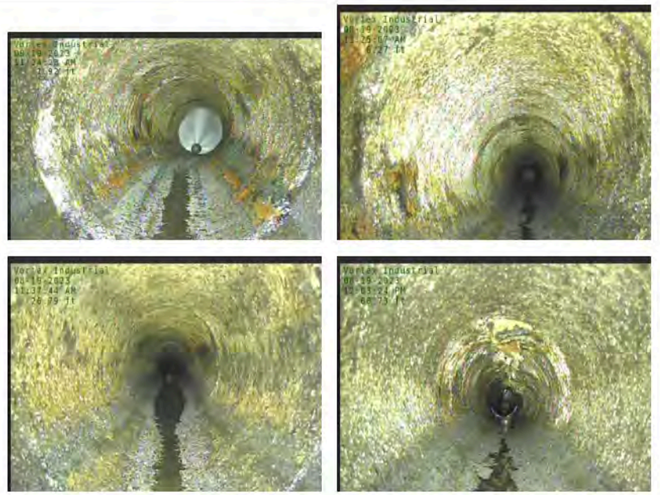
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	 

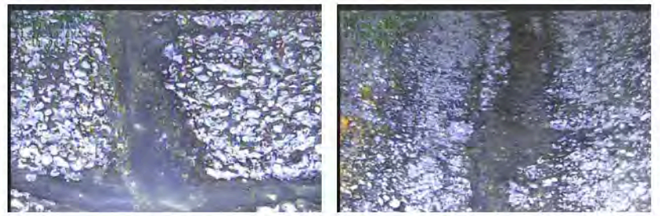
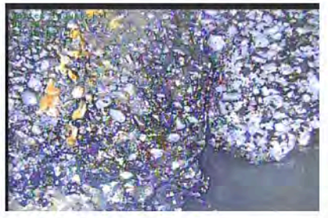
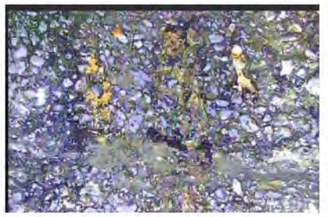
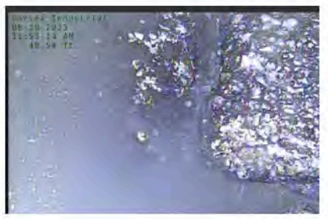
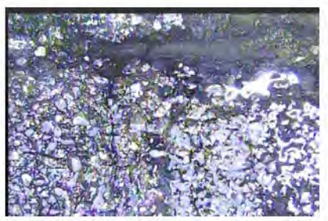
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

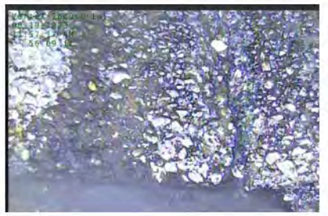
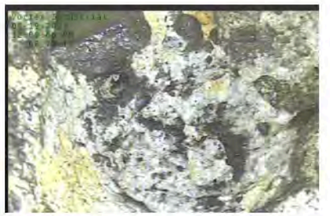
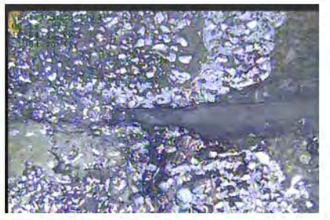
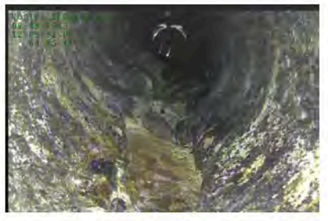
Setup ID	2023-26	Inspection Date	Aug 19, 2023	Inspected Length (ft)	82.3	Defects Rated ≥3	3	Peak Structural Rating	4	Total PR Defects	12
Segment ID	D-6:D-19	Primary Pipe Material	RCP	Pipe Diameter (in)	15	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-6	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 82.3	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	

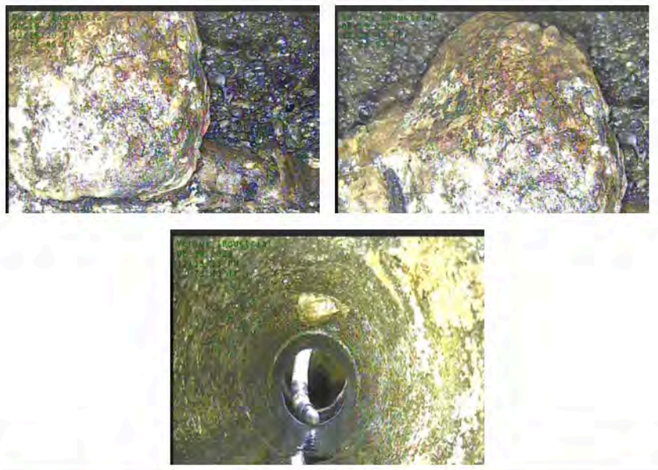
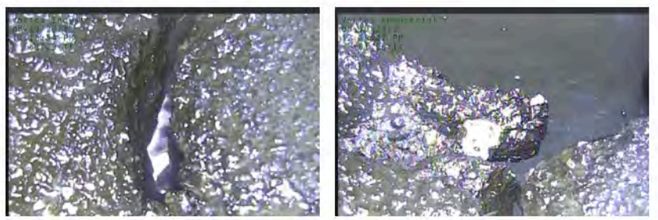
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  

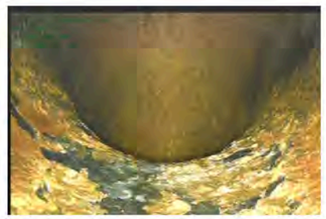
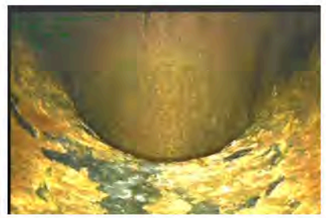
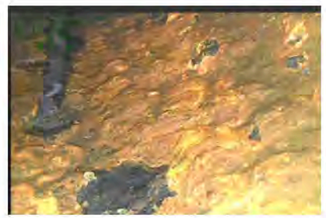
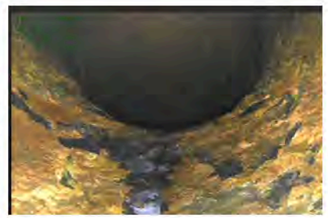
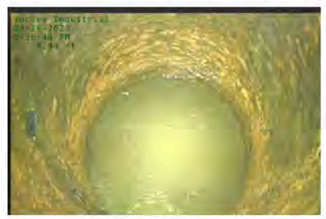
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

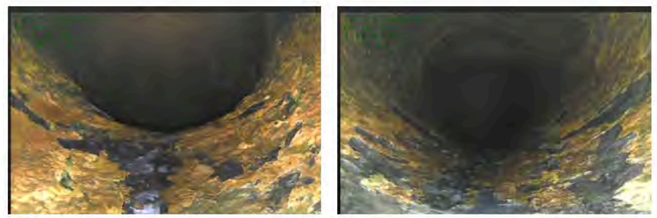
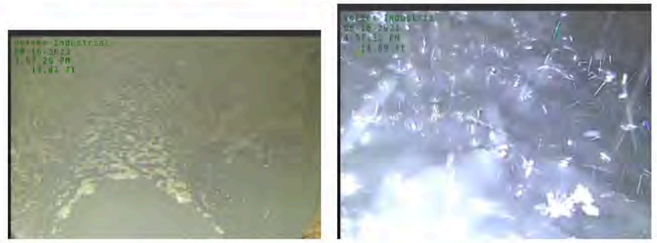
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-27	Inspection Date	Aug 16, 2023	Inspected Length (ft)	14.9	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	1
Segment ID	D-21:D-22	Primary Pipe Material	SP	Pipe Diameter (in)	30	Peak Prioritization Rating	2	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	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	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Miscellaneous Water Level	Point	14.9	Miscellaneous	100		0	0	0	0	Miscellaneous Water Level	

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Process Segment Inspection Summary Report

Setup ID	2023-28	Inspection Date	Aug 22, 2023	Inspected Length (ft)	268	Defects Rated ≥3	3	Peak Structural Rating	4	Total PR Defects	45
Segment ID	5-E:5-F	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-E	
Miscellaneous Water Level	Point	0	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	 

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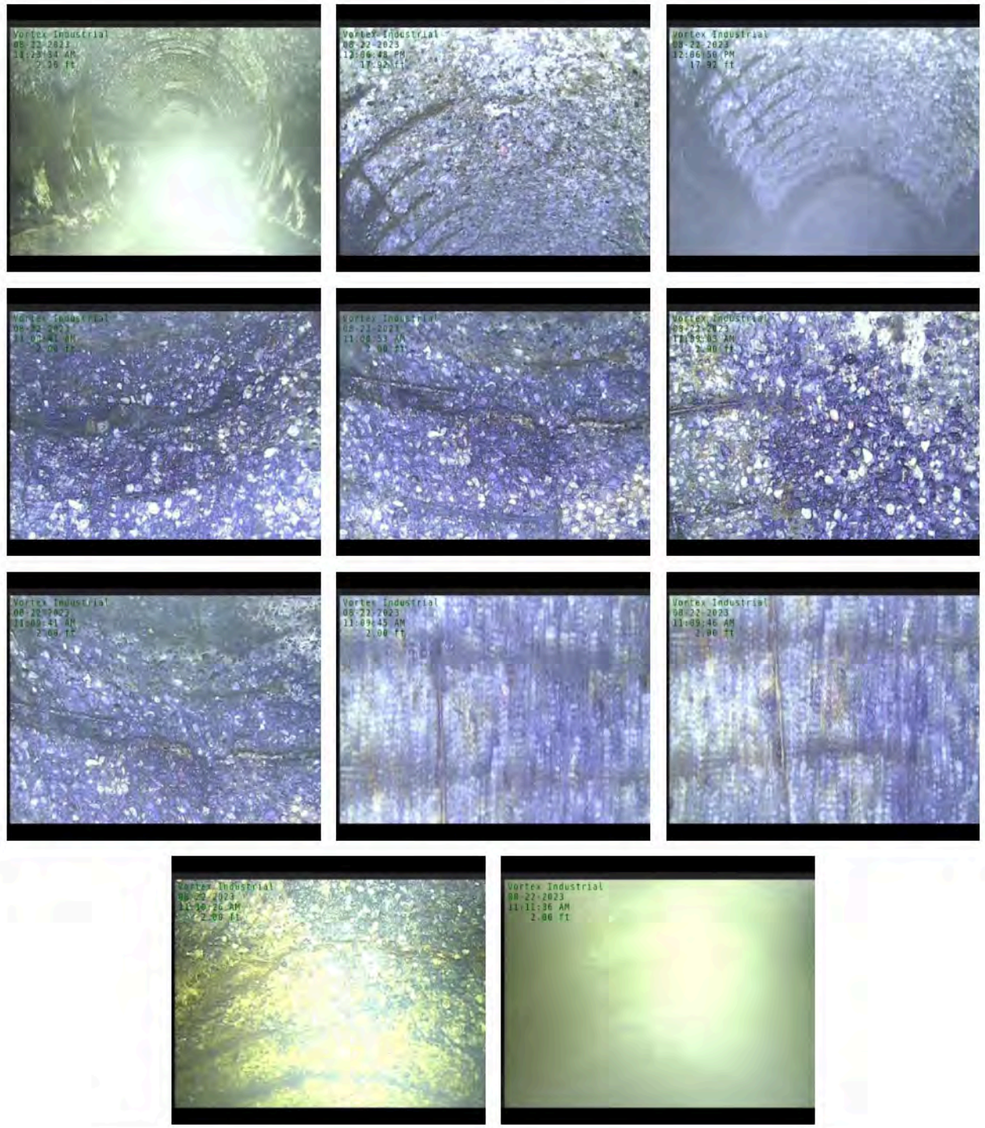
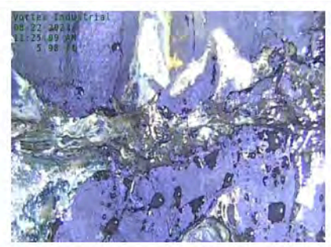
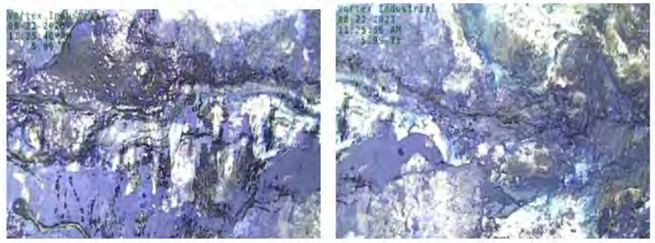
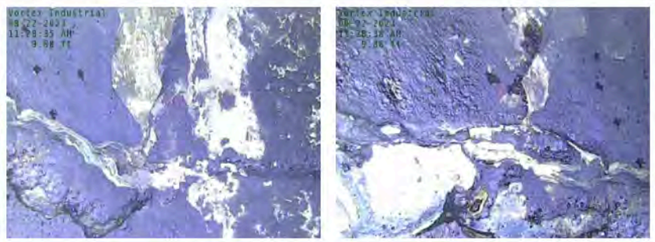
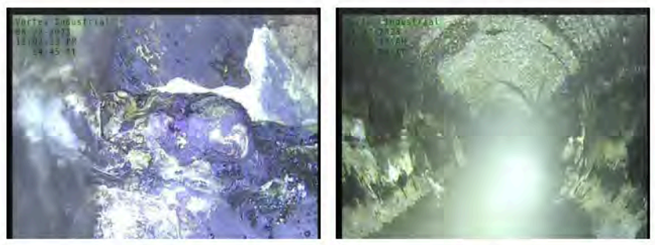
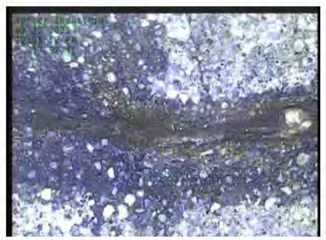
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Reinforcement Visible	Continuous	2 - 61.3	Structural	0	10-2	4	0	0	3	Surface Damage Reinforcement Visible	
Crack Multiple	Point	5.9	Structural	0	6-7	0	0	0	2	Crack Multiple	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Deposits Attached Encrustation	Point	14.5	O&M	10	4-5	0	2	0	0	Deposits Attached Encrustation	
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	

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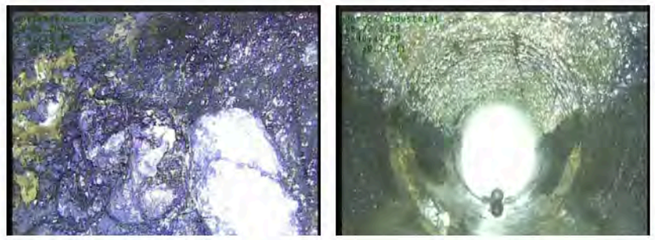
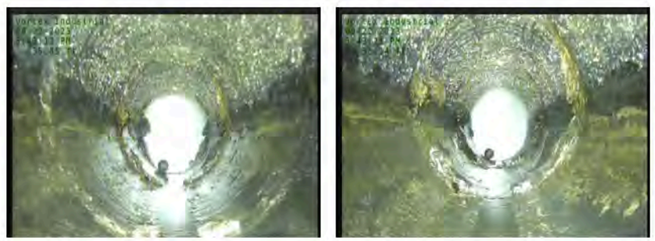
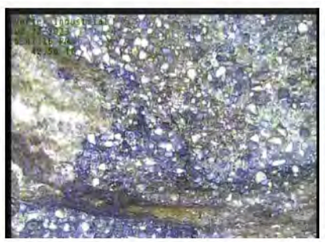
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Deposits Attached Encrustation	Point	34.4	O&M	10	7	0	2	0	0	Deposits Attached Encrustation	
Crack Longitudinal	Point	35.5	Structural	0	8	2	0	0	2	Crack Longitudinal	
Crack Longitudinal	Point	38.3	Structural	0	5	2	0	0	2	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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

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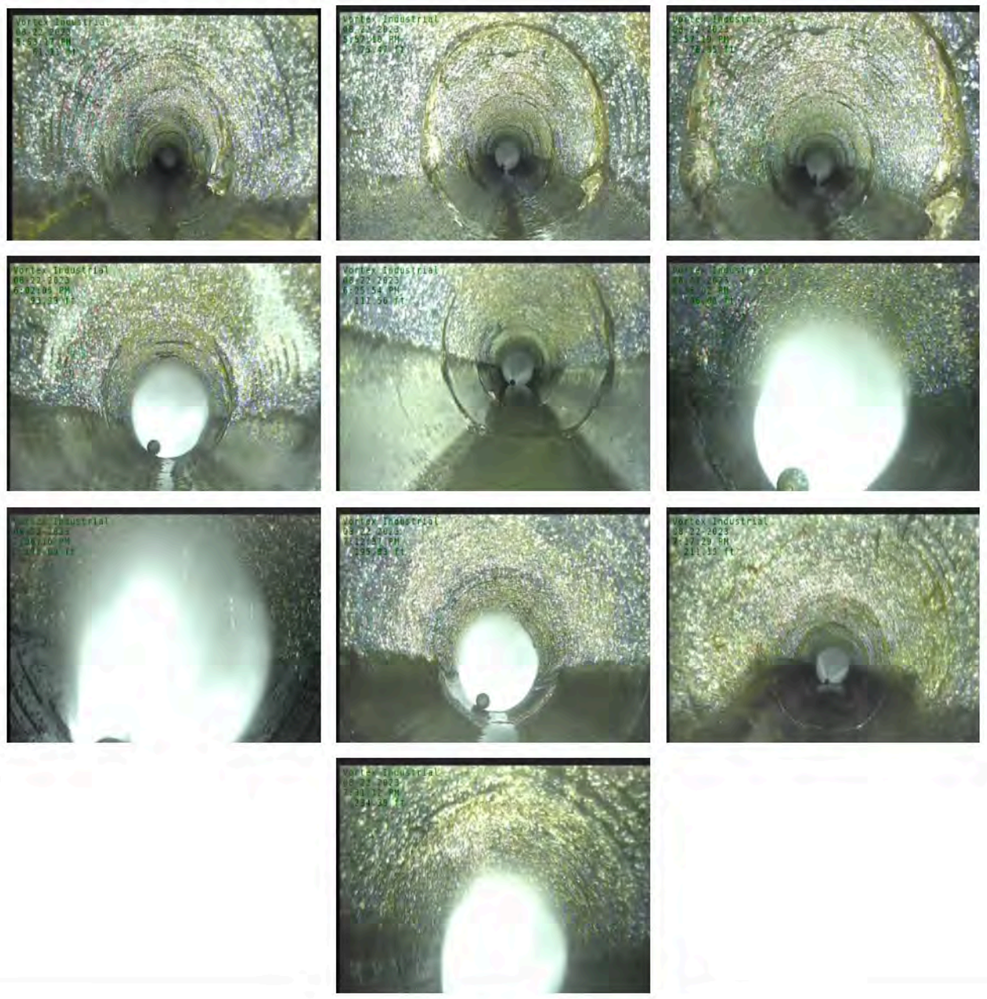
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Surface Damage Reinforcement Visible	Continuous	61.4 - 234	Structural	0	8-4	4	0	0	3	Surface Damage Reinforcement Visible	
Deposits Attached Encrustation	Point	67.3	O&M	10	2-4	0	2	0	0	Deposits Attached Encrustation	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	 

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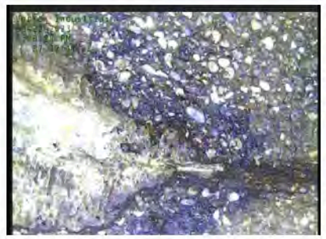
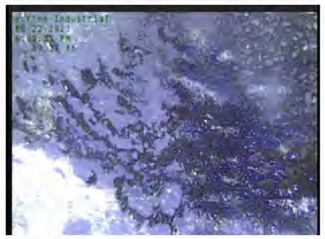
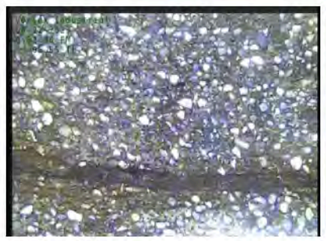
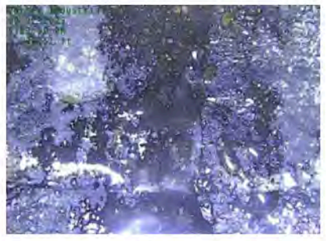
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	79.3	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	87.3	Structural	0	4-5	3	0	0	1	Crack Multiple	 
Crack Multiple	Point	91.8	Structural	0	6-7	3	0	0	1	Crack Multiple	
Crack Multiple	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	

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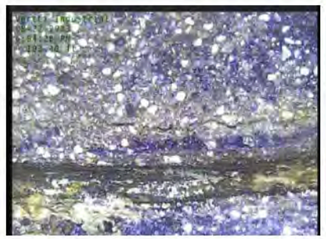
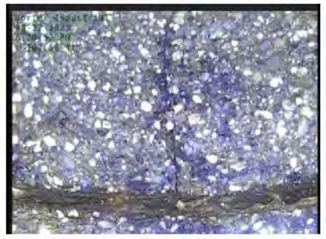
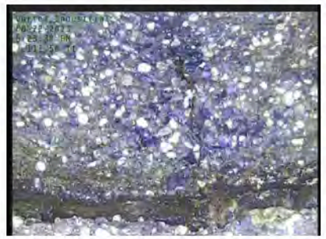
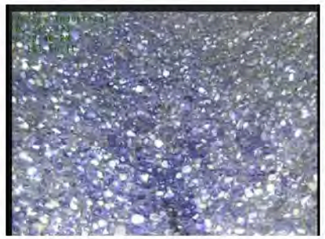
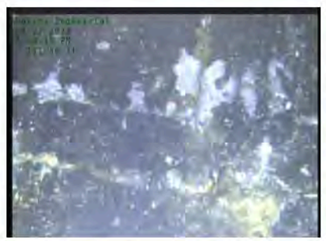
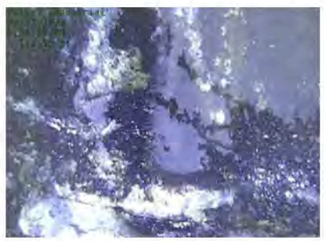
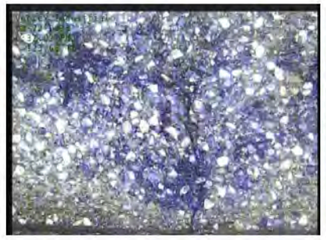
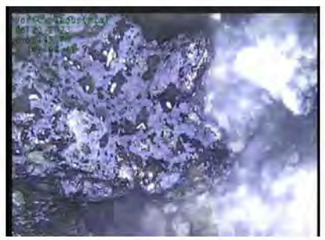
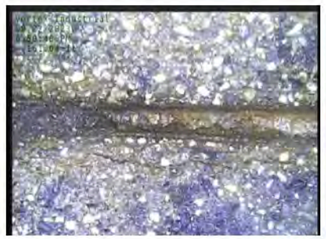
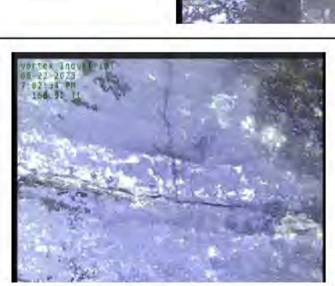
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	103.4	Structural	0	12-1	1	0	0	1	Crack Circumferential	
Crack Longitudinal	Point	107.5	Structural	0	12	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	111.5	Structural	0	12	2	0	0	1	Crack Longitudinal	 
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	

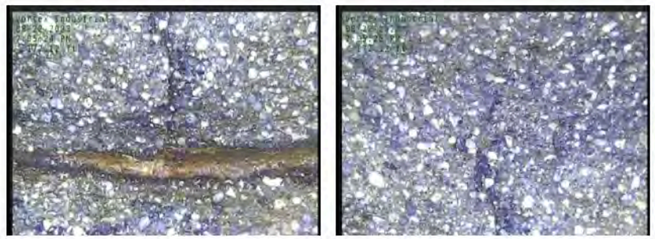
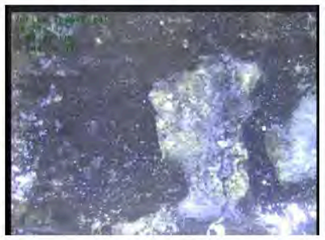
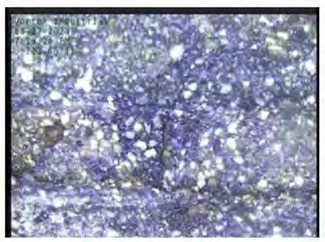
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	132.5	Structural	0	1	2	0	0	1	Crack Longitudinal	
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	 
Crack Longitudinal	Point	157.1	Structural	0	6	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	 
Crack Multiple	Point	172.8	Structural	0	4-5	2	0	0	2	Crack Multiple	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

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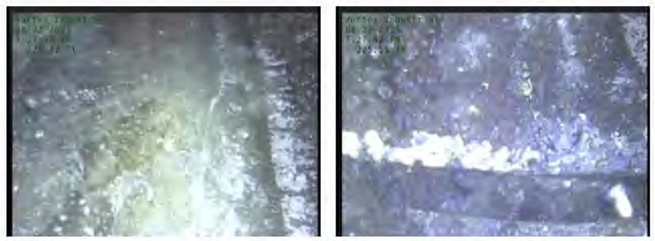
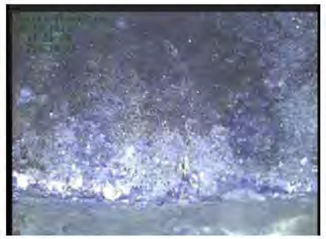
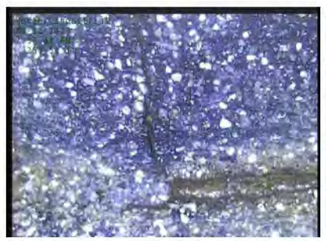
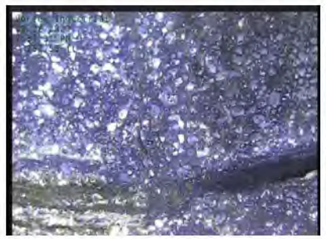
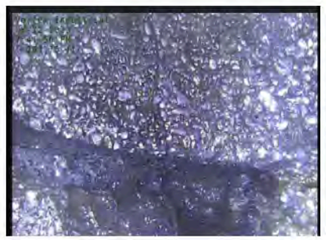
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	225.5	Structural	0	6	2	0	0	1	Crack Longitudinal	
Surface Damage Reinforcement Visible	Continuous	234.1 - 268	Structural	0	10-2	4	0	0	2	Surface Damage Reinforcement Visible	
Crack Circumferential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

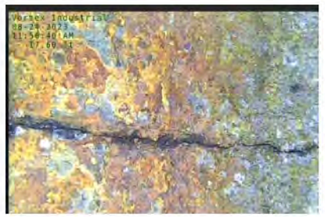
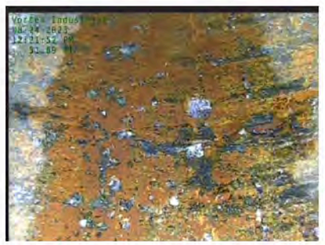
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

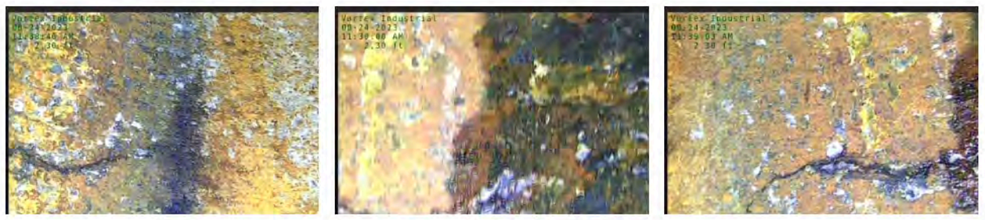
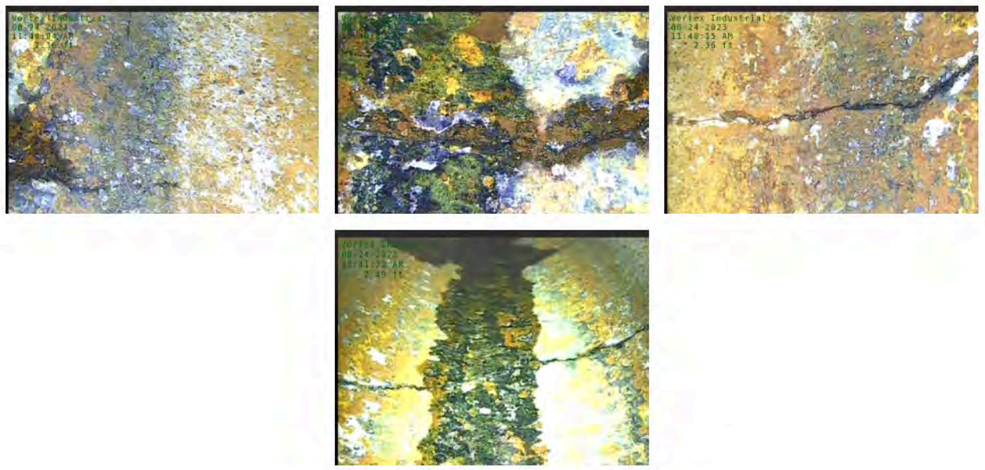
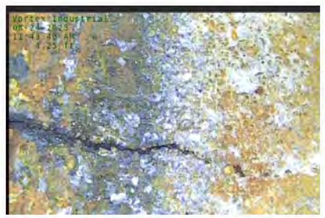
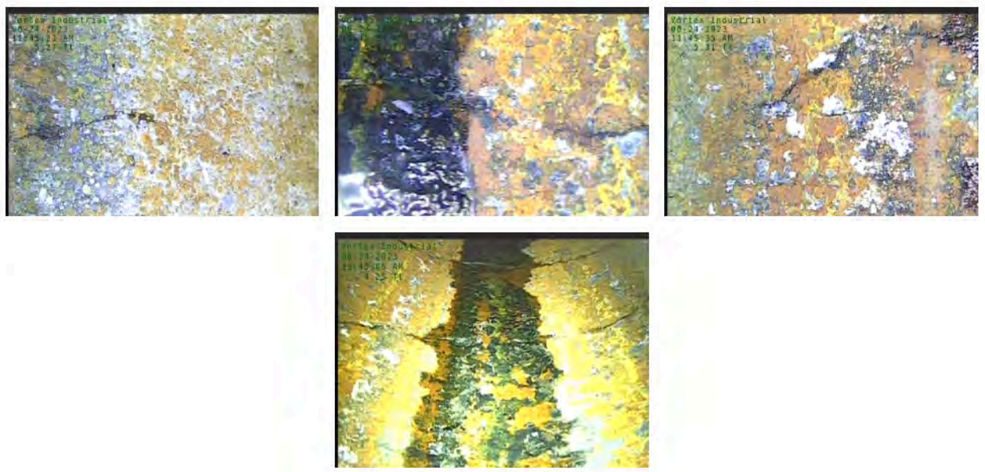
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

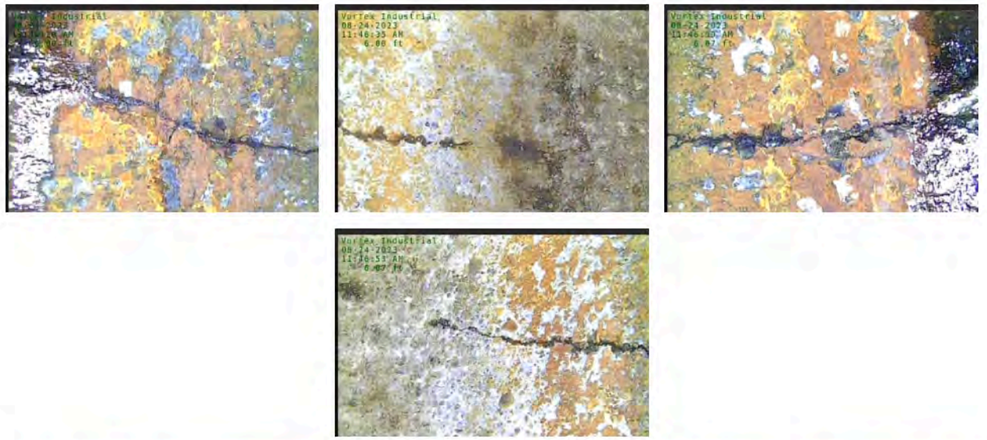
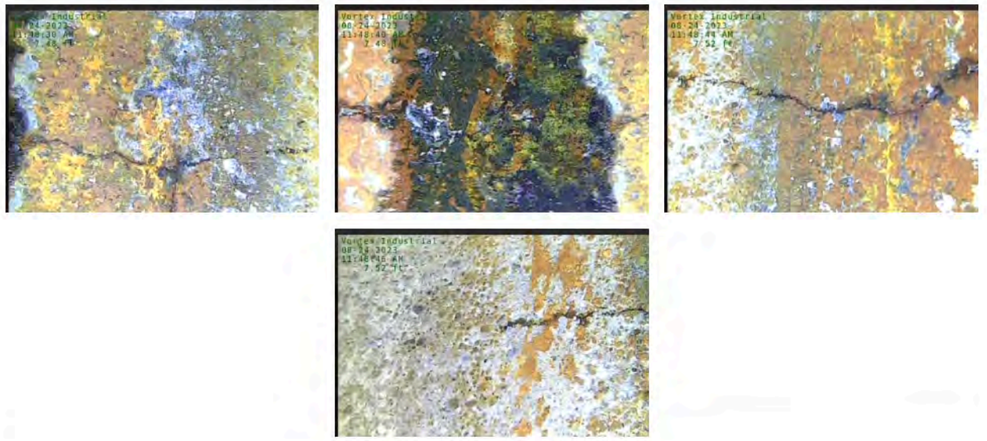
Setup ID	2023-29	Inspection Date	Aug 24, 2023	Inspected Length (ft)	207.7	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	66
Segment ID	5-P:5-O	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-P	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	0 - 207.7	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	     

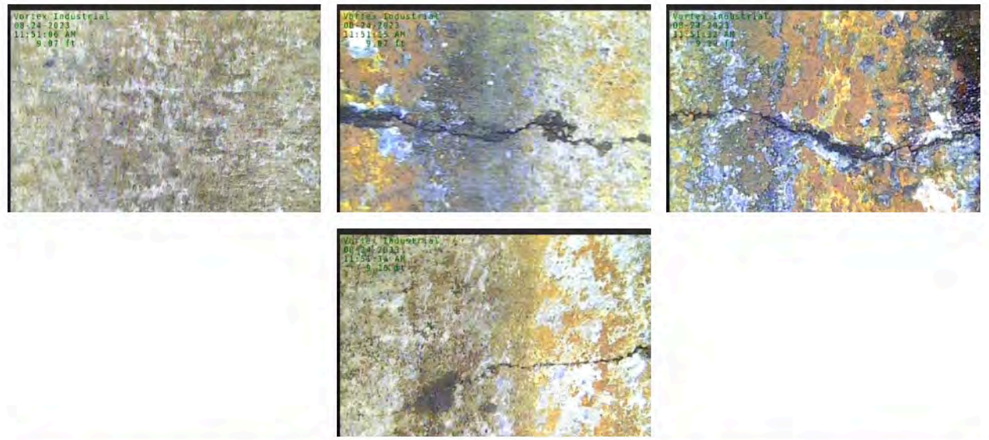
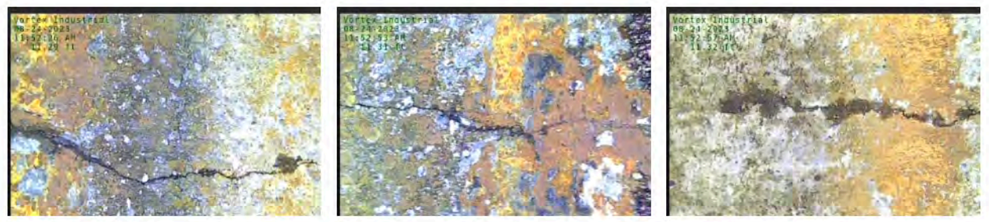
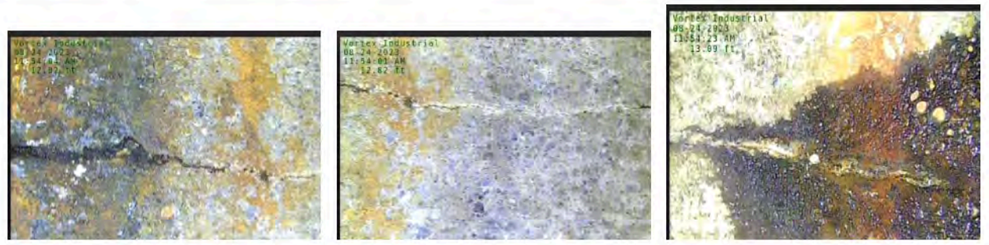
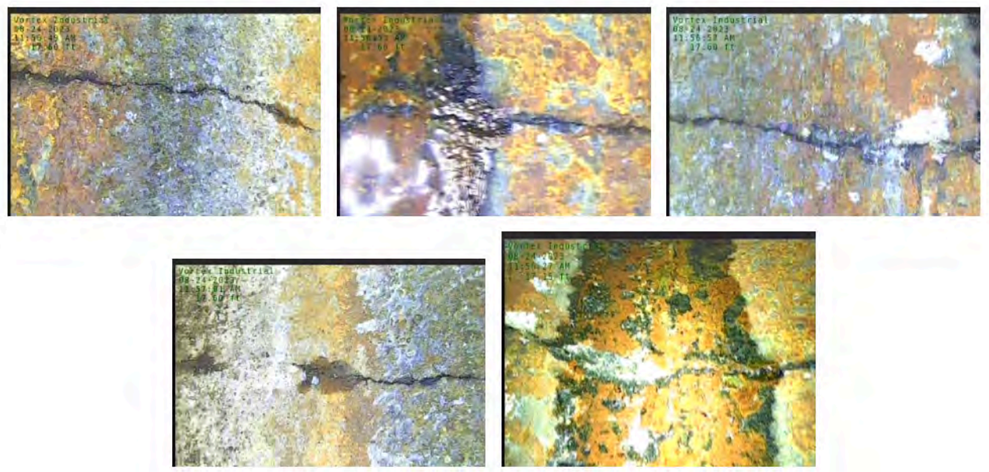
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

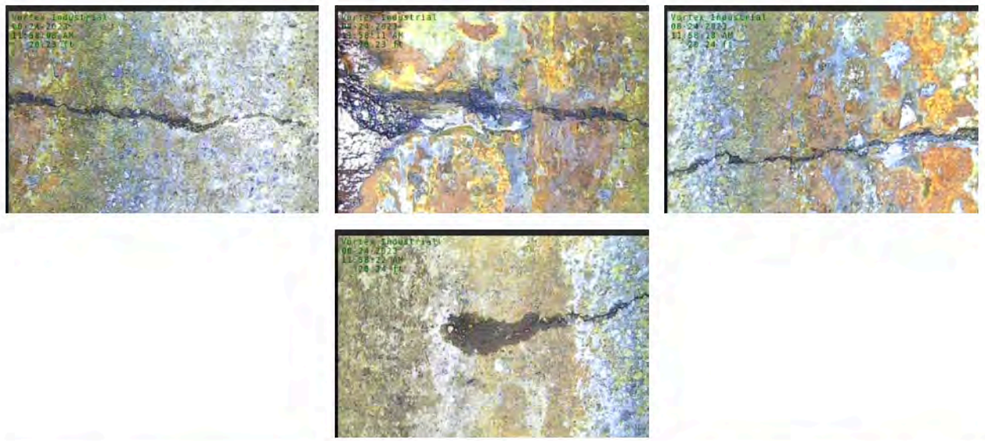
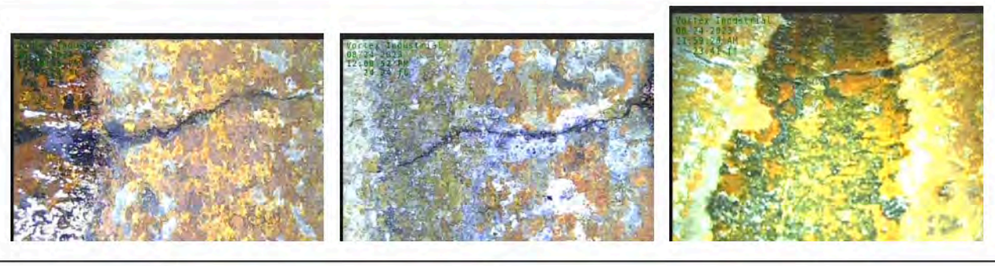
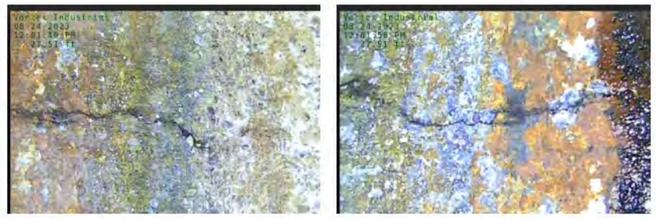
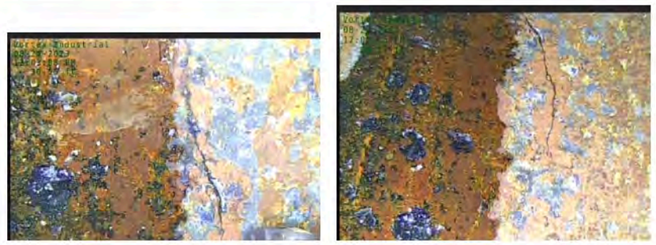
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

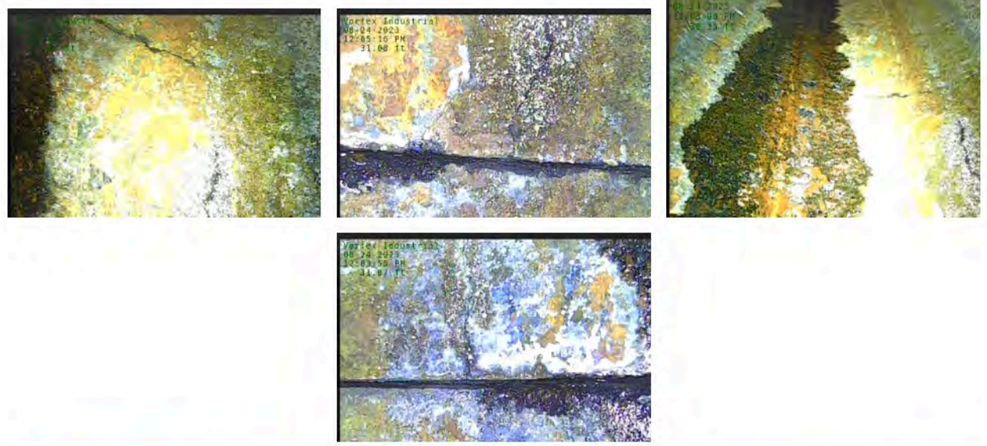
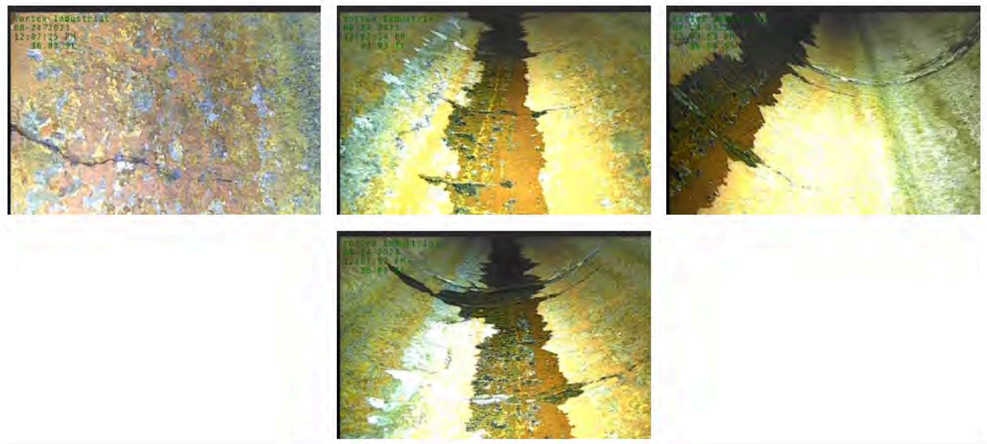
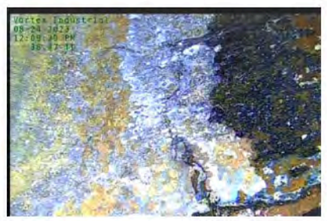
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	9.1	Structural	0	3-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	11.3	Structural	0	5-8	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	12.8	Structural	0	4-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	17.6	Structural	0	4-8	1	0	0	2	Crack Circumferential	

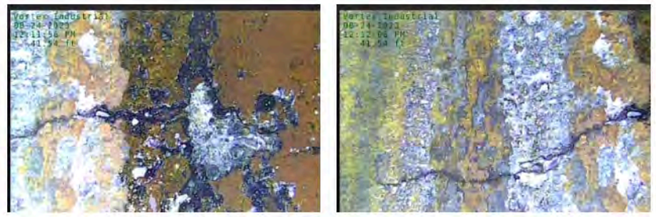
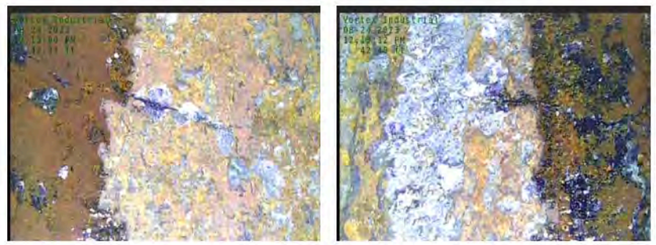
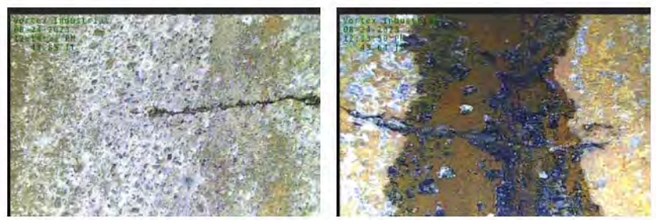
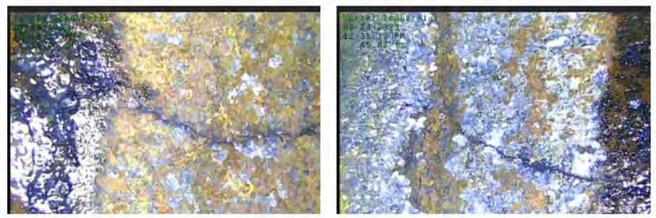
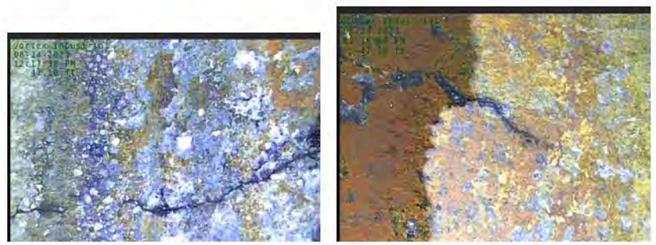
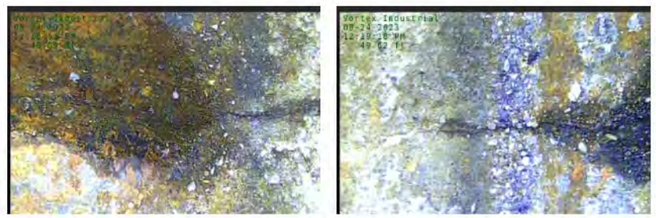
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Longitudinal	Point	30.6	Structural	0	6	2	0	0	1	Crack Longitudinal	

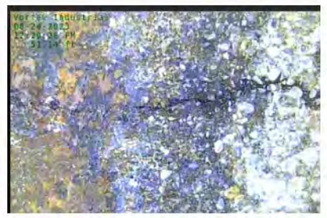
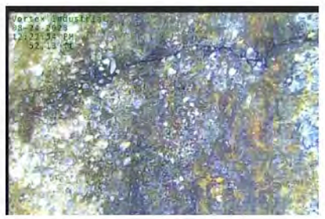
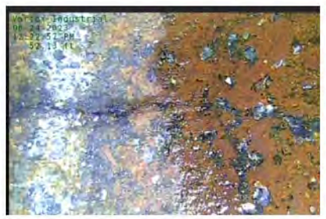
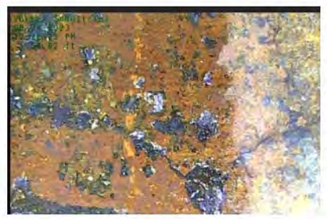
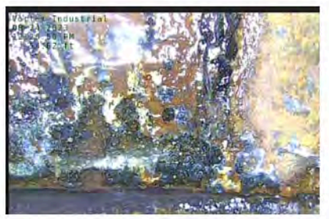
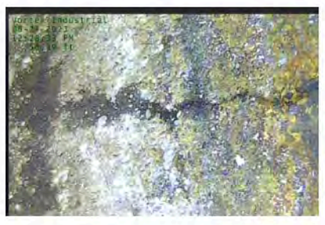
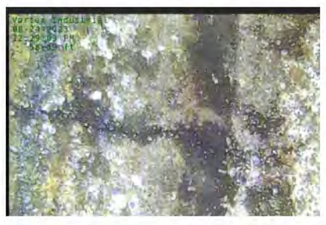
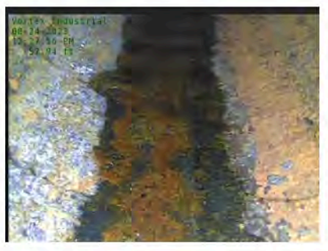
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	31.1	Structural	0	5-7	3	0	0	1	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	
Crack Multiple	Point	38.5	Structural	0	6-7	3	0	0	1	Crack Multiple	

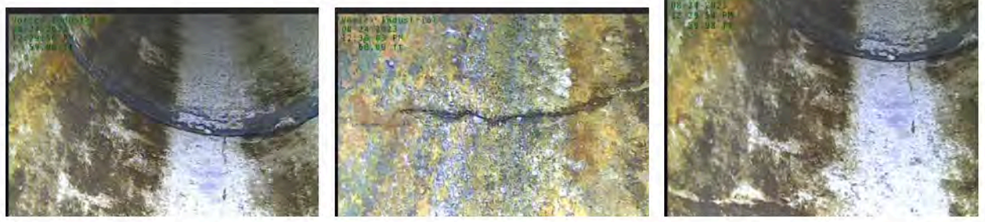
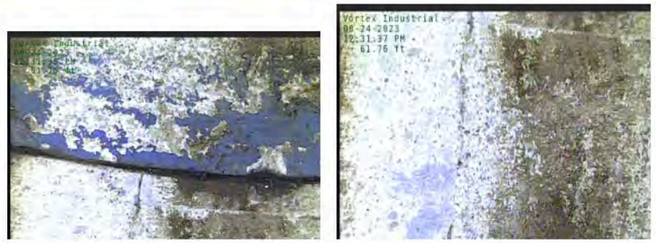
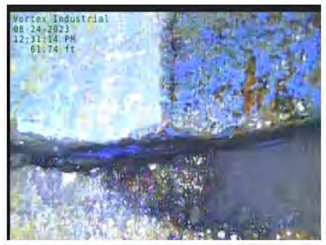
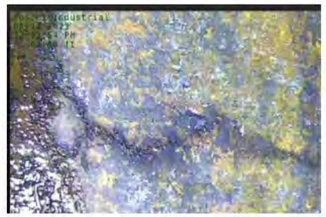
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	41.5	Structural	0	6-7	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	42.4	Structural	0	5-6	1	0	0	1	Crack Circumferential	
Crack Circumferential	Point	43.9	Structural	0	6-8	1	0	0	2	Crack Circumferential	
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	

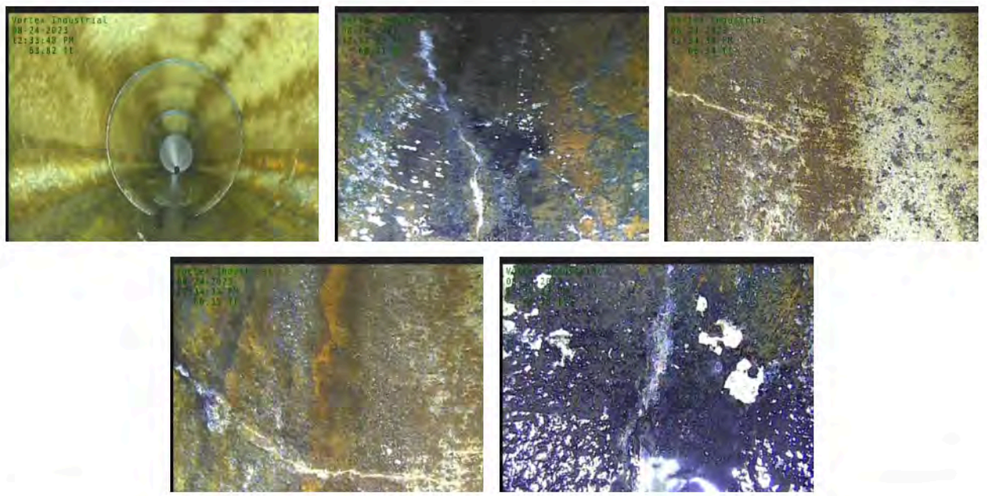
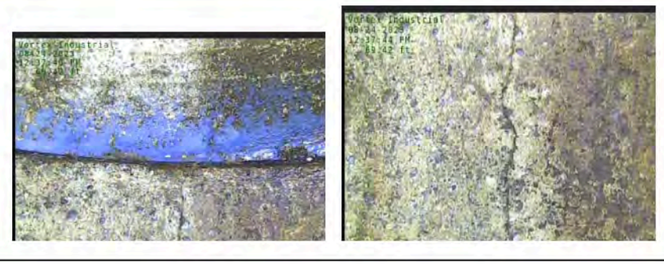
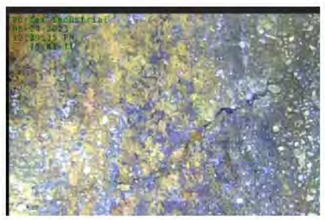
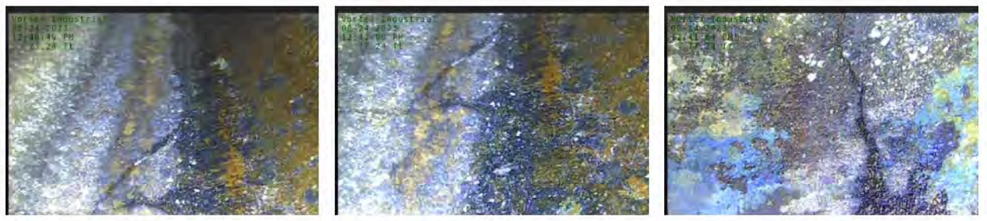
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	  

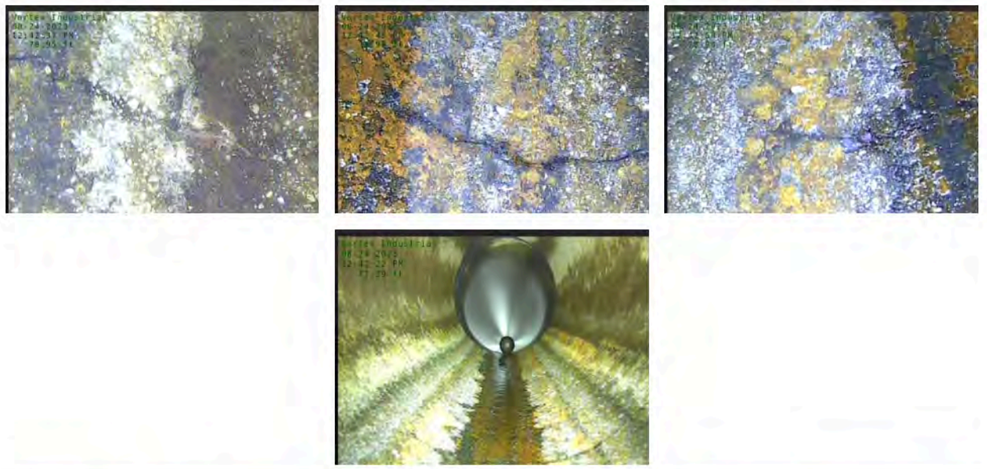
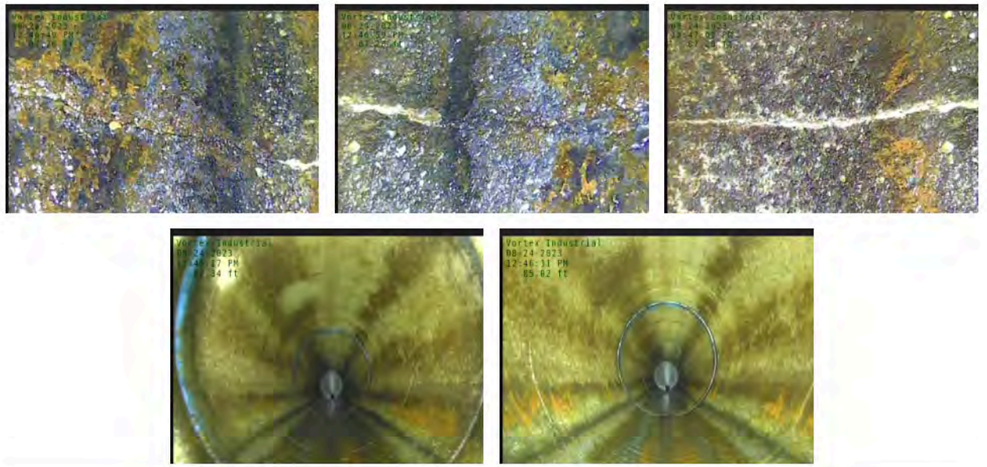
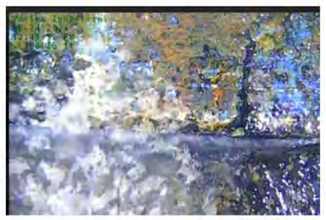
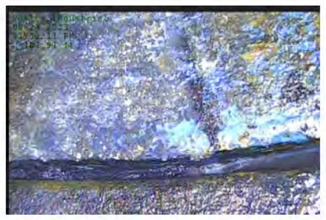
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Crack Multiple	Point	62.5	Structural	0	5-6	3	0	0	1	Crack Multiple	

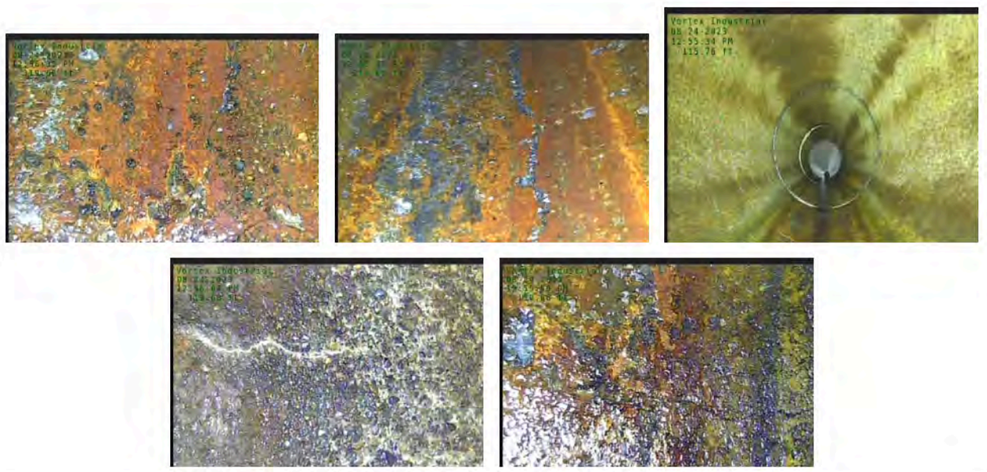
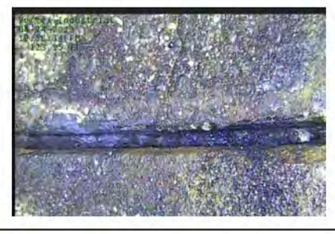
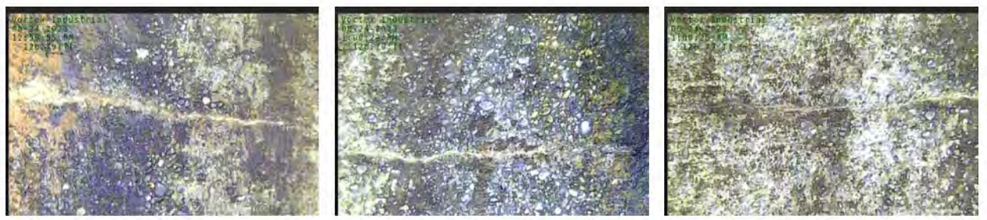
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
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	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

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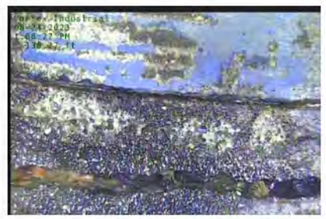
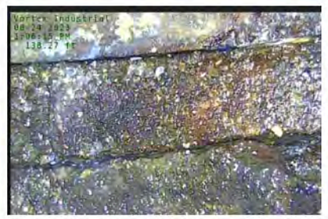
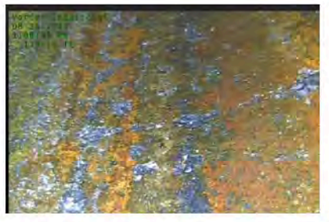
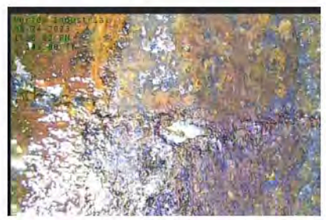
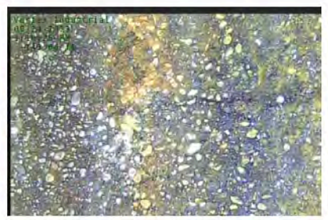
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	134.4	Structural	0	2	2	0	0	1	Crack Longitudinal	
Crack Circumferential	Point	138.3	Structural	0	12-12	1	0	0	2	Crack Circumferential	  
Crack Multiple	Point	139.1	Structural	0	5-7	3	0	0	1	Crack Multiple	 
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	 

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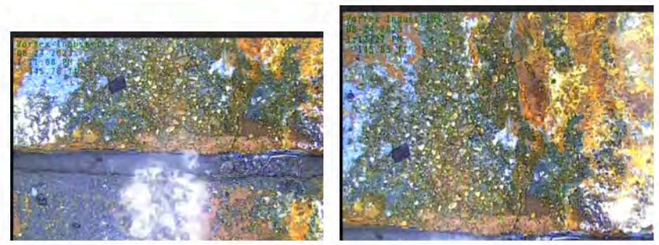
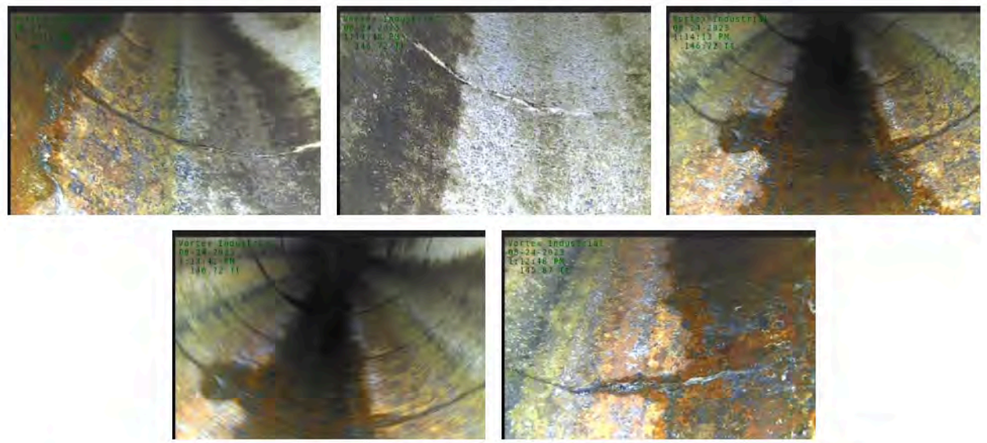
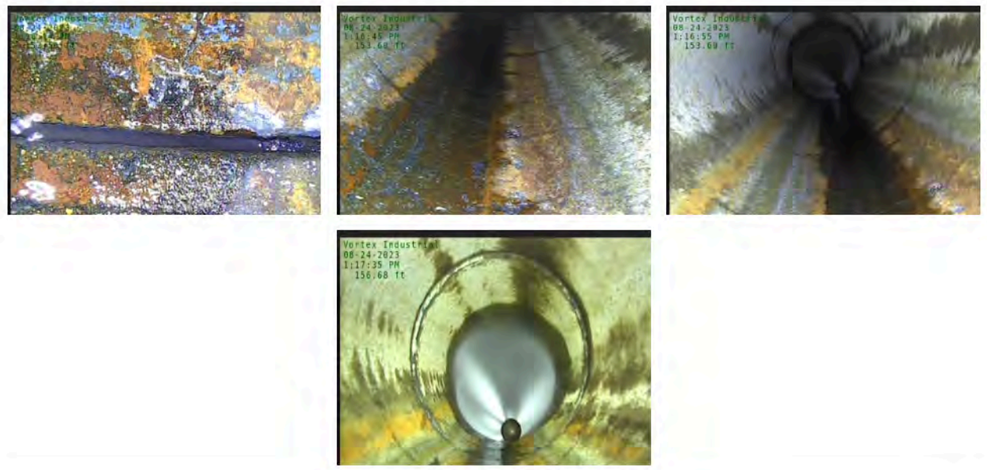
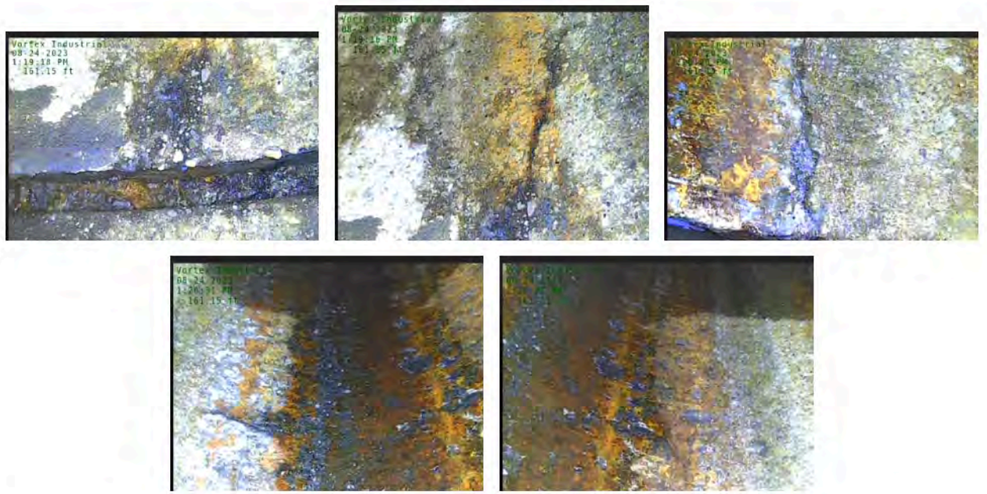
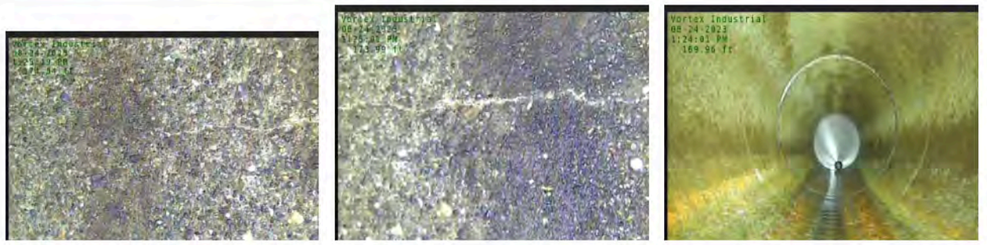
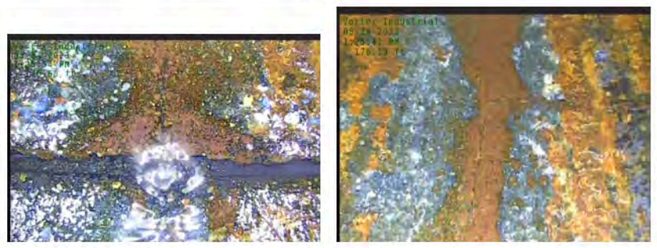
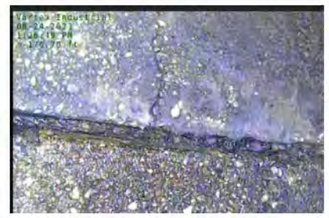
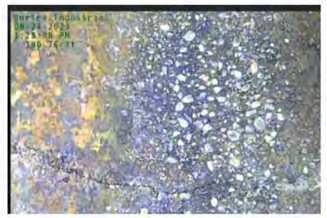
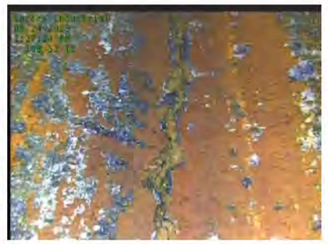
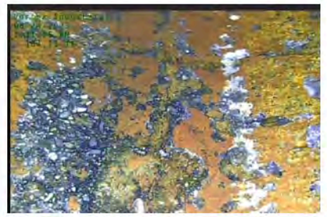
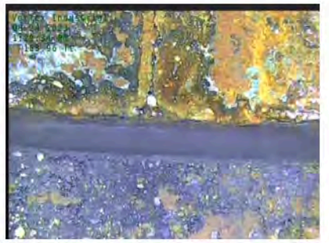
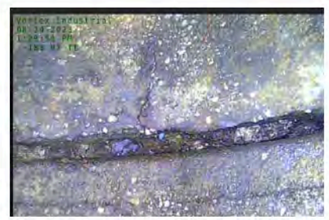
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	145.9	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Continuous	146.7 - 150	Structural	0	4-8	3	0	0	2	Crack Multiple	
Crack Multiple	Continuous	153.6 - 158.8	Structural	0	4-9	3	0	0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

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

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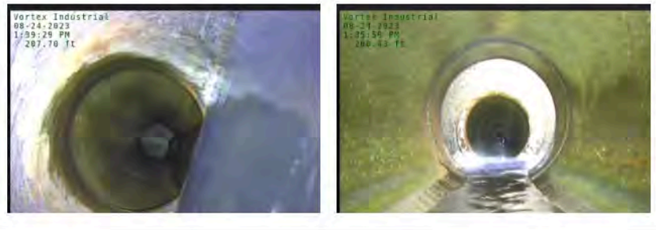
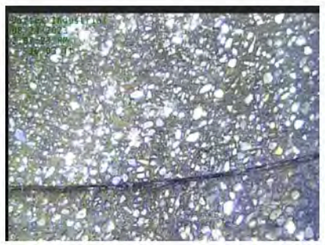
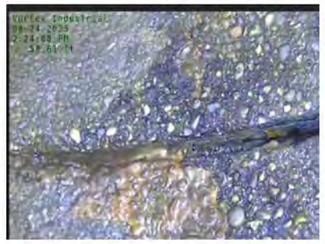
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Circumferential	Point	206	Structural	0	7-5	2	0	0	2	Fracture Circumferential	
Manhole	Point	207.7	Constructional	0		0	0	0	0	5-0	

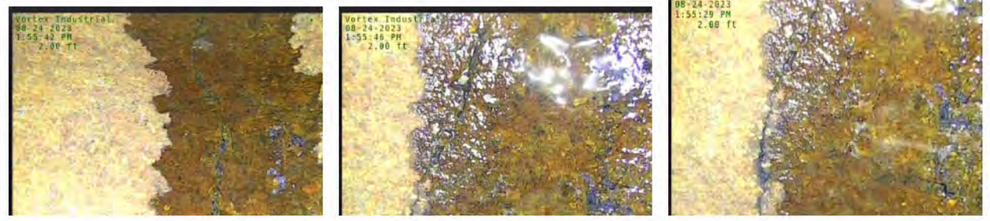
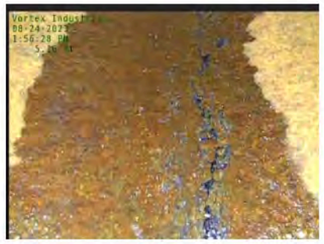
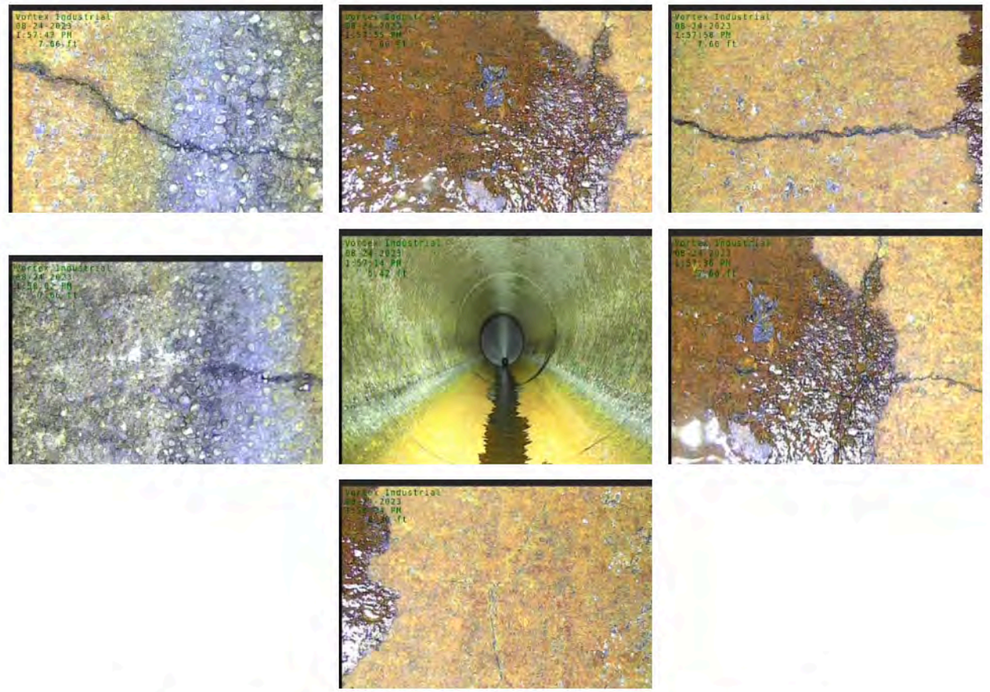
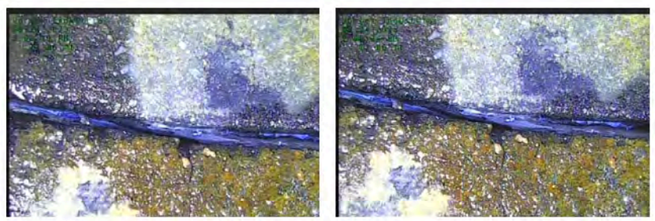
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

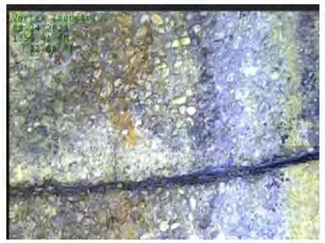
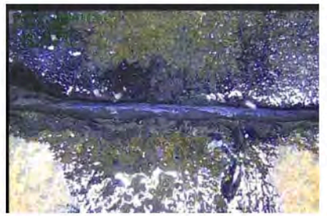
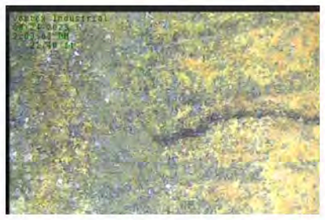
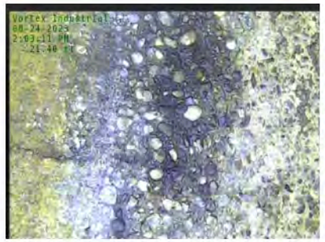
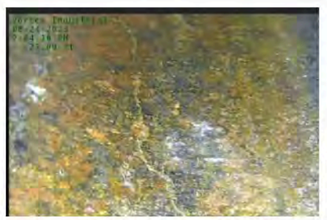
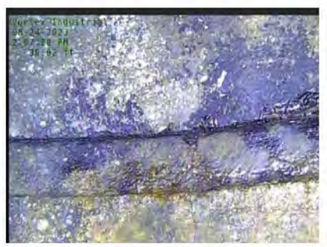
Setup ID	2023-30	Inspection Date	Aug 24, 2023	Inspected Length (ft)	82	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	14
Segment ID	5-O:5-M	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	1	Peak C/O&M Rating	0		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-0	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Aggregate Visible	Continuous	0 - 82	Structural	0	12-12	2	0	0	1	Surface Aggregate Visible	    

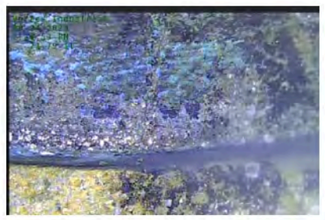
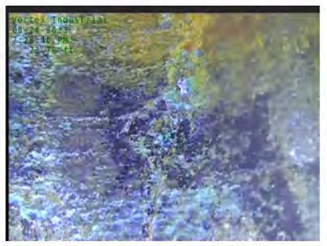
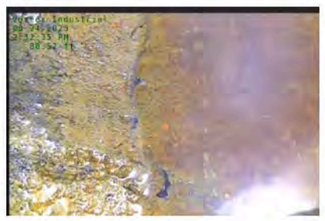
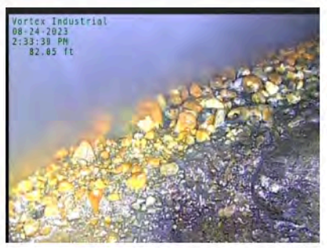
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	2	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	5.4	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	7.7	Structural	0	4-8	3	0	0	1	Crack Multiple	
Crack Longitudinal	Point	12.7	Structural	0	5	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	12.8	Constructional	0	9-10	3	0	0	1	Crack Multiple	 
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	     
Crack Longitudinal	Point	27.1	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	36	Structural	0	7	2	0	0	1	Crack Longitudinal	

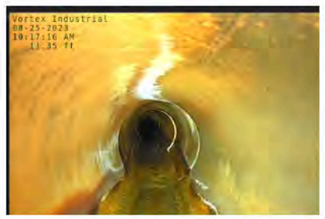
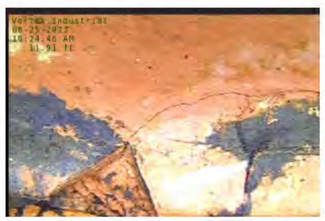
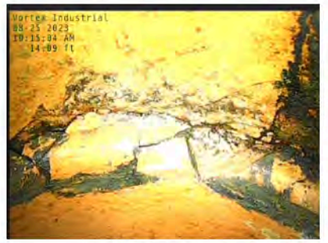
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	51.5	Structural	0	5	2	0	0	1	Crack Longitudinal	 
Crack Longitudinal	Point	51.5	Structural	0	7	2	0	0	1	Crack Longitudinal	 
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	 
Manhole	Point	82	Constructional	0		0	0	0	0	5-M	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-31	Inspection Date	Aug 25, 2023	Inspected Length (ft)	208.7	Defects Rated ≥3	5	Peak Structural Rating	4	Total PR Defects	96
Segment ID	B-1:B-3	Primary Pipe Material	VCP	Pipe Diameter (in)	10	Peak Prioritization Rating	4	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	B-1	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Crack Multiple	Point	2	Structural	0	11-1	3	0	0	2	Crack Multiple	    

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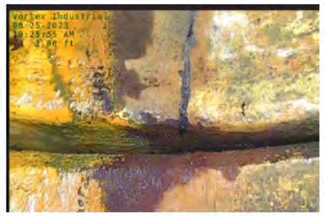
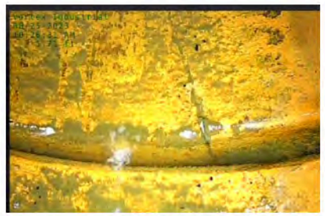
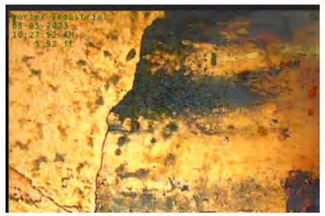
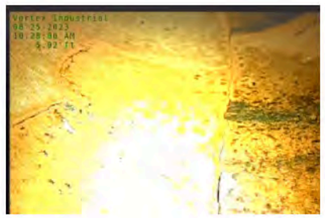
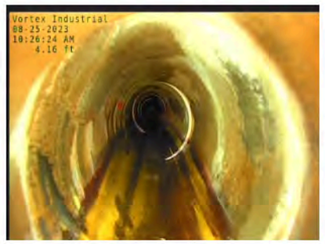
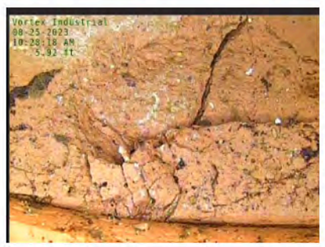
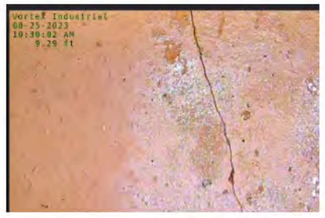
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	2	Structural	0	5	2	0	0	1	Crack Longitudinal	
Fracture Multiple	Point	5.7	Structural	0	6-10	3	0	0	3	Fracture Multiple	      
Crack Longitudinal	Point	9.3	Structural	0	12	2	0	0	1	Crack Longitudinal	  

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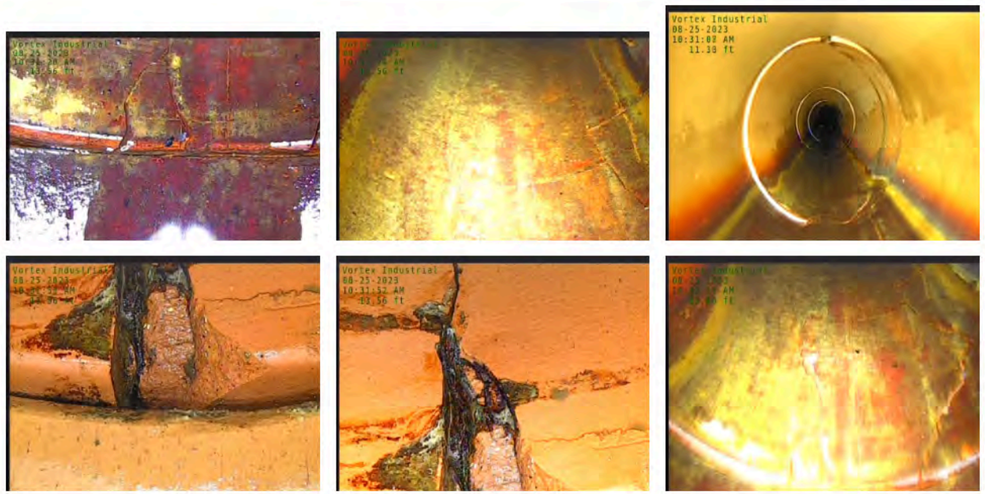
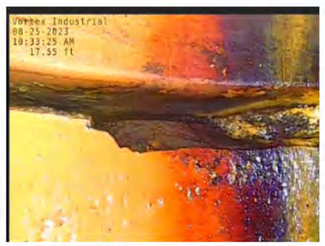
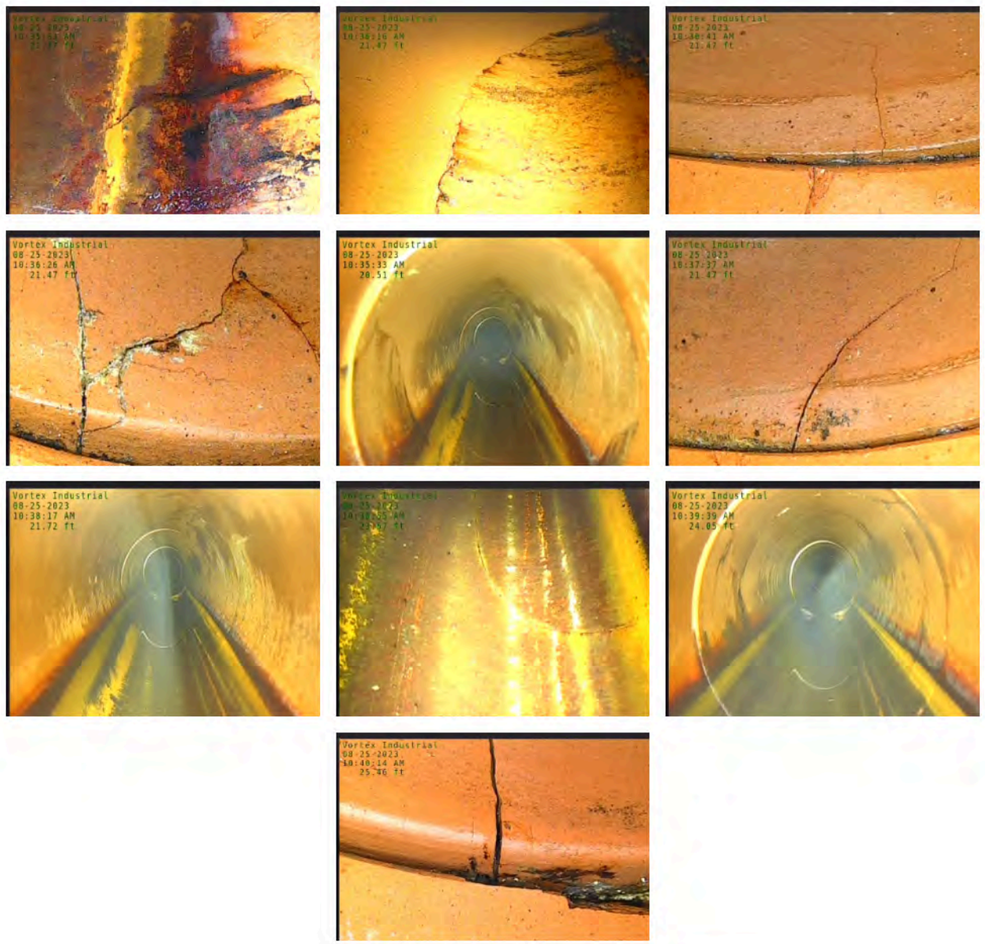
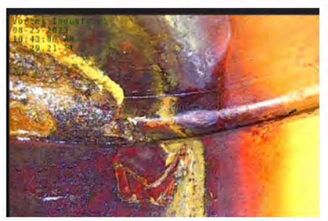
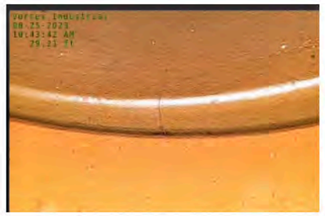
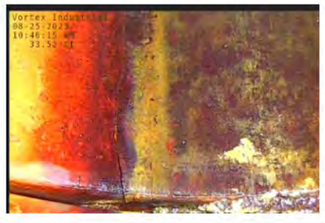
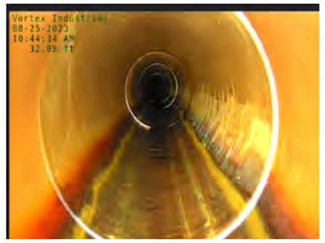
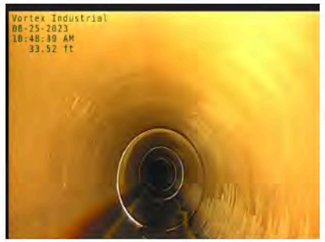
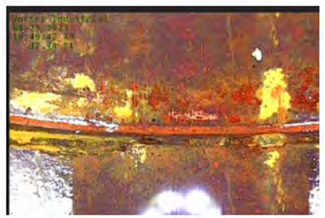
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Multiple	Point	13.6	Structural	0	12-12	3	0	0	3	Fracture Multiple	
Crack Multiple	Point	17.6	Structural	0	5-6	3	0	0	1	Crack Multiple	
Crack Multiple	Point	17.6	Structural	0	10-1	3	0	0	2	Crack Multiple	
Fracture Spiral	Point	17.6	Structural	0	6-7	3	0	0	2	Fracture Spiral	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Continuous	21.5 - 26	Structural	0	12-12	3	0	0	2	Crack Multiple	
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	29.2	Structural	0	2	2	0	0	1	Crack Longitudinal	
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	
Crack Longitudinal	Continuous	33.5 - 36.8	Structural	0	10	2	0	0	1	Crack Longitudinal	  
Crack Spiral	Point	37.4	Structural	0	3-5	2	0	0	1	Crack Spiral	 
Crack Longitudinal	Point	37.4	Structural	0	6	2	0	0	1	Crack Longitudinal	

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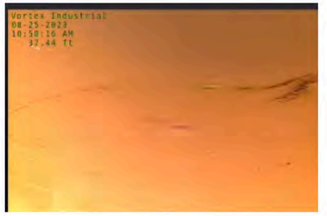
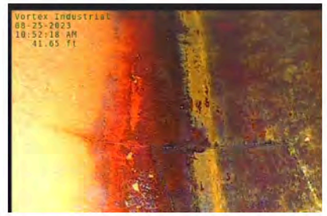
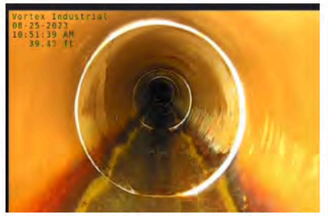
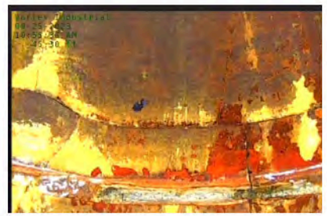
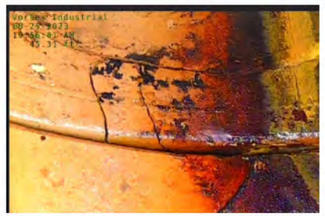
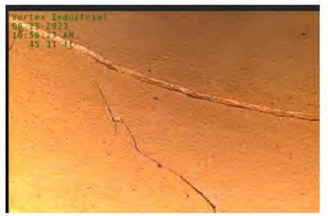
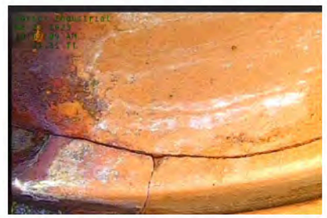
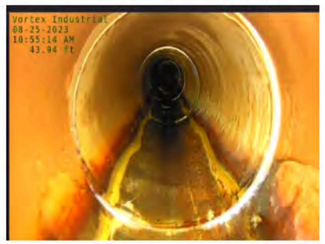
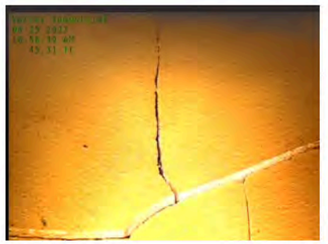
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Circumferential	Point	37.4	Structural	0	7-8	2	0	0	1	Fracture Circumferential	 
Crack Spiral	Point	37.4	Structural	0	8-10	2	0	0	1	Crack Spiral	 
Crack Multiple	Point	41.7	Structural	0	5-11	3	0	0	2	Crack Multiple	  
Fracture Multiple	Point	45.3	Structural	0	12-12	3	0	0	2	Fracture Multiple	      

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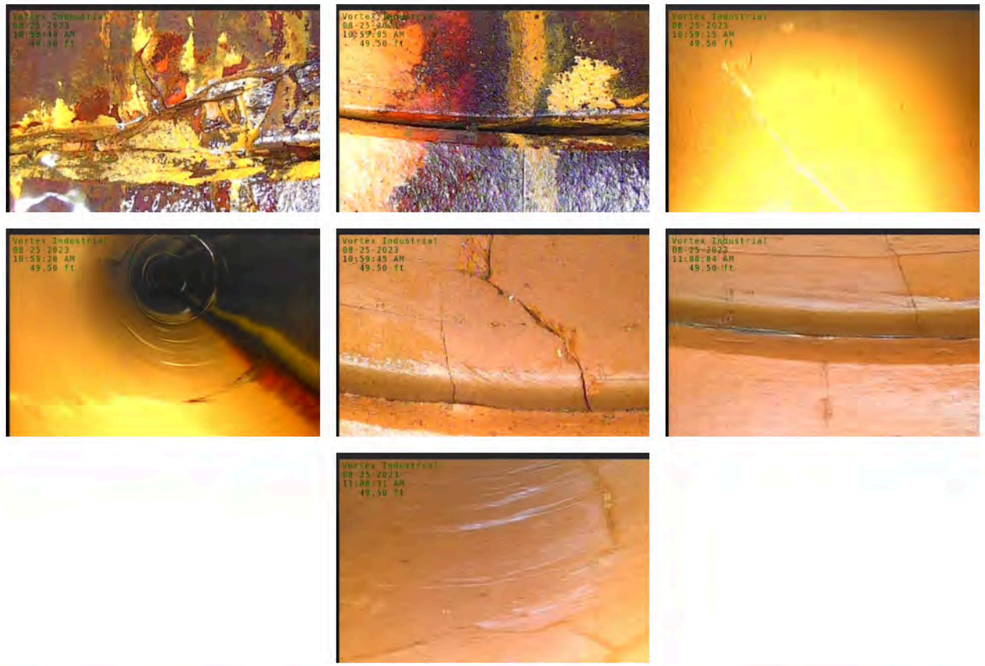
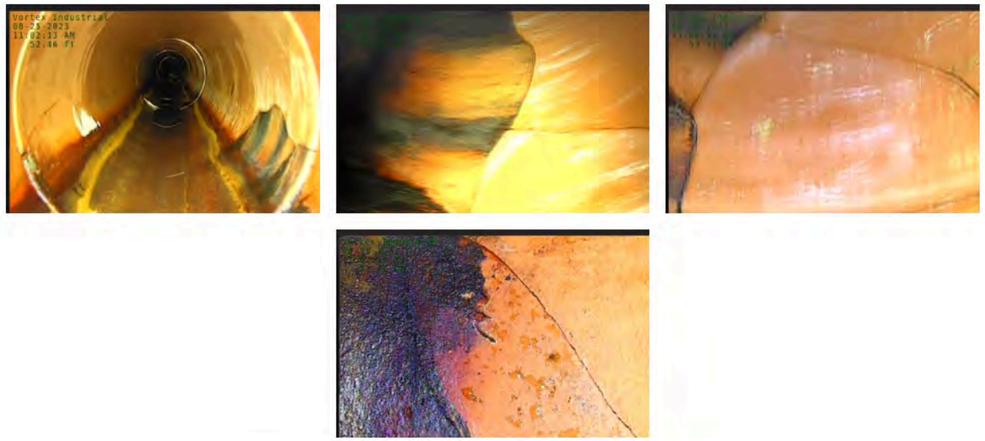
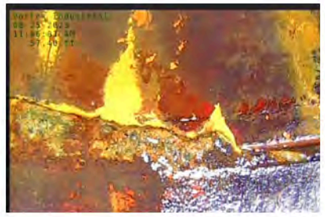
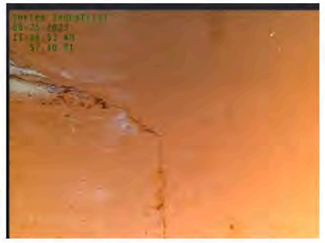
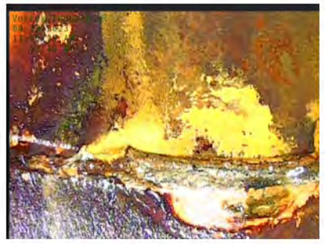
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	49.5	Structural	0	12-12	3	0	0	2	Crack Multiple	
Fracture Multiple	Point	53.4	Structural	0	12-12	3	0	0	3	Fracture Multiple	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Fracture Spiral	Point	57.4	Structural	0	10-11	3	0	0	2	Fracture Spiral	
Crack Longitudinal	Point	61.7	Structural	0	10	2	0	0	1	Crack Longitudinal	

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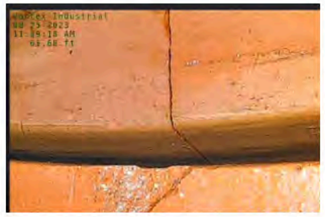
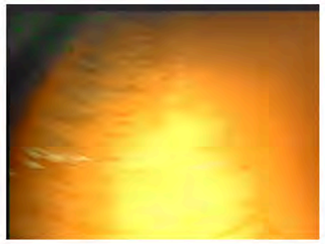
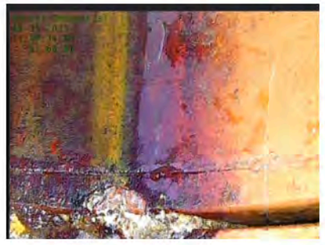
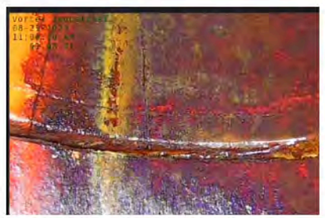
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	61.7	Structural	0	3-5	3	0	0	2	Crack Longitudinal	   
Crack Longitudinal	Point	61.7	Structural	0	6	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	61.7	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	65.5	Structural	0	7	2	0	0	1	Crack Longitudinal	
Fracture Spiral	Point	65.5	Structural	0	2-3	3	0	0	2	Fracture Spiral	

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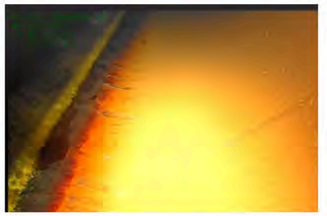
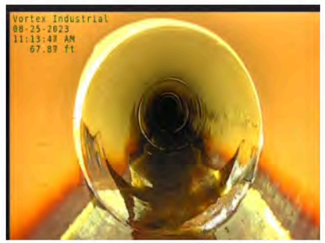
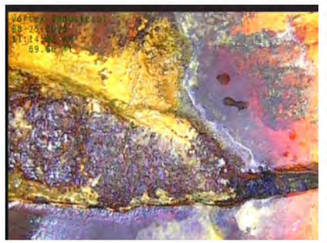
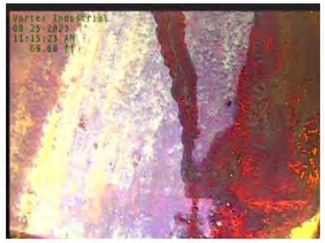
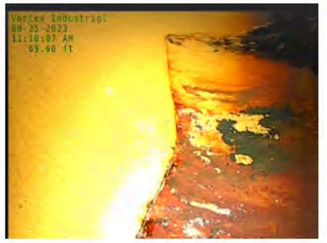
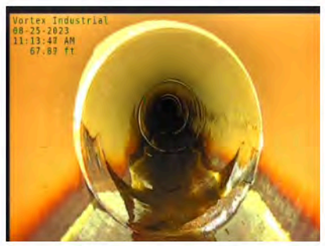
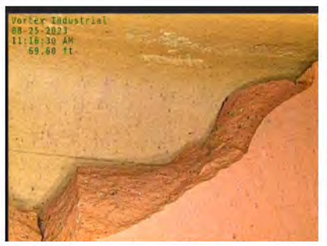
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	65.5	Structural	0	2-5	2	0	0	1	Crack Spiral	 
Fracture Multiple	Point	69.6	Structural	0	5-6	4	0	0	2	Fracture Multiple	  
Fracture Spiral	Point	69.6	Structural	0	7-9	3	0	0	2	Fracture Spiral	  
Fracture Circumferential	Point	69.6	Structural	0	10-11	2	0	0	2	Fracture Circumferential	   

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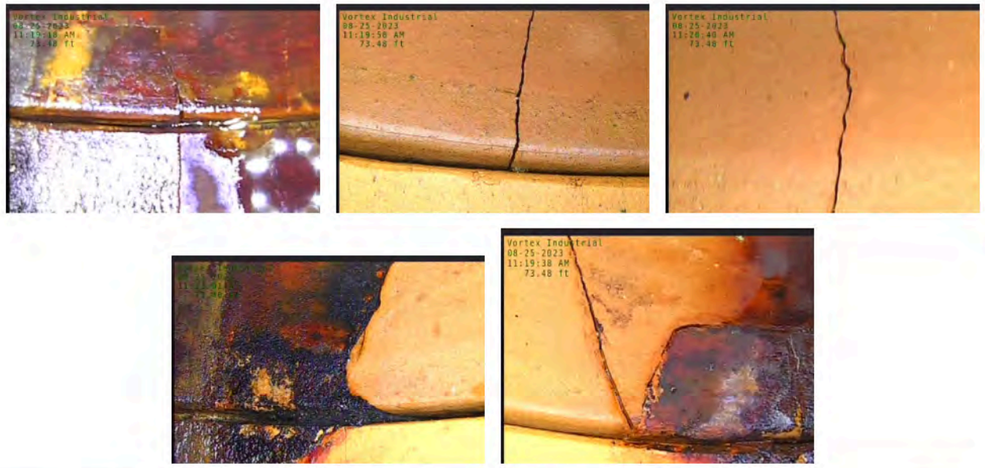
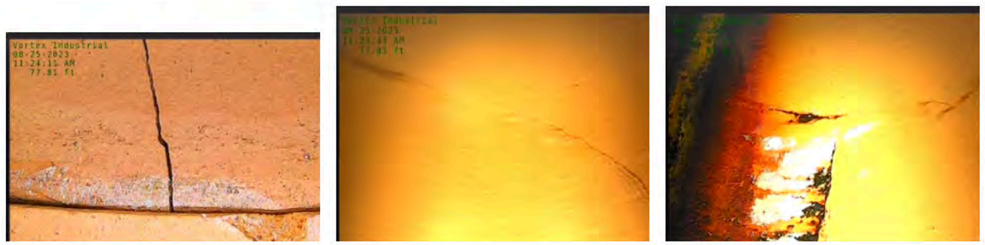
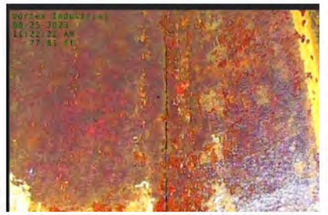
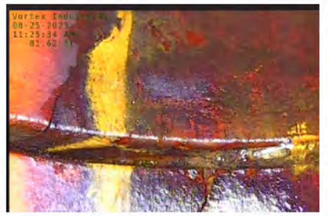
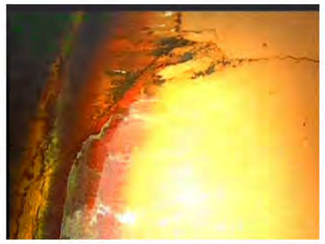
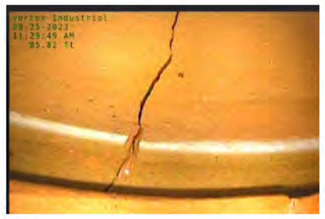
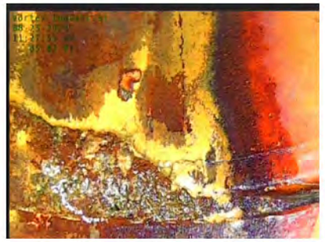
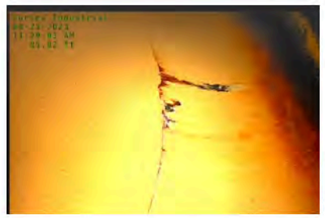
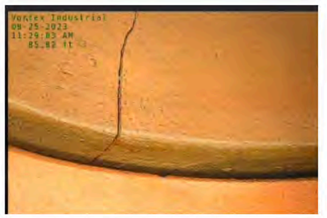
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	69.6	Structural	0	3-4	3	0	0	2	Crack Multiple	
Crack Multiple	Point	73.5	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Multiple	Point	77.8	Structural	0	12-5	2	0	0	2	Crack Multiple	
Crack Longitudinal	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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Fracture Multiple	Point	81.6	Structural	0	2-5	3	0	0	2	Fracture Multiple	  
Crack Longitudinal	Point	85.8	Structural	0	1	2	0	0	2	Crack Longitudinal	
Deposits Attached Encrustation	Point	85.8	O&M	10	5-7	0	2	0	0	Deposits Attached Encrustation	  
Crack Longitudinal	Point	85.8	Structural	0	9	2	0	0	2	Crack Longitudinal	 
Crack Longitudinal	Point	85.8	Structural	0	4	2	0	0	1	Crack Longitudinal	

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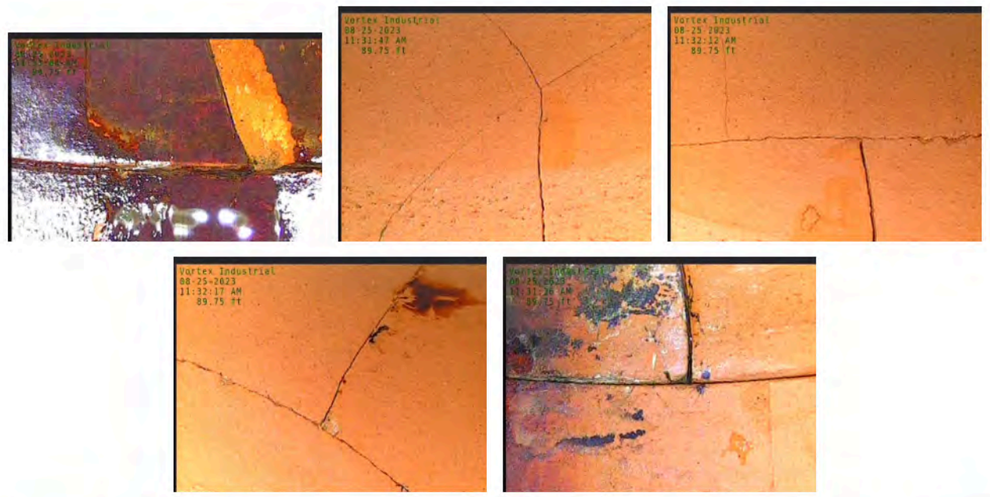
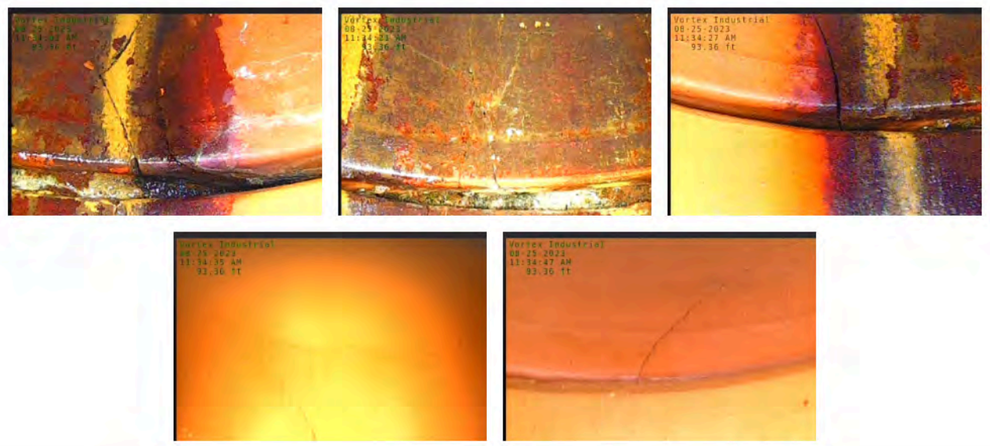
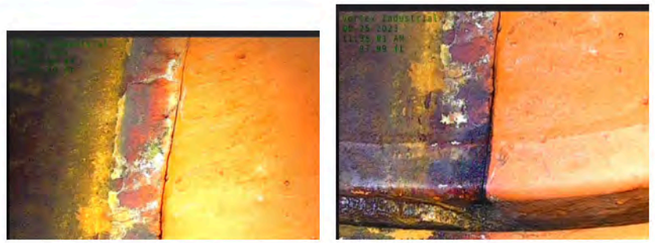
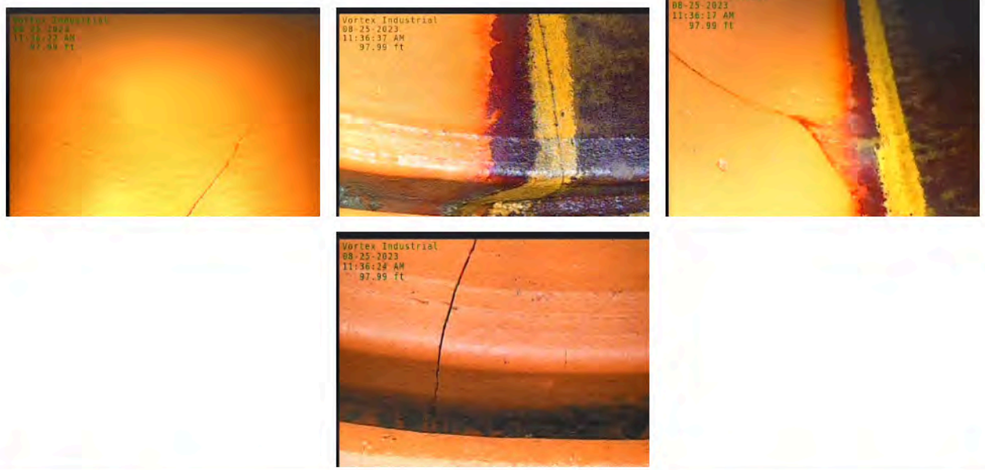
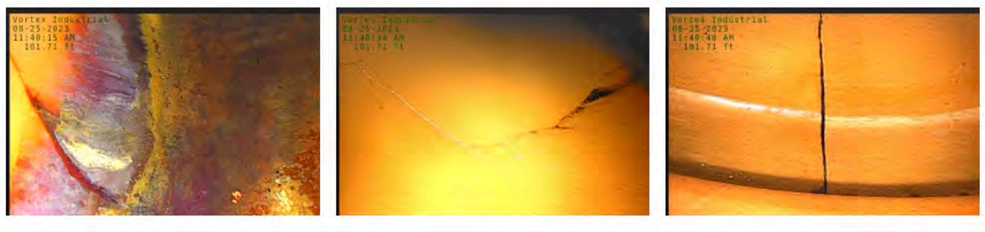
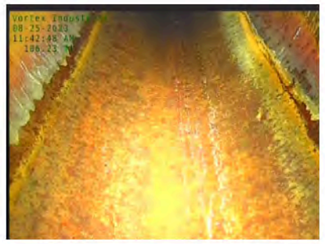
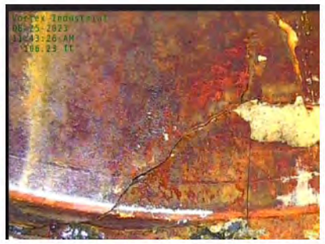
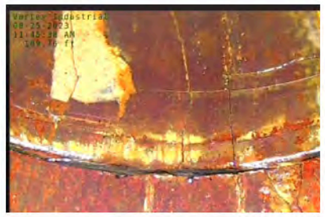
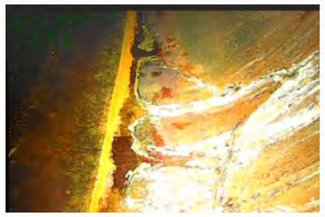
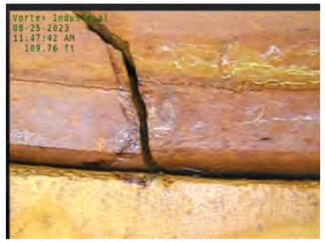
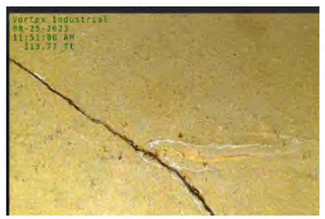
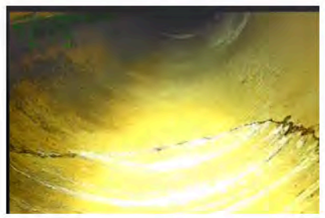
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	89.6	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Multiple	Point	93.4	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	98	Structural	0	5	2	0	0	1	Crack Longitudinal	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Spiral	Point	98	Structural	0	7-11	3	0	0	1	Crack Spiral	
Crack Multiple	Point	101.7	Structural	0	6-12	3	0	0	2	Crack Multiple	
Deposits Settled Hard/Compacted	Point	101.7	O&M	10	6-7	0	2	0	0	Deposits Settled Hard/Compacted	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	106.2	Structural	0	5-7	3	0	0	2	Crack Multiple	   
Fracture Multiple	Point	109.8	Structural	0	12-12	3	0	0	3	Fracture Multiple	     
Crack Multiple	Point	113.8	Structural	0	12-12	3	0	0	2	Crack Multiple	   

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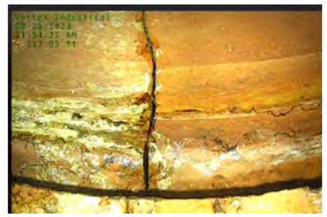
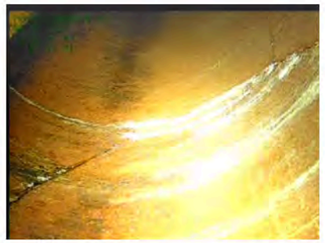
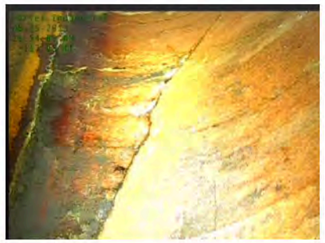
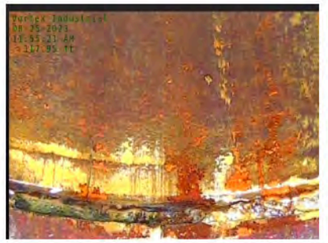
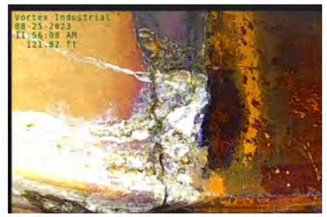
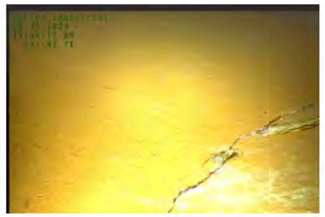
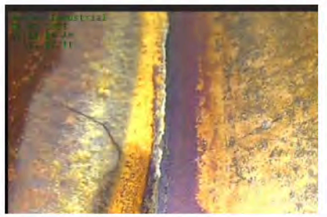
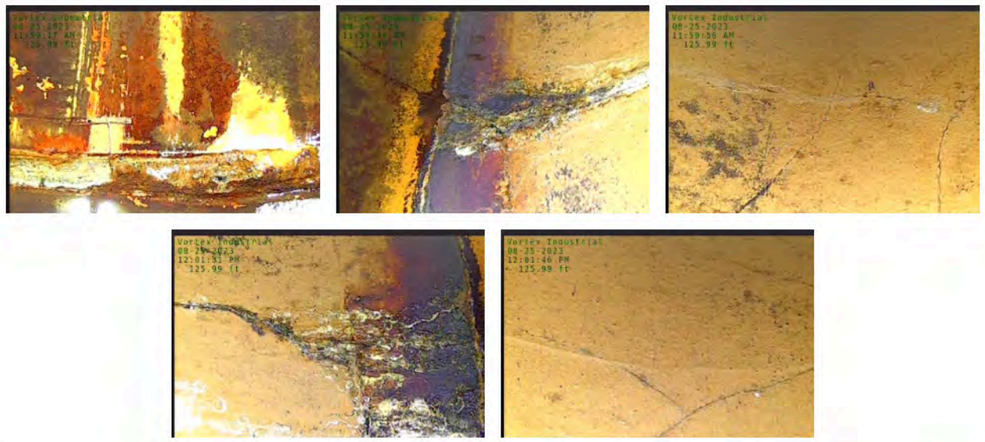
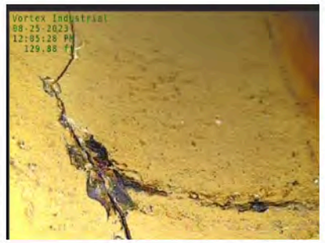
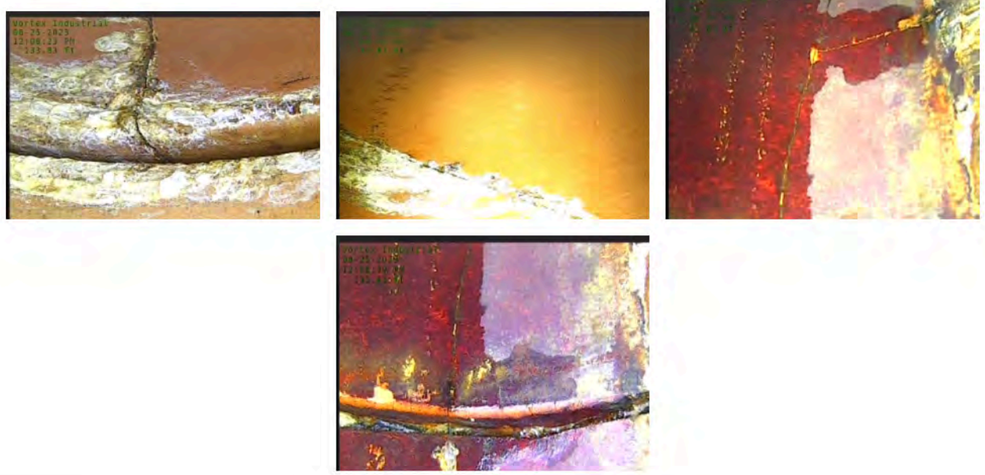
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	118	Structural	0	12-6	3	0	0	2	Crack Multiple	  
Crack Spiral	Point	118	Structural	0	6-8	2	0	0	1	Crack Spiral	 
Joint Offset Medium	Point	121.8	Structural	0		3	0	0	1	Joint Offset Medium	
Crack Multiple	Point	121.8	Structural	0	12-12	3	0	0	2	Crack Multiple	    

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 
Crack Multiple	Point	133.8	Structural	0	2-6	2	0	0	2	Crack Multiple	

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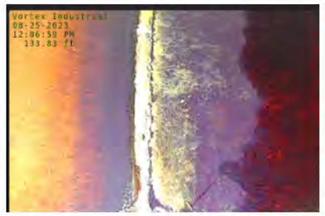
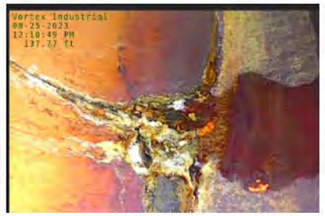
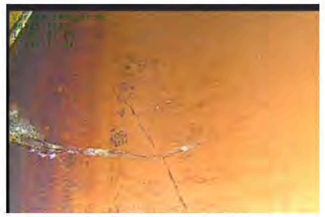
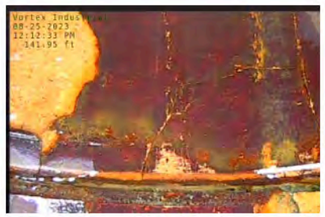
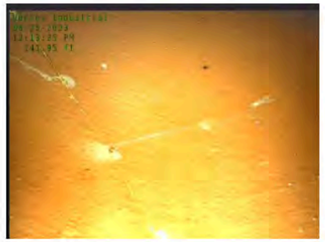
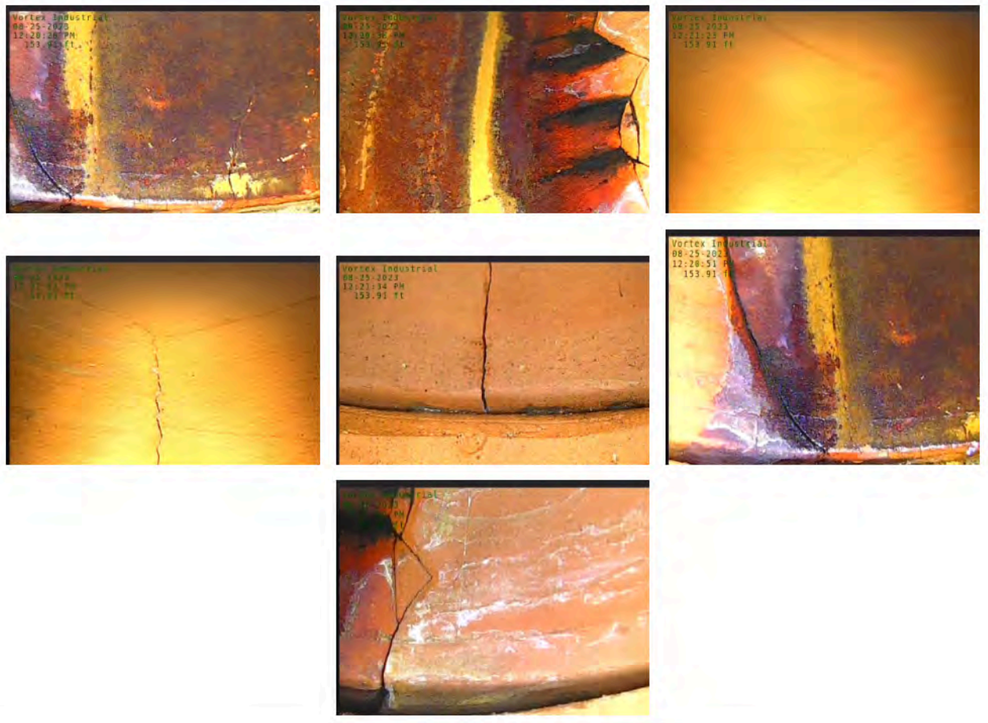
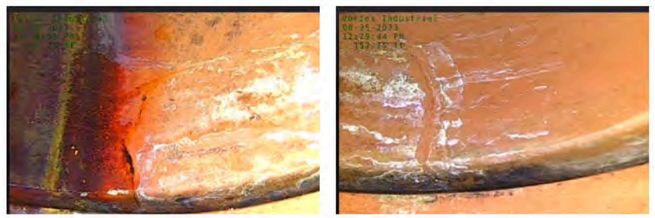
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	133.8	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	133.8	Structural	0	9	2	0	0	1	Crack Longitudinal	 
Crack Circumferential	Point	134.4	Structural	0	7-10	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	137.8	Structural	0	4-9	3	0	0	1	Crack Multiple	   

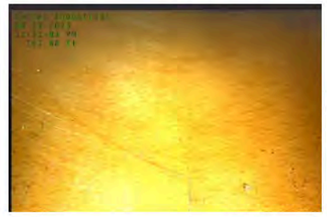
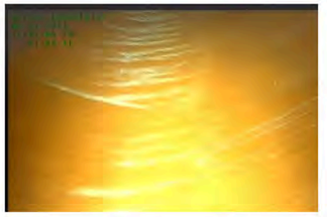
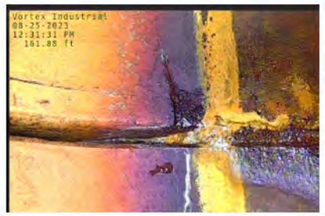
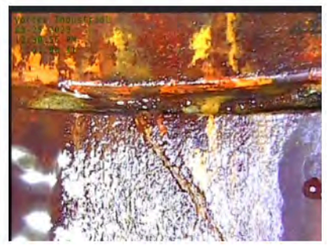
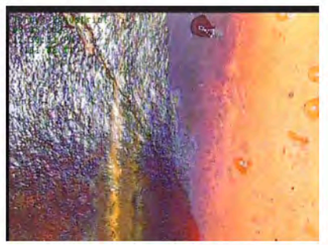
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	142	Structural	0	12-12	3	0	0	1	Crack Multiple	   
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	  
Crack Longitudinal	Point	149.7	Structural	0	3	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	149.7	Structural	0	2	2	0	0	1	Crack Longitudinal	

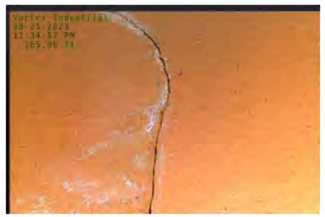
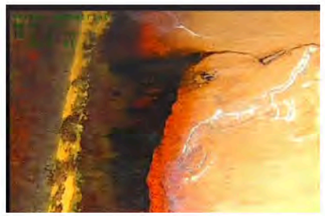
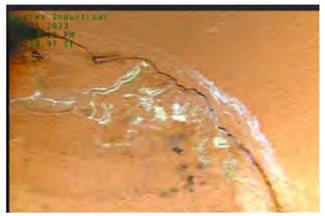
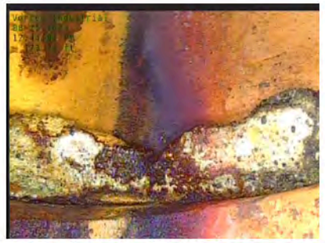
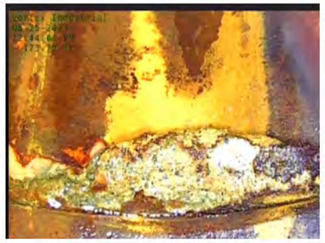
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	153.9	Structural	0	12-12	3	0	0	2	Crack Multiple	
Crack Longitudinal	Point	157.7	Structural	0	8	2	0	0	1	Crack Longitudinal	
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	

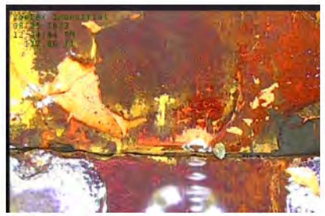
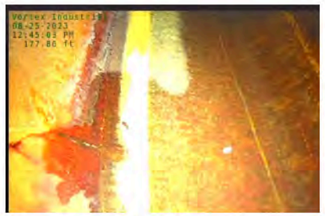
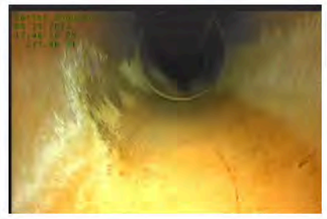
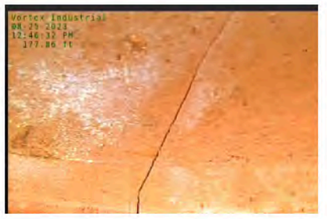
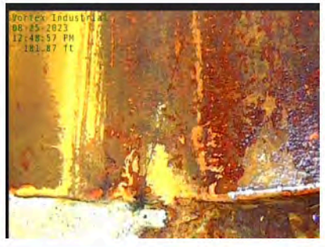
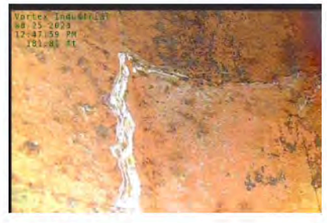
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	157.7	Structural	0	7	2	0	0	1	Crack Longitudinal	
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	
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	  

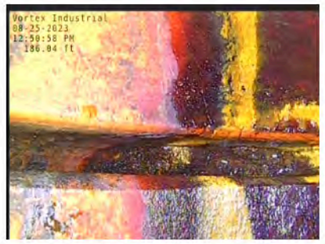
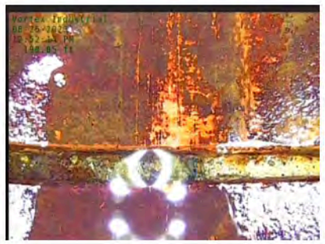
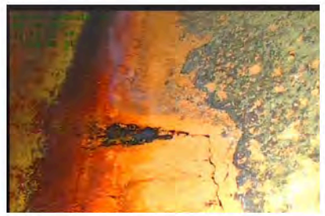
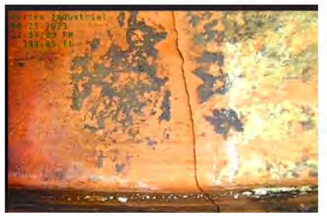
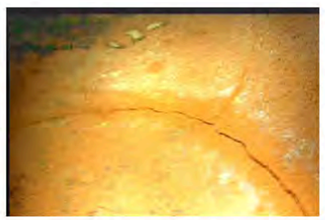
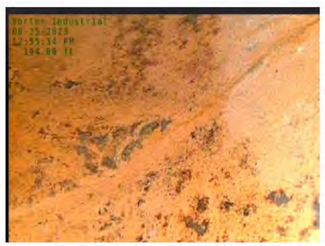
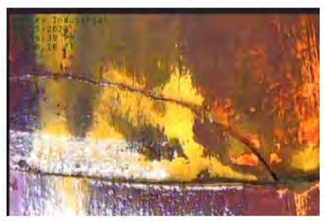
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Multiple	Point	166	Structural	0	7-9	3	0	0	1	Crack Multiple	
Crack Multiple	Point	166	Structural	0	3-5	2	0	0	1	Crack Multiple	  
Crack Multiple	Point	170	Structural	0	2-5	3	0	0	1	Crack Multiple	  
Crack Longitudinal	Point	170	Structural	0	7	2	0	0	1	Crack Longitudinal	
Deposits Attached Encrustation	Point	173.8	O&M	10	4-6	0	2	0	0	Deposits Attached Encrustation	  

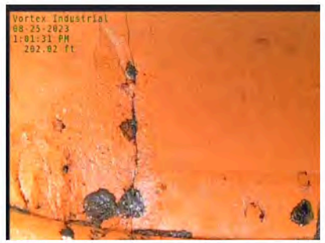
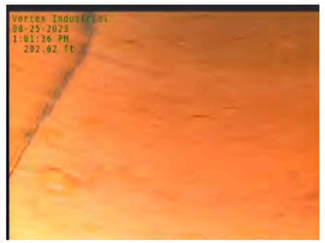
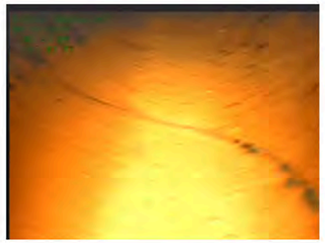
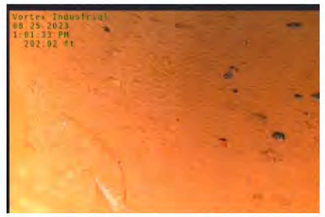
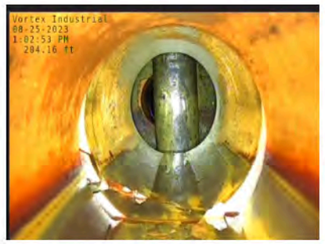
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	173.8	Structural	0	8	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	177.9	Structural	0	6-9	3	0	0	1	Crack Multiple	   
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	  
Crack Multiple	Point	181.9	Structural	0	7-8	3	0	0	1	Crack Multiple	 

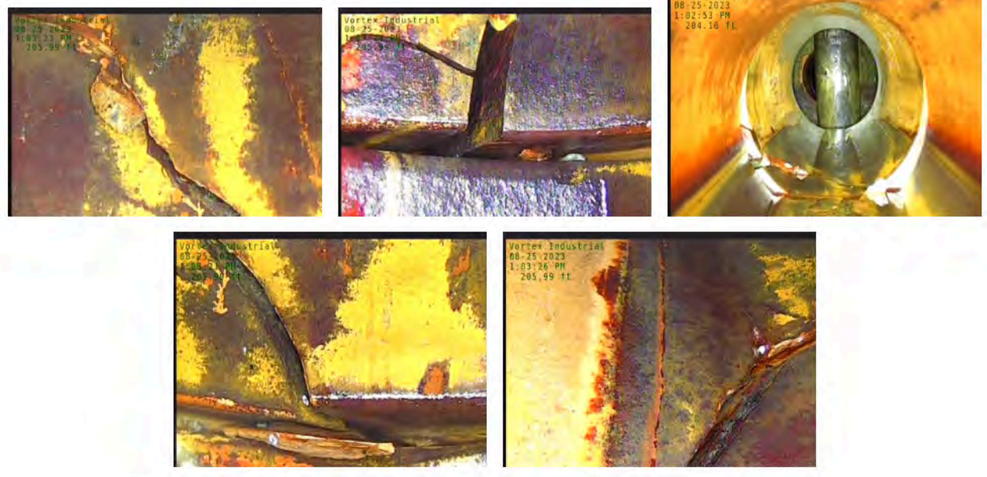
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	186	Structural	0	7	2	0	0	1	Crack Longitudinal	
Crack Spiral	Point	190.1	Structural	0	6-10	2	0	0	2	Crack Spiral	  
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	  
Crack Spiral	Point	198.1	Structural	0	6-7	1	0	0	1	Crack Spiral	 

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Longitudinal	Point	198.1	Structural	0	4	2	0	0	1	Crack Longitudinal	
Crack Multiple	Point	202	Structural	0	11-4	3	0	0	2	Crack Multiple	   
Crack Longitudinal	Point	202	Structural	0	11	2	0	0	1	Crack Longitudinal	 
Joint Offset Medium	Point	206	Structural	0		3	0	0	2	Joint Offset Medium	

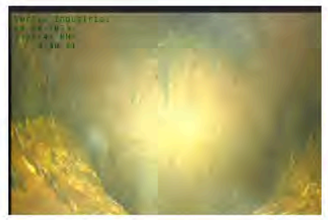
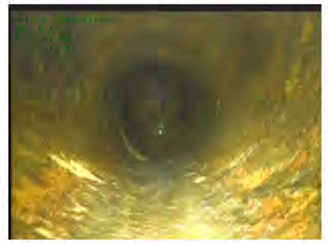
 C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	
Manhole	Point	208.7	Constructional	0		0	0	0	0	B-3	

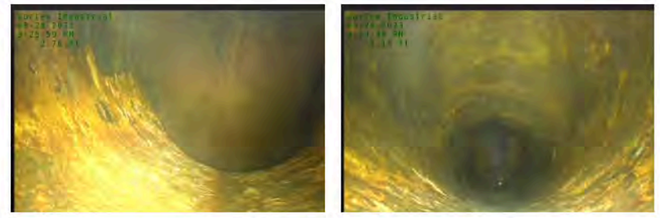
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-32	Inspection Date	Aug 28, 2023	Inspected Length (ft)	21.5	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	1
Segment ID	D-21:D-22	Primary Pipe Material	SP	Pipe Diameter (in)	30	Peak Prioritization Rating	2	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	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 - 21.5	Structural	0	12-12	3	0	0	2	Surface Damage Corrosion	  

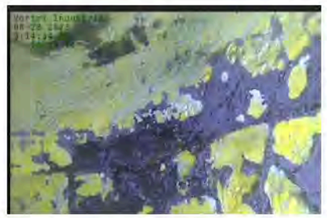
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Line Down	Point	5.1	Constructional	100		0	4	4	0	Line Down	
Manhole	Point	21.5	Constructional	0		0	0	0	0	D-22	

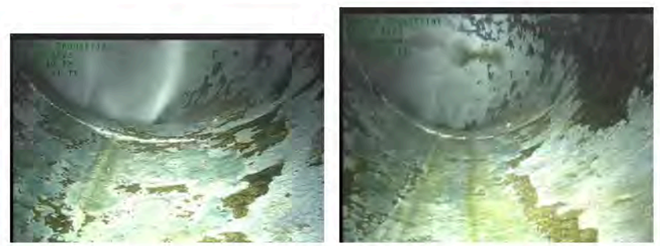
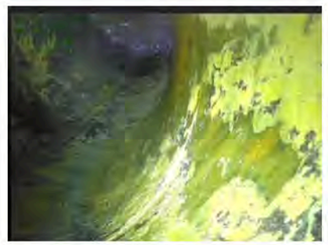
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-33	Inspection Date	Aug 28, 2023	Inspected Length (ft)	16.2	Defects Rated ≥3	0	Peak Structural Rating	2	Total PR Defects	1
Segment ID	D-20C:D-22	Primary Pipe Material	SP	Pipe Diameter (in)	30	Peak Prioritization Rating	1	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	D-20C	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Surface Spalling	Continuous	0 - 16.2	Structural	0	12-12	2	0	0	1	Surface Damage Surface Spalling	  

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-34	Inspection Date	Aug 24, 2023	Inspected Length (ft)	53.4	Defects Rated ≥3	0	Peak Structural Rating	1	Total PR Defects	1
Segment ID	5-M:D-12	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-M	
Miscellaneous Water Level	Point	52.6	Miscellaneous	10		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	52.6 - 106	Structural	10	12-12	1	0	0	2	Surface Damage Roughness Increased	 

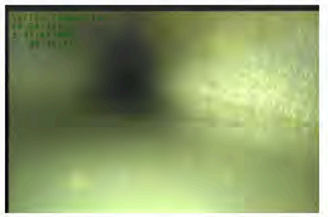
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

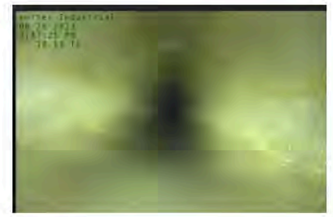
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-35	Inspection Date	Aug 26, 2023	Inspected Length (ft)	103.4	Defects Rated ≥3	0	Peak Structural Rating	2	Total PR Defects	1
Segment ID	5-M:D-12	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	4		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-M	
Miscellaneous Water Level	Point	0	Miscellaneous	30		0	0	0	0	Water Level at Start of Survey	
Surface Damage Roughness Increased	Continuous	0 - 103.4	O&M	0	12-12	2	0	0	2	Surface Damage Roughness Increased	   

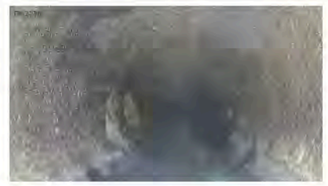
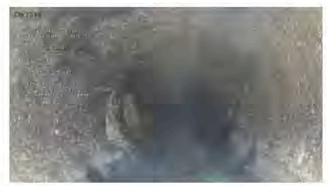
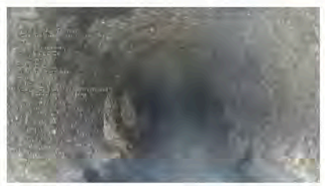
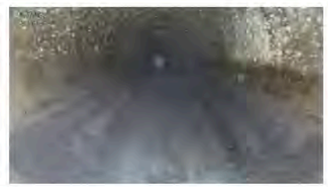
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

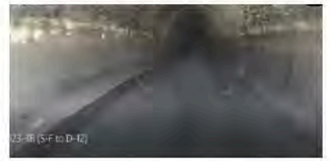
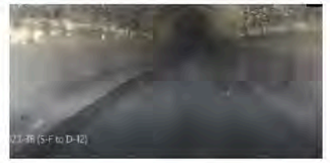
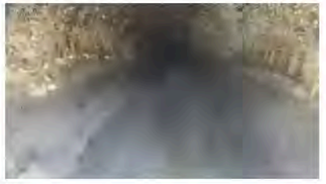
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

Setup ID	2023-36	Inspection Date	Jan 17, 2024	Inspected Length (ft)	136.9	Defects Rated ≥3	2	Peak Structural Rating	4	Total PR Defects	19
Segment ID	5-F:D-12	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	3	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Structural	0		0	0	0	0	5-F	
Miscellaneous Water Level	Point	0	Miscellaneous	0		0	0	0	0	Water Level at Start of Survey	
Surface Damage Aggregate Visible	Continuous	0 - 136.9	Structural	0	8-4	2	0	0	1	Surface Damage Aggregate Visible	   
Surface Damage Aggregate Missing	Point	5.6	Structural	0	8-9	4	0	0	2	Surface Damage Aggregate Missing	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

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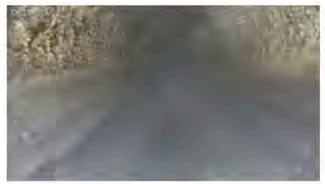
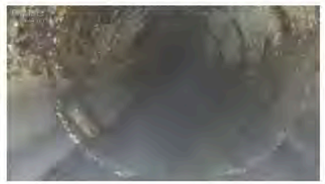
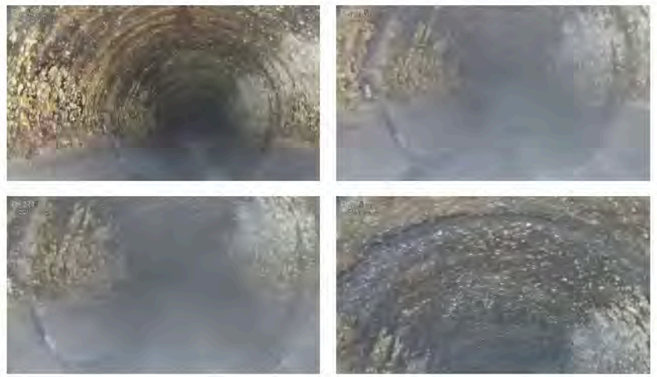
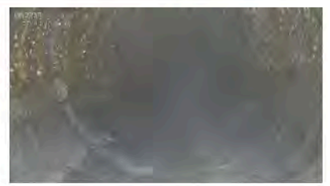
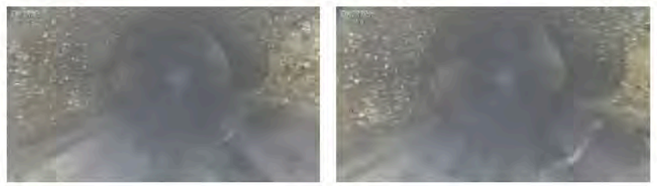
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Crack Circumferential	Point	53.5	Structural	0	8-10	1	0	0	1	Crack Circumferential	
Crack Multiple	Point	59.7	Structural	0	7-10	3	0	0	1	Crack Multiple	 
Crack Circumferential	Point	63.8	Structural	0	7-8	1	0	0	1	Crack Circumferential	 
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

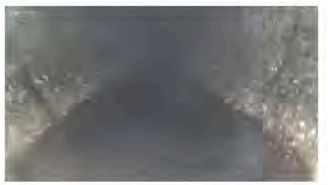
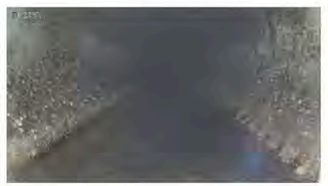
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

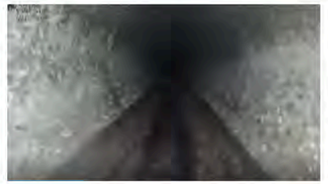
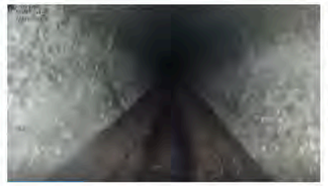
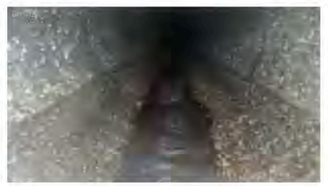
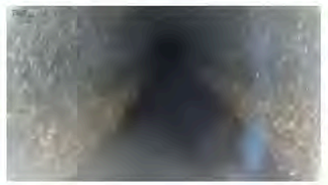
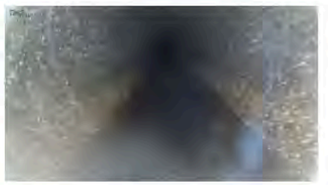
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Process Segment Inspection Summary Report

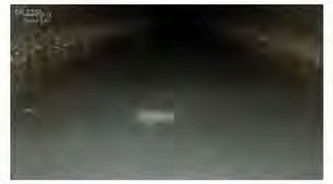
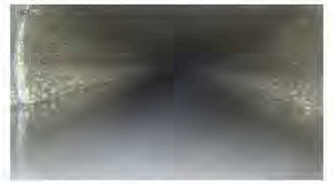
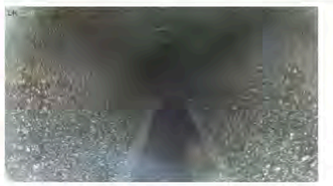
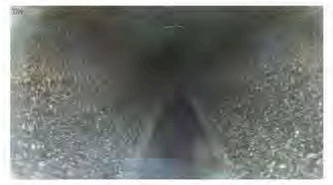
Setup ID	2023-37	Inspection Date	Jan 17, 2024	Inspected Length (ft)	203	Defects Rated ≥3	0	Peak Structural Rating	3	Total PR Defects	5
Segment ID	5-M:D-12	Primary Pipe Material	RCP	Pipe Diameter (in)	21	Peak Prioritization Rating	2	Peak C/O&M Rating	2		

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	0	Constructional	0		0	0	0	0	5-M	
Miscellaneous Water Level	Point	0	Miscellaneous	20		0	0	0	0	Water Level at Start of Survey	 
Surface Damage Roughness Increased	Continuous	0 - 164.1	Structural	0	12-12	1	0	0	2	Surface Damage Roughness Increased	    

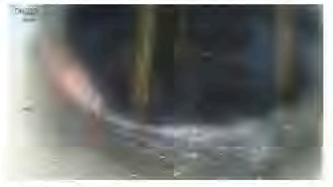
C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	 

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
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	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

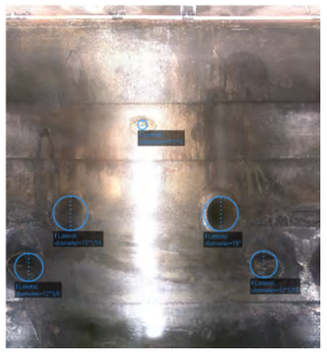
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	PR	Remarks	Photos
Manhole	Point	203	Constructional	0		0	0	0	0	D-12	

C = Construction; O&M = Operation and Maintenance; PR = Prioritization Rating; SR = Structural Rating

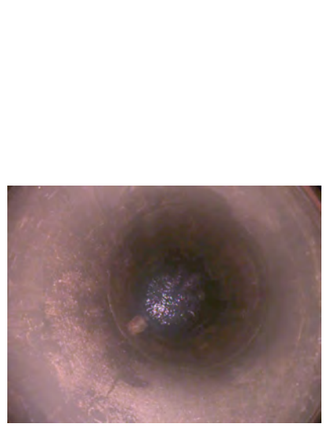
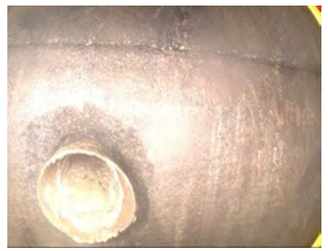
Attachment 3: Process Structure Inspection Summary Reports

Process Structure Inspection Summary Report

Setup ID	2023-ST-1	Inspection date	Aug 9, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7.9
Structure ID	D-1.1	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	12.4	Total ER Defects	5

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

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

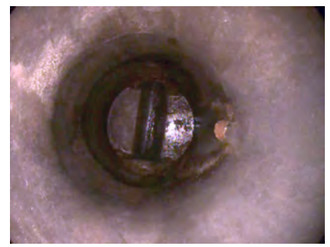
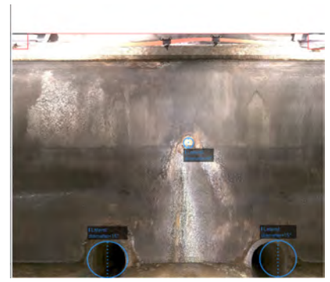
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-2	Inspection date	Aug 9, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	8
Structure ID	D-2.1	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Aggregate Visible	Point	3	Structural	0	3	2	0	0	1	Surface Damage Aggregate Visible	 

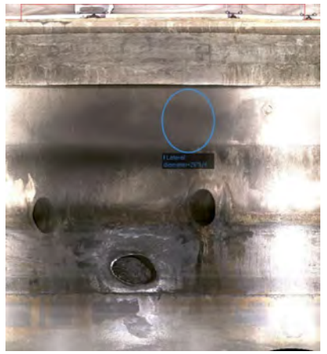
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

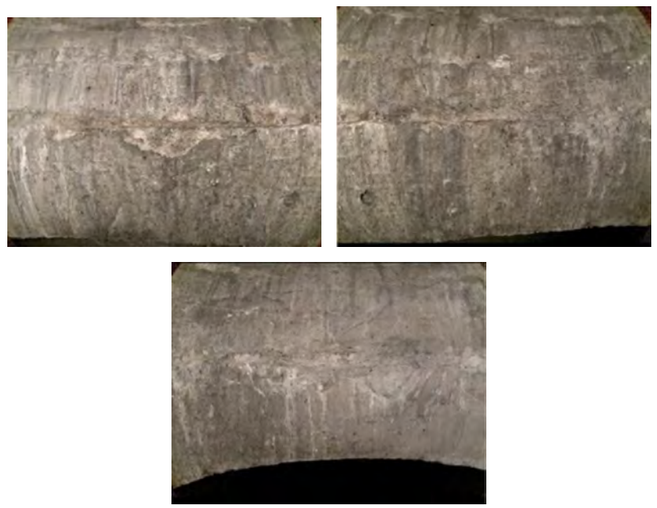
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

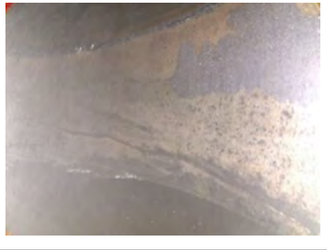
Setup ID	2023-ST-3	Inspection date	Aug 9, 2023	Defects Rated ≥3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	7.8
Structure ID	D-3.1	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	11.6	Total ER Defects	6

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

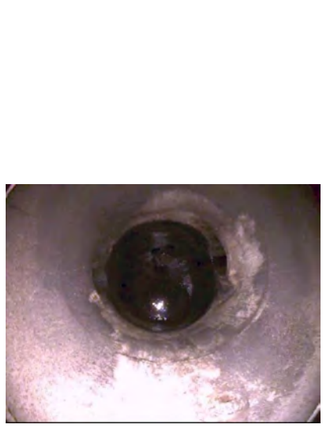
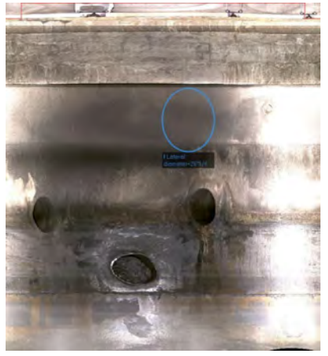
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

Process Structure Inspection Summary Report

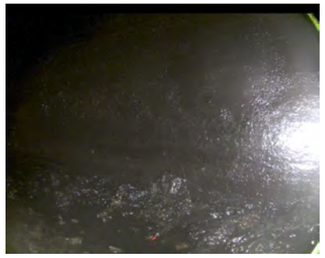
Setup ID	2023-ST-4	Inspection date	Aug 9, 2023	Defects Rated ≥3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	5.8
Structure ID	D-4.1	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.7	Total ER Defects	7

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Roughness Increased	Continuous	0 - 1.1	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	 

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

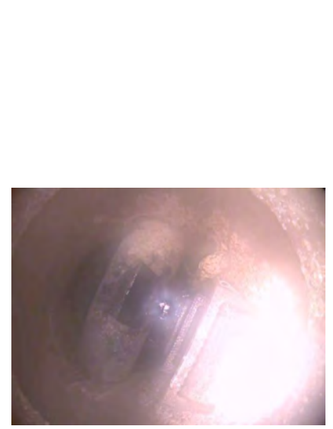
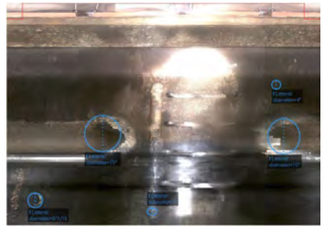
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Crack Multiple	Point	5.5	Structural	0	2-3	3	0	0	1	Crack Multiple	 
Crack Longitudinal	Point	5.5	Structural	0	11	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	6	Structural	0	9	2	0	0	1	Crack Longitudinal	 
Deposits Settled Other	Point	8	O&M	0	12-12	0	0	0	0	Deposits Settled Other	 

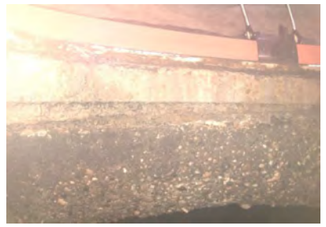
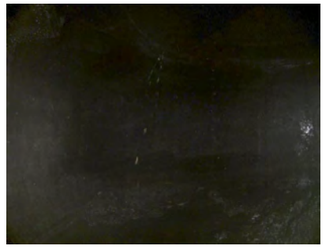
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-5	Inspection date	Aug 10, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	4.9
Structure ID	D-20	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	7.6	Total ER Defects	2

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

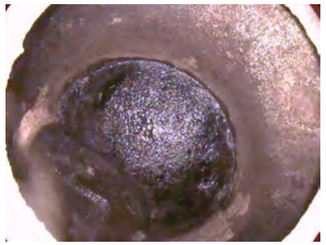
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

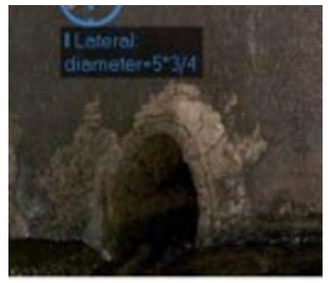
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-6	Inspection date	Aug 10, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	3.8
Structure ID	D-6.1	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	3.8	Total ER Defects	6

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Crack Longitudinal	Point	1	Structural	0	1	2	0	0	1	Crack Longitudinal	
Crack Longitudinal	Point	1	Structural	0	3	2	0	0	1	Crack Longitudinal	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

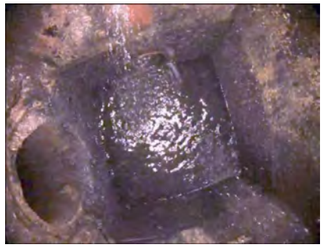
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-7	Inspection date	Aug 10, 2023	Defects Rated ≥3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	8.3
Structure ID	D-6	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	10.1	Total ER Defects	3

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Surface Damage Aggregate Visible	Continuous	0 - 9.5	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

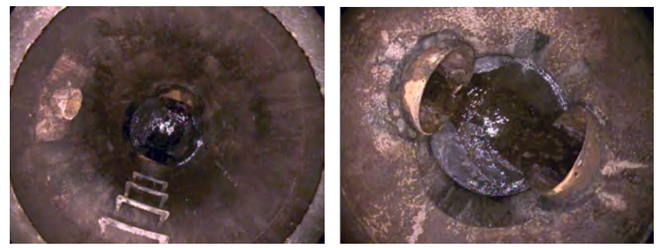
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

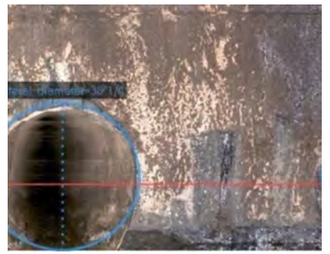
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-8	Inspection date	Aug 11, 2023	Defects Rated ≥3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	10.7
Structure ID	D-23	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	10.7	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Roughness Increased	Point	1	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	

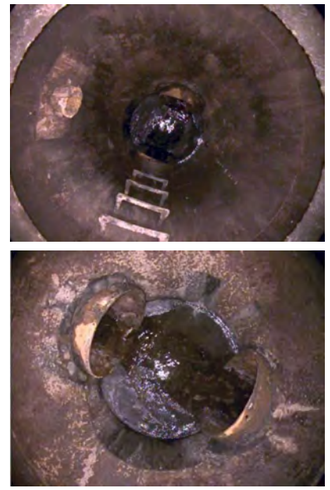
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-9	Inspection date	Aug 14, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	8.3
Structure ID	23-1	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.6	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

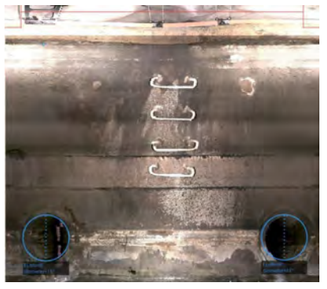
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-10	Inspection date	Aug 14, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7
Structure ID	23-2	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.6	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Aggregate Missing	Point	4	Structural	0	8	4	0	0	2	Surface Damage Aggregate Missing	
Crack Longitudinal	Point	6	Structural	0	9	2	0	0	1	Crack Longitudinal	 

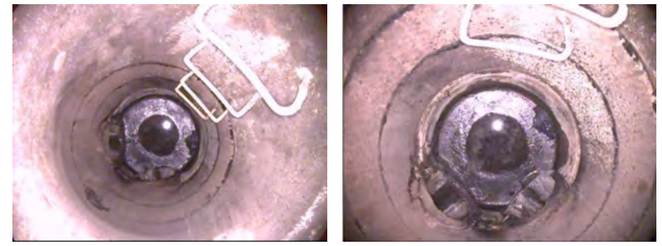
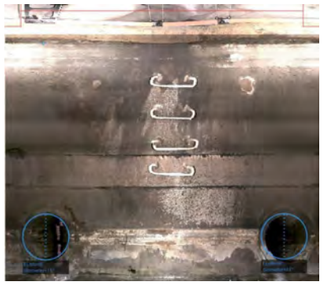
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-11	Inspection date	Aug 14, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	7.8
Structure ID	23-3	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.1	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Aggregate Visible	Continuous	1.5 - 4	Structural	0	2-6	2	0	0	1	Surface Damage Aggregate Visible	
Surface Damage Aggregate Visible	Point	4	Structural	0	11	2	0	0	1	Surface Damage Aggregate Visible	

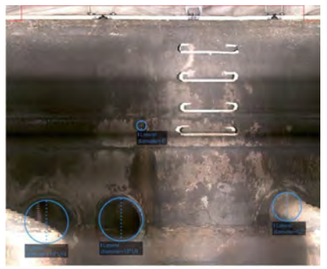
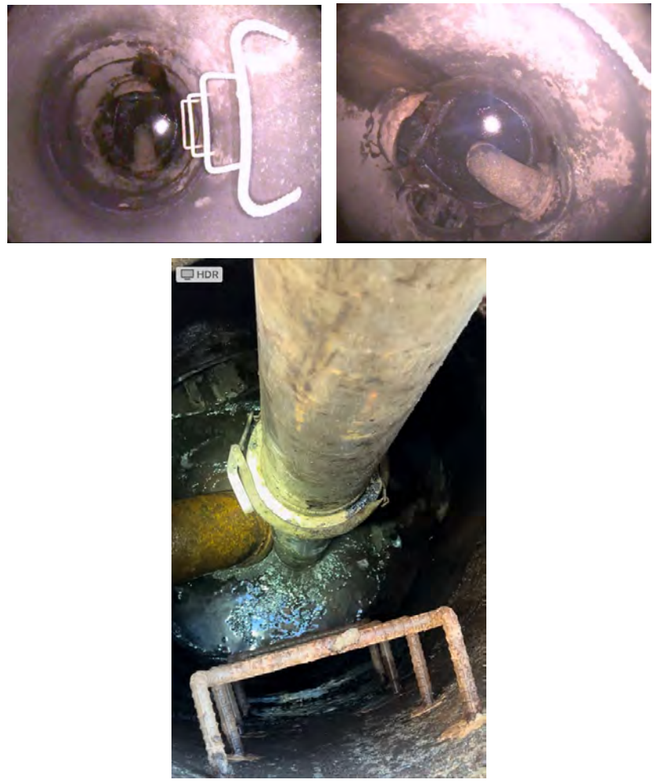
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

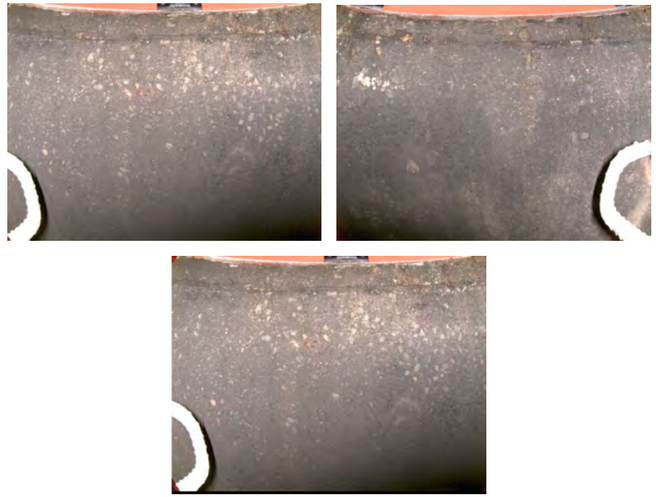
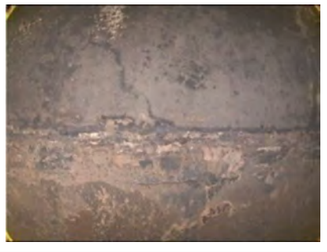
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-12	Inspection date	Aug 14, 2023	Defects Rated ≥3	0	Peak Structural Rating	3	Rim to Invert (ft) - Lowest Outgoing Pipe	7.9
Structure ID	23-4	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.6	Total ER Defects	5

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

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

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

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-13	Inspection 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 Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	9.8	Total ER Defects	3

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	 

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

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

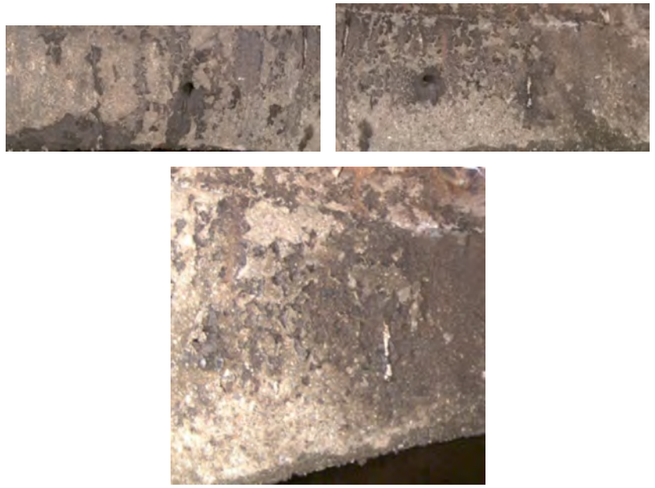
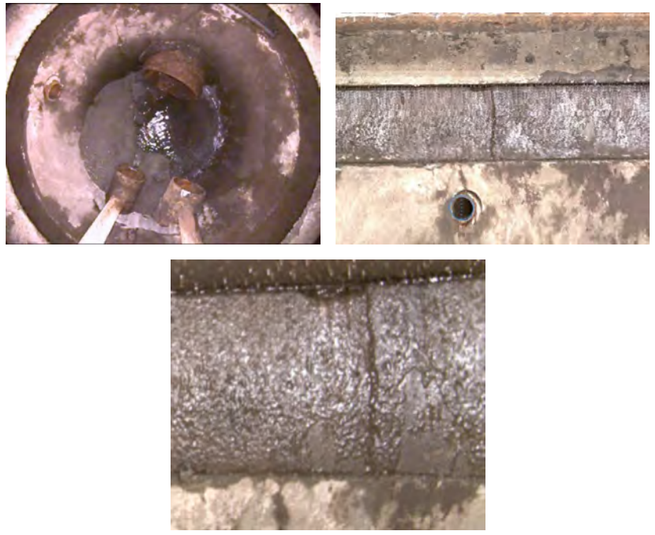
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-14	Inspection date	Aug 16, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7.1
Structure ID	D-21	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	7.6	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

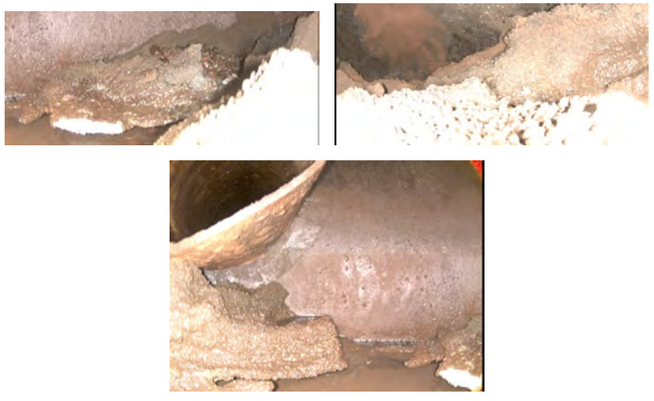
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

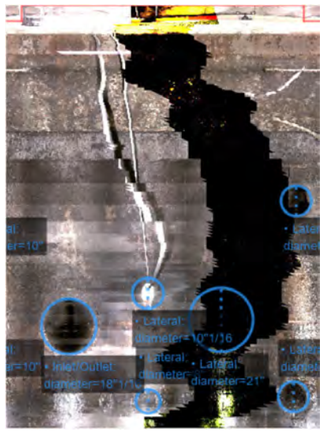
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

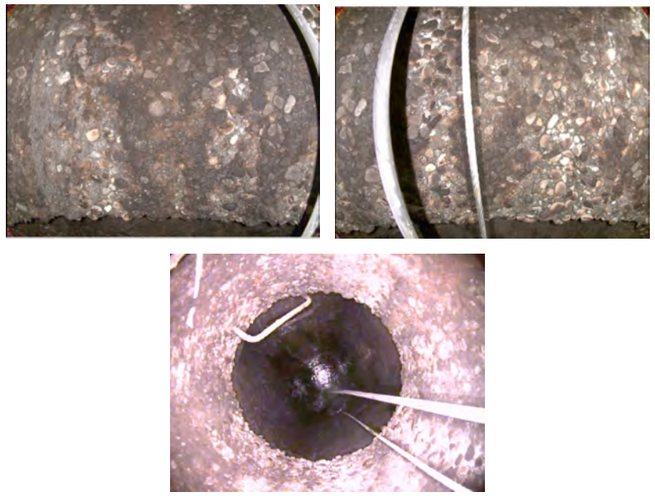
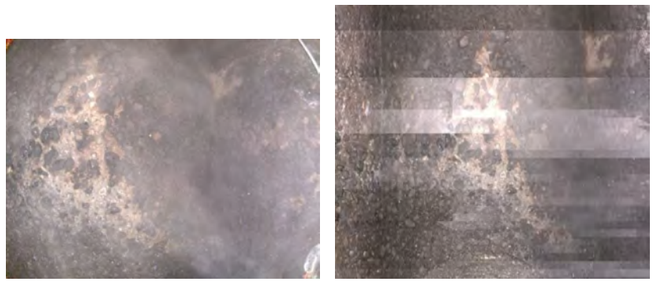
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

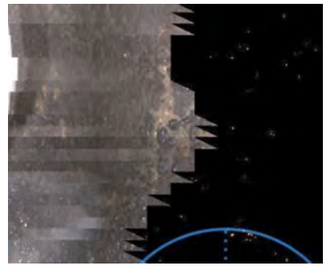
Setup ID	2023-ST-15	Inspection date	Aug 23, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	8.9
Structure ID	5-B	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	10.8	Total ER Defects	6

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

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

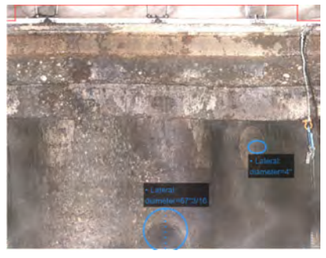
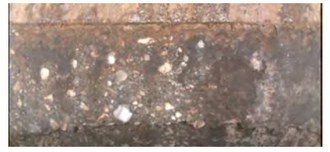
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

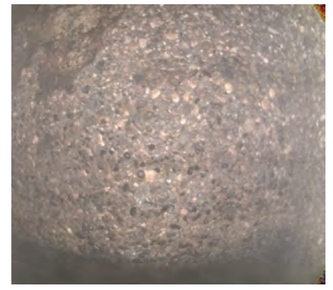
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-16	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	7
Structure ID	5-D	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	9.2	Total ER Defects	2

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Aggregate Visible	Point	1	Structural	0	12-12	2	0	0	1	Surface Damage Aggregate Visible	  

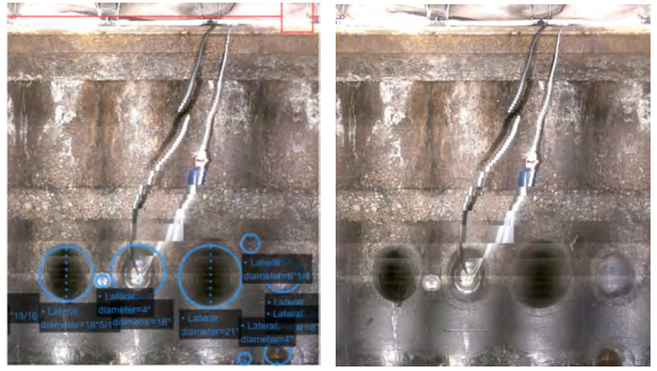
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

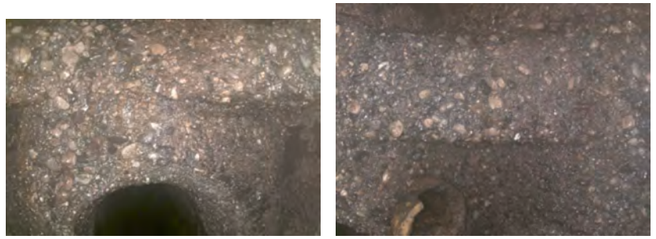
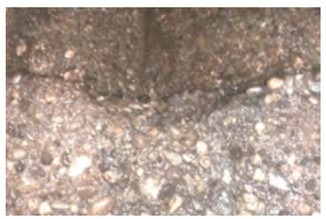
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-17	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	5	Rim to Invert (ft) - Lowest Outgoing Pipe	8.4
Structure ID	5-E	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	10.2	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

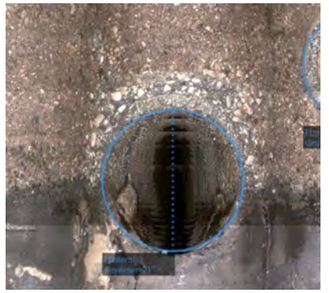
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-18	Inspection date	Aug 23, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	9.3
Structure ID	5-F	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	11.6	Total ER Defects	2

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

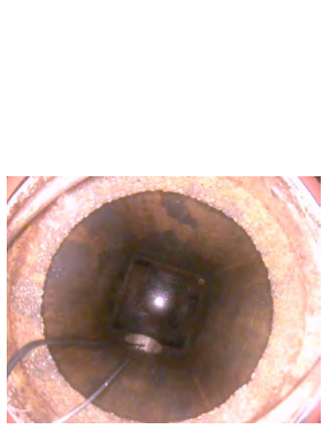
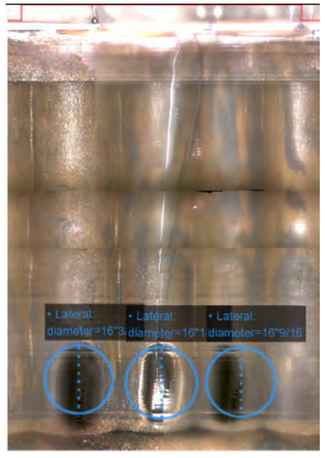
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	    

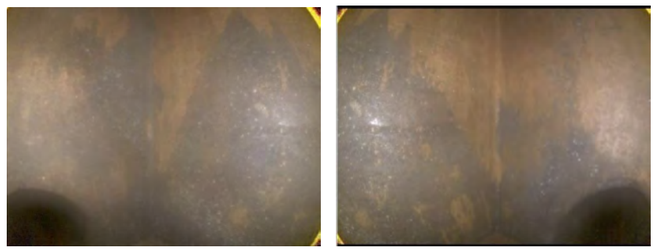
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-19	Inspection date	Aug 24, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	8.2
Structure ID	5-M	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.2	Total ER Defects	2

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

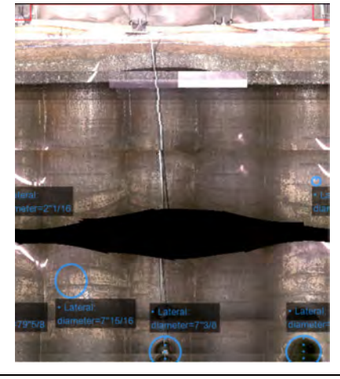
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

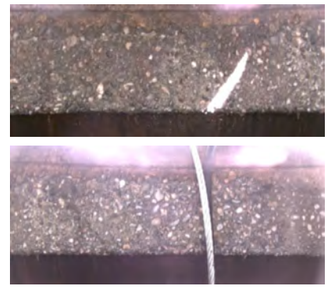
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-20	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	7.9
Structure ID	5-O	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	9.8	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

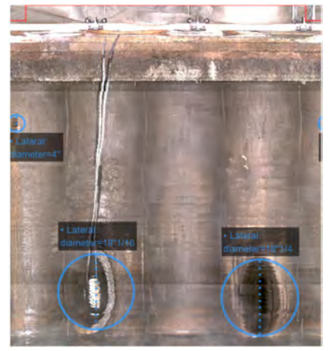
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

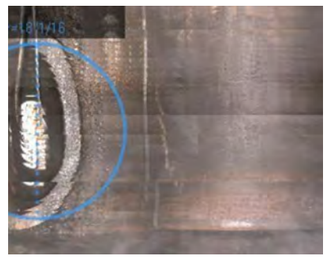
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-21	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	6.9
Structure ID	5-P	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	7.6	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Aggregate Missing	Point	2.8	Structural	0	6-7	4	0	0	1	Surface Damage Aggregate Missing	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-22	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	6.5
Structure ID	B-02	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	10	Total ER Defects	4

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	

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

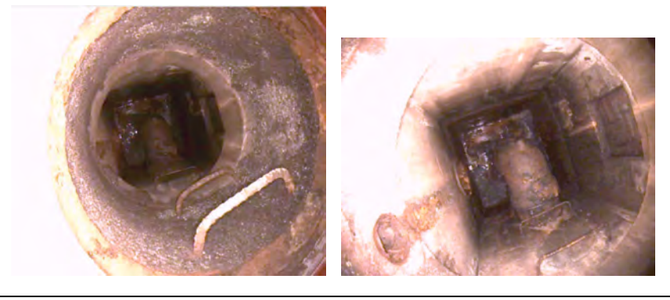
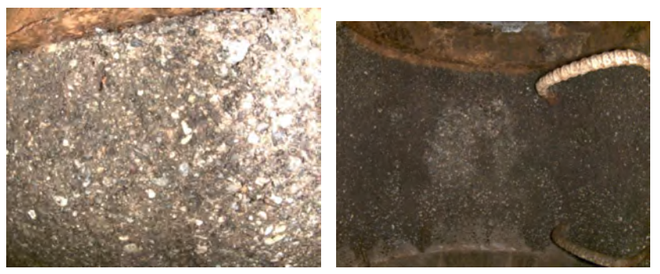
Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Surface Damage Roughness Increased	Point	5.5	Structural	0	6	1	0	0	1	Surface Damage Roughness Increased	
Surface Damage Surface Spalling	Point	6.5	Structural	0	12	2	0	0	1	Surface Damage Surface Spalling	 
Surface Damage Surface Spalling	Point	7.2	Structural	0	3	2	0	0	1	Surface Damage Surface Spalling	 
Surface Damage Aggregate Missing	Point	9	Structural	0	11	4	0	0	2	Surface Damage Aggregate Missing	

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

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-23	Inspection date	Aug 25, 2023	Defects Rated ≥3	0	Peak Structural Rating	5	Rim to Invert (ft) - Lowest Outgoing Pipe	6.9
Structure ID	B-1	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.8	Total ER Defects	5

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
Surface Damage Roughness Increased	Continuous	0.6 - 2.5	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 

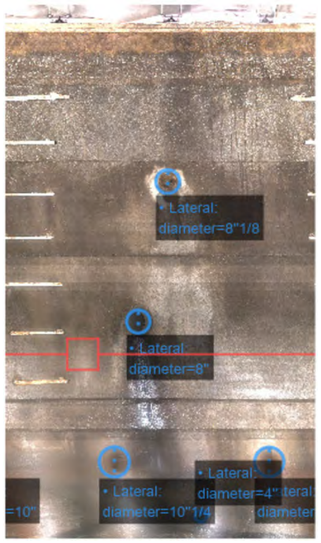
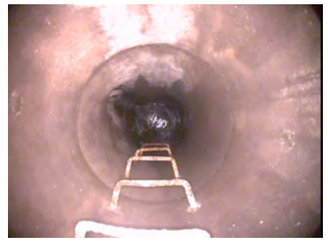
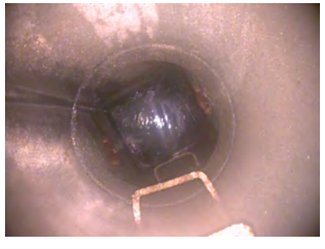
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

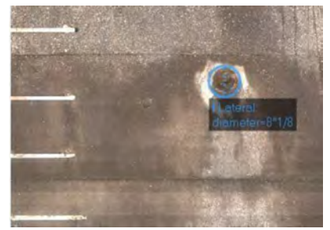
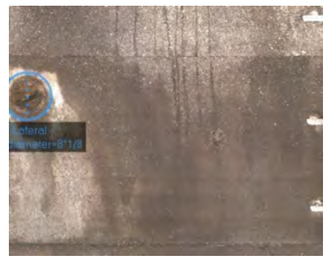
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

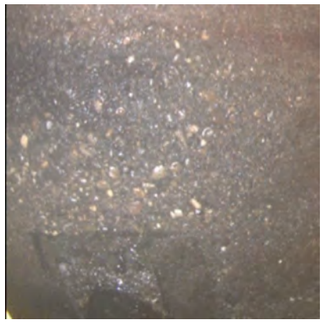
Setup ID	2023-ST-24	Inspection date	Aug 25, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	12.9
Structure ID	B-3	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	14.9	Total ER Defects	6

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

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	 
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	

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

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

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-25	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	4.4
Structure ID	D-19	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	8.6	Total ER Defects	3

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Surface Damage Roughness Increased	Continuous	0 - 8.2	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	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	
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	

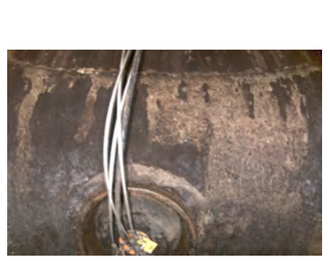
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

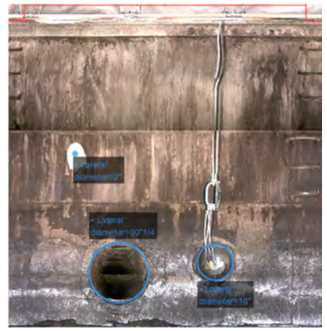
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-26	Inspection date	Aug 27, 2023	Defects Rated ≥3	0	Peak Structural Rating	2	Rim to Invert (ft) - Lowest Outgoing Pipe	12
Structure ID	D-20C	Peak Environmental Rating	1	Peak C/O&M Rating	0	Rim to Bottom (ft)	13	Total ER Defects	2

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Surface Damage Roughness Increased	Continuous	0 - 10	Structural	0	12-12	1	0	0	1	Surface Damage Roughness Increased	    
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	 

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	

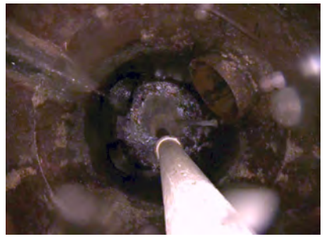
C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

Process Structure Inspection Summary Report

Setup ID	2023-ST-27	Inspection date	Aug 28, 2023	Defects Rated ≥3	0	Peak Structural Rating	4	Rim to Invert (ft) - Lowest Outgoing Pipe	11.4
Structure ID	D-22	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	16.3	Total ER Defects	3

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Miscellaneous General Photograph	Point	0	Miscellaneous	0		0	0	0	0	View Down Structure	

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

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
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	  

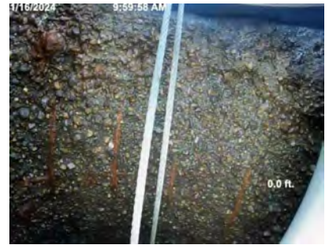
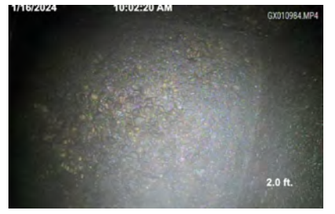
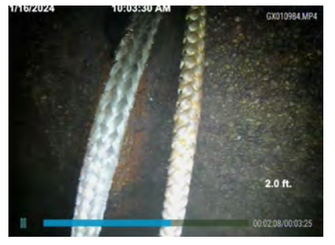
 C = Construction; O&M = Operation and Maintenance; ER = Environmental Rating; SR = Structural Rating

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

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

Process Structure Inspection Summary Report

Setup ID	2023-ST-28	Inspection date	Jan 16, 2024	Defects Rated ≥3	0	Peak Structural Rating	5	Rim to Invert (ft) - Lowest Outgoing Pipe	NM
Structure ID	D-12	Peak Environmental Rating	2	Peak C/O&M Rating	0	Rim to Bottom (ft)	NM	Total ER Defects	3

Description	Spatial Type	Distance (ft)	Type	Percent	Clock	SR	O&M	C	ER	Remarks	Photos
Surface Damage Reinforcement Visible	Continuous	0 - 2	Structural	0	12-12	5	0	0	2	Surface Damage Reinforcement Visible	  
Surface Damage Aggregate Visible	Continuous	2 - 7.5	Structural	0	12-12	2	0	0	2	Surface Damage Aggregate Visible	   

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

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

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

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:

ALL4 LLC
228 East Champion Street
Bellingham, WA 98225

SUBMITTED TO:

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

TABLE OF CONTENTS

Section Name **Page Number**

LIST OF APPENDICES

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:

- NWTPH-EPH: Extractable Petroleum Hydrocarbons
- NWTPH-VPH: Volatile Petroleum Hydrocarbons
- EPA Method 8260: Benzene, toluene, ethylbenzene, and total xylenes (BTEX)
- EPA Method 8270 SIM: Polycyclic Aromatic Hydrocarbons (PAHs)
- EPA Method 6020 & 7471: 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:

- NWTPH-EPH: Extractable Petroleum Hydrocarbons
- NWTPH-VPH: Volatile Petroleum Hydrocarbons
- EPA Method 8260: Benzene, toluene, ethylbenzene, and total xylenes (BTEX)
- EPA Method 8270 SIM: Polycyclic Aromatic Hydrocarbons (PAHs)
- EPA Method 6020 & 7471: 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 regulatory-approved 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.

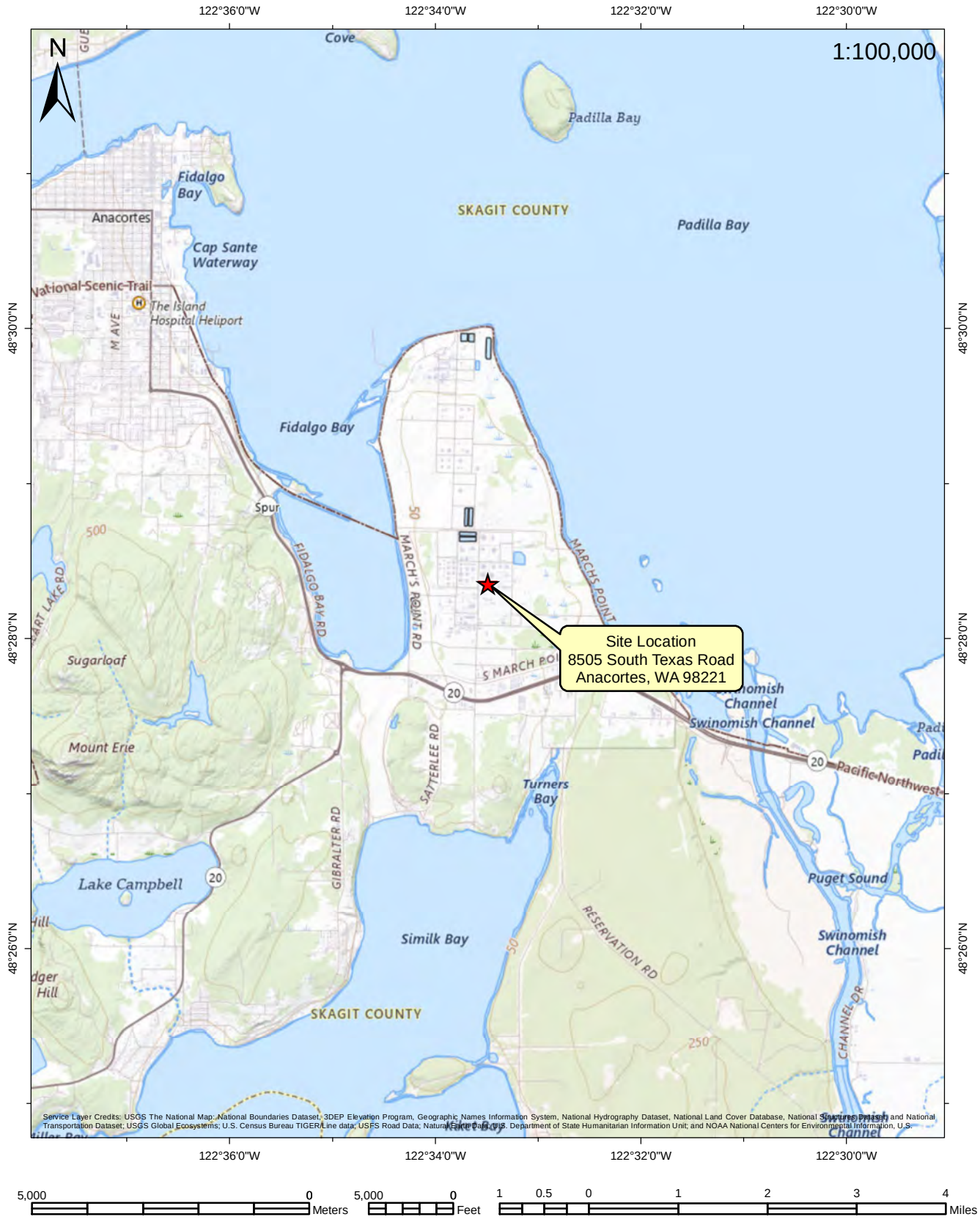
Washington State Department of Ecology (Ecology). November 1, 2021. Agreed Order for Interim Action – Oily Water Sewer (SWMU-1). No. DE 16298.

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

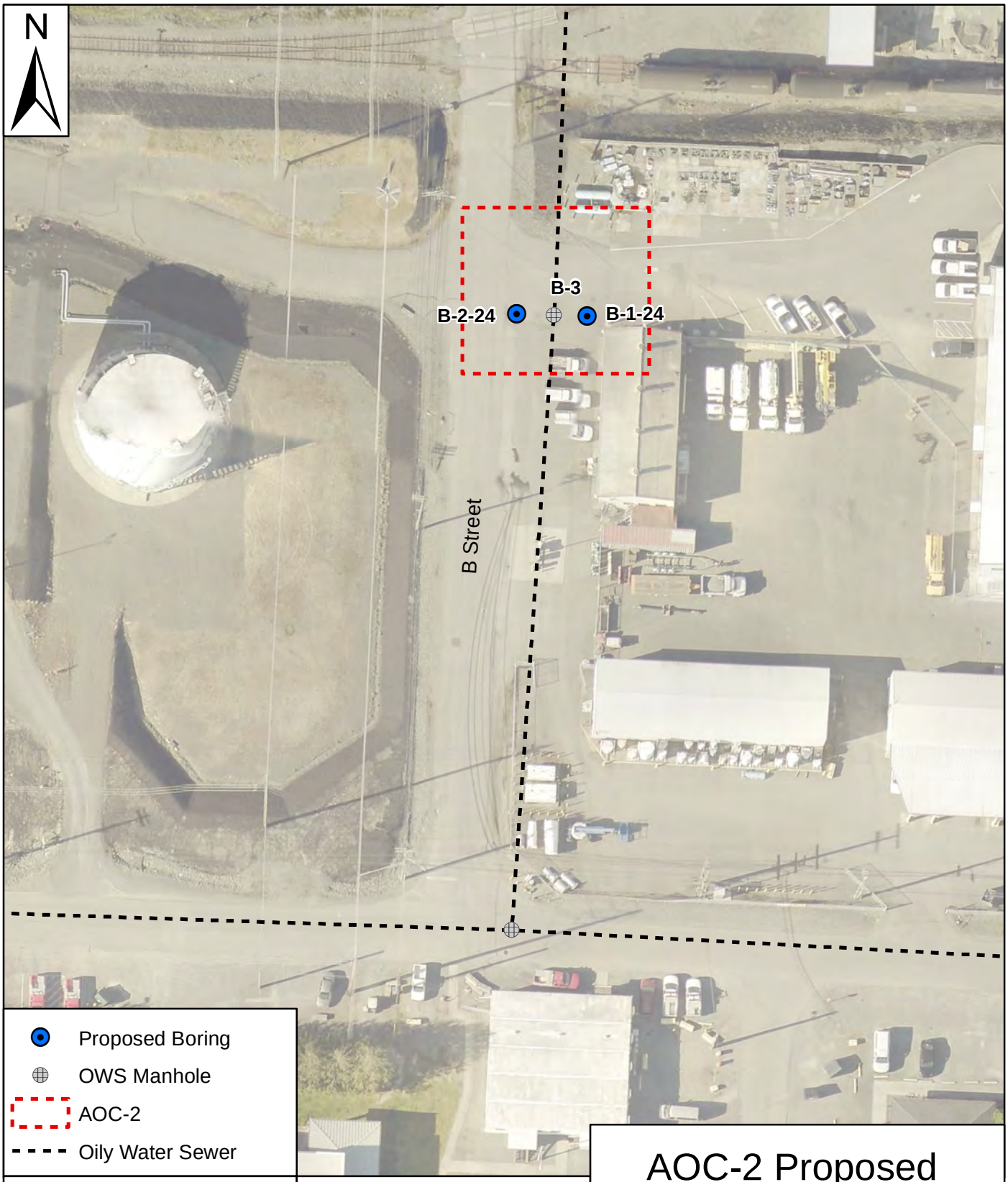
Washington State Department of Ecology (Ecology). 2024. Model Toxics Control Act Cleanup Regulation Chapter 173-340 WAC. Publication No. 94-06.

Washington State Department of Ecology (Ecology). December 2008. Minimum Standards for Construction and Maintenance of Wells WAC 173-160-400.

APPENDIX A -
FIGURES



Prepared for:	Prepared by:	Site Location Map	
HF Sinclair	ALL4	Oily Water Sewer 5/9/2024	Figure A-1



Proposed Boring

OWS Manhole

AOC-2

Oily Water Sewer

0 30 60 90 Feet

1 inch = 60 feet

All data are approximate and should be used for relative location reference only.

AOC-2 Proposed Soil Boring Locations

Prepared for: HF Sinclair

Prepared by: ALL4

8505 South Texas Road
Anacortes, WA 98221

OWS AOC-2 Investigation

5/13/2024

Figure A-2

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 Count	Screening Results			Sample
			Depth (ft)	PID (ppm)	Sheen	
	(cleared top 8 ft with vac truck/hand auger)	*Dames and Moore Split Spoon Sampler*				
Surface	~8-inches of asphalt					
	4-inches pit run gravel					
1.00 to 9.50 ft	Gravely, silty, sand, brown, firm, moist.		1'	0.1	SS*	
			2'	0.1	SS*	
			3'	0.1	SS*	
		8' to 9.5'	4'	0.1	SS*	
		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	
			11'	0.1	NS	
16.00 to 16.50 ft	Silty clay with gravel, gray, firm, moist.	15' to 16.5'				
		5-7-10	13'	0.2	SS	
			14'	0.6	MS	14 ft
17.50 to 18.50 ft	Silty clay with gravel, gray, firm, wet.	17.5' to 19'				
		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.	19' to 20.5'	18'	0.2	SS	
		4-9-10	19'	0.2	SS	
			20'	0.2	NS	20 ft
	Soil Sample Collection Depth					
* indicates a weathered sheen						

ALL4 LLC

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 Count	Screening Results			Sample
			Depth (ft)	PID (ppm)	Sheen	
	(cleared top 8 ft with vac truck/hand auger)	*Dames and Moore Split Spoon Sampler*				
Surface	~8-inches of asphalt					
	4-inches pit run gravel					
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*	
			7'	0.2	SS*	
8.50 to 9.50	Silty sand with clay, brown with orange mottling, firm,	8' to 9.5'	8'	0.1	SS*	
	moist.	2-3-4				
			9'	0.1	SS	
10.00 to 11.00 ft	Silty sand with minor gravel, brown, soft, moist.	10' to 11.5'	10'	0.0	SS*	
		2-2-3	11'	0.0	SS*	
11.00 to 15.00 ft	Silty sand with minor gravel, brown, soft, wet.	11.5' to 13'				
		3-3-8	12'	0.0	NS	
			13'	0.0	NS	
		13' to 14.5'				
15.00 to 16.50	Silty sand with minor gravel, brown, soft, moist.	6-6-7	14'	0.1	NS	
						14 ft
		15' to 16.5'	15'	0.1	NS	
17.50 to 20.50 ft	Silty sand with clay, brown, firm, moist.	8-8-10	16'	0.1	NS	
						16 ft
		17.5' to 19'	18'	0.1	NS	
		6-6-6	19'	0.1	NS	
		19' to 20.5'				
		5-7-9	20'	0.1	NS	
	Soil Sample Collection Depth					
* indicates a weathered sheen						

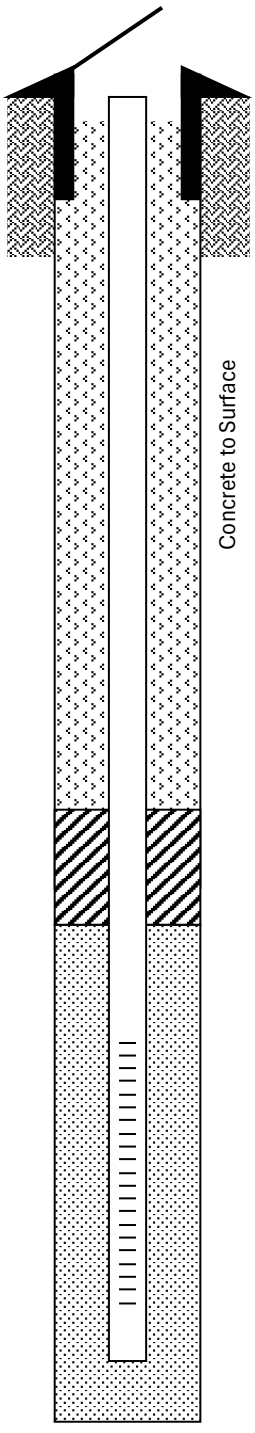
ALL4 LLC

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

Well Design Specifications



Depths in Feet Below Ground Surface

2

8

10

20

20.3

20.3

Not to Scale

Elevations (feet): Top of Casing:
Mean Sea Level (MSL) Ground Elevation:

Coordinates:

Coordinate System:

Type of Casing: PVC

Casing Diameter: 2"

Screen Slot: 0.01"

Screen Style: Machine cut

Sand Pack: 10/20 Colorado Silica

Bentonite Seal: Medium chip

Grout Type: N/A **Weight:** N/A

Bore Hole Diameter: 8.25"

Drill Rig: cm-85

Drilled by: Brian - Cascade

Logged by: Matt Roberts/Olana Costa - ALL4

Completion Date: 12/3/2024

Date of Measurement	D-T-W (ft. bgs)	Water Level (ft. MSL)	Field pH	Field EC (mS/cm)
12/13/2024	11.85		7.69	0.2735
1/22/2025	11.81		7.25	0.293

Comments:

Project: HFSPSR OWS B-Street

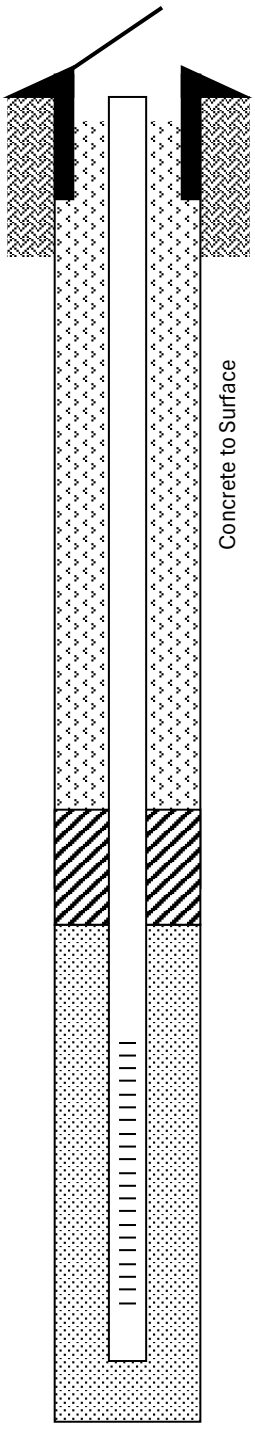
Location: 5 feet east of manhole B-3

ALL4 LLC
228 East Champion Street #101
Bellingham, WA 98225
(360) 752-9571

W-130

Ecology Well ID:
BPW-874

Well Design Specifications



Depths in Feet Below Ground Surface

2

8

10

20

20.3

20.3

Not to Scale

Elevations (feet): Top of Casing:
Mean Sea Level (MSL) Ground Elevation:

Coordinates:

Coordinate System:

Type of Casing: PVC

Casing Diameter: 2"

Screen Slot: 0.01"

Screen Style: Machine Cut

Sand Pack: 10/20 Colorado Silica

Bentonite Seal: Medium Chip

Grout Type: N/A **Weight:** N/A

Bore Hole Diameter: 8.25"

Drill Rig: cm-85

Drilled by: Brian - Cascade

Logged by: Matt Roberts/Olana Costa - ALL4

Completion Date: 12/3/2024

Date of Measurement	D-T-W (ft. bgs)	Water Level (ft. MSL)	Field pH	Field EC (mS/cm)
12/13/2024	11.81		6.88	0.2832
1/22/2025	15.4		7.37	0.260

Comments:

Project: HFSPSR OWS B-Street

Location: 5 feet west of manhole B-3

ALL4 LLC
228 East Champion Street #101
Bellingham, WA 98225
(360) 752-9571

W-131

Ecology Well ID:
BPW-875

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

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

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-01
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:05:00 PM
CLIENT SAMPLE ID	B-1-14ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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	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	**38**	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
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE:	12/20/2024
		ALS JOB#:	EV24120018
		ALS SAMPLE#:	EV24120018-01
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:05:00 PM
CLIENT SAMPLE ID	B-1-14ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE 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
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	**0.032**	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
p-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.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-02
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:00:00 PM
CLIENT SAMPLE ID	B-1-16ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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	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
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

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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#:	12/20/2024 EV24120018 EV24120018-02
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:00:00 PM
CLIENT SAMPLE ID	B-1-16ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	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	**0.041**	0.020	1	MG/KG	12/04/2024	RAL
Chromium (III)	Calc-Cr3	**44**	0.50	1	MG/KG	12/17/2024	CLC
Arsenic	EPA-6020	**6.2**	0.20	1	MG/KG	12/11/2024	RAL
Cadmium	EPA-6020	**0.16**	0.10	1	MG/KG	12/11/2024	RAL
Chromium	EPA-6020	**44**	0.10	1	MG/KG	12/11/2024	RAL
Lead	EPA-6020	**5.2**	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	**71**	0.50	1	MG/KG	12/11/2024	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**70.4**	12/18/2024	FAL
p-Terphenyl	NWEPH	**73.6**	12/18/2024	FAL
1,2-Dichloroethane-d4	EPA-8260	**114**	12/09/2024	DLC
Toluene-d8	EPA-8260	**96.7**	12/09/2024	DLC
Terphenyl-d14	EPA-8270 SIM	**78.1**	12/10/2024	DS

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

Soil results reported on a dry-weight basis.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-03
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:15:00 PM
CLIENT SAMPLE ID	B-1-20ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-03
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/2/2024 1:15:00 PM
CLIENT SAMPLE ID	B-1-20ft - 120224	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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.

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

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-04
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/3/2024 9:55:00 AM
CLIENT SAMPLE ID	B-2-14ft - 120324	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/10/2024	DS

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-04
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/3/2024 9:55:00 AM
CLIENT SAMPLE ID	B-2-14ft - 120324	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	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	**0.083**	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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**74.0**	12/18/2024	FAL
p-Terphenyl	NWEPH	**70.7**	12/18/2024	FAL
1,2-Dichloroethane-d4	EPA-8260	**114**	12/09/2024	DLC
Toluene-d8	EPA-8260	**95.1**	12/09/2024	DLC
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.

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-05
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/3/2024 10:05:00 AM
CLIENT SAMPLE ID	B-2-16ft - 120324	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/20/2024 EV24120018 EV24120018-05
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/04/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/3/2024 10:05:00 AM
CLIENT SAMPLE ID	B-2-16ft - 120324	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	12/11/2024	DS
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	12/10/2024	MJC
Mercury	EPA-7471	U	0.020	1	MG/KG	12/04/2024	RAL
Chromium (III)	Calc-Cr3	**30**	0.50	1	MG/KG	12/17/2024	CLC
Arsenic	EPA-6020	**2.5**	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	**30**	0.10	1	MG/KG	12/11/2024	RAL
Lead	EPA-6020	**2.1**	0.10	1	MG/KG	12/11/2024	RAL
Nickel	EPA-6020	**67**	0.10	1	MG/KG	12/11/2024	RAL
Zinc	EPA-6020	**32**	0.50	1	MG/KG	12/11/2024	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**75.8**	12/18/2024	FAL
p-Terphenyl	NWEPH	**77.6**	12/18/2024	FAL
1,2-Dichloroethane-d4	EPA-8260	**117**	12/09/2024	DLC
Toluene-d8	EPA-8260	**93.9**	12/09/2024	DLC
Terphenyl-d14	EPA-8270 SIM	**108**	12/11/2024	DS

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

Soil results reported on a dry-weight basis.

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

MBLK-R502886 - Batch R502886 - Soil by NWVPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Hexane	EPA-8260	U	UG/KG	10	12/09/2024	DLC
1,2-Dichloroethane	EPA-8260	U	UG/KG	10	12/09/2024	DLC
Benzene	EPA-8260	U	UG/KG	5.0	12/09/2024	DLC
Toluene	EPA-8260	U	UG/KG	10	12/09/2024	DLC
1,2-Dibromoethane	EPA-8260	U	UG/KG	5.0	12/09/2024	DLC
Ethylbenzene	EPA-8260	U	UG/KG	10	12/09/2024	DLC
m,p-Xylene	EPA-8260	U	UG/KG	20	12/09/2024	DLC
o-Xylene	EPA-8260	U	UG/KG	10	12/09/2024	DLC

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

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CERTIFICATE OF ANALYSIS

CLIENT: ALL4 LLC
228 E. Champion St, Suite 101
Bellingham, WA 98225

CLIENT CONTACT: Matt Roberts
CLIENT PROJECT: HFS OWS AOC-2

DATE: 12/20/2024
ALS SDG#: EV24120018
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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

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CERTIFICATE OF ANALYSIS

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

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.

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CLIENT CONTACT: Matt Roberts
CLIENT PROJECT: HFS OWS AOC-2

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R502826 - Soil by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
>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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

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CLIENT PROJECT: HFS OWS AOC-2

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ALS SDG#: EV24120018
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

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

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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Naphthalene - BS	EPA-8270 SIM	**60.9**			20	150	12/06/2024	DS
Naphthalene - BSD	EPA-8270 SIM	**62.5**	**3**		20	150	12/06/2024	DS
2-Methylnaphthalene - BS	EPA-8270 SIM	**66.8**			20	150	12/06/2024	DS
2-Methylnaphthalene - BSD	EPA-8270 SIM	**68.6**	**3**		20	150	12/06/2024	DS
1-Methylnaphthalene - BS	EPA-8270 SIM	**67.6**			20	150	12/06/2024	DS
1-Methylnaphthalene - BSD	EPA-8270 SIM	**69.1**	**2**		20	150	12/06/2024	DS
Acenaphthylene - BS	EPA-8270 SIM	**65.8**			20	150	12/06/2024	DS
Acenaphthylene - BSD	EPA-8270 SIM	**68.4**	**4**		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
Fluorene - BSD	EPA-8270 SIM	**69.1**	**3**		20	150	12/06/2024	DS
Phenanthrene - BS	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 - BS	EPA-8270 SIM	**65.0**			20	150	12/06/2024	DS
Anthracene - BSD	EPA-8270 SIM	**67.2**	**3**		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	**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 - 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**			20	150	12/06/2024	DS
Chrysene - BSD	EPA-8270 SIM	**64.9**	**2**		20	150	12/06/2024	DS
Benzo[B]Fluoranthene - BS	EPA-8270 SIM	**63.6**			20	150	12/06/2024	DS
Benzo[B]Fluoranthene - BSD	EPA-8270 SIM	**64.7**	**2**		20	150	12/06/2024	DS
Benzo[K]Fluoranthene - BS	EPA-8270 SIM	**55.2**			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 - 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 - BS	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 - 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

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

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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*	LIMITS 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

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MATRIX SPIKE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
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
Benzo[G,H,I]Perylene - MS	EPA-8270 SIM	**122**			813	0	992	20	150		12/10/2024	DS
Benzo[G,H,I]Perylene - MS	EPA-8270 SIM	**122**			813	0	992	20	150		12/10/2024	DS
Benzo[G,H,I]Perylene - MSD	EPA-8270 SIM	**119**	**2**		813	0	970	20	150	30	12/11/2024	DS
Benzo[G,H,I]Perylene - MSD	EPA-8270 SIM	**119**	**2**		813	0	970	20	150	30	12/11/2024	DS

SURROGATE	METHOD	%REC	RPD	QUAL	SPIKE ADDED	PARENT SAMPLE RESULT	CALC RESULT*	LIMITS MIN	LIMITS MAX	RPD	ANALYSIS DATE	ANALYSIS BY
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

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 SDG#: WDOE ACCREDITATION:	12/20/2024 EV24120018 C601
CLIENT CONTACT:	Matt Roberts		
CLIENT PROJECT:	HFS OWS AOC-2		

MATRIX 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

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

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24120018

Date 12/4/24 Page 1 Of 1

PROJECT ID: HFS OWS ADC-2
REPORT TO COMPANY: ALL4 LLC
PROJECT MANAGER: Matt Roberts
ADDRESS: 228 E. Champion Street Suite 101
Bellingham, WA 98225
PHONE: 360-752-9571 P.O. #: 004531-0012
E-MAIL: mroberts@ALL4inc.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☒	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify) See instructions	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): Hexane	EPH	VPH	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. B-1-14ft-120224	12/2/24	13:05	Soil	1				X					X		X			X		X	X	X	6	
2. B-1-16ft-120224	"	13:00	"	2																				
3. B-1-20ft-120224	"	13:15	"	3																				
4. B-2-14ft-120324	12/3/24	9:55	"	4																				
5. B-2-16ft-120324	"	10:05	"	5																				
6.																								
7.																								
8.																								
9.																								
10.																								

SPECIAL INSTRUCTIONS metals: As, Cd, CrIII, CrVI, Pb, Ni, Hg, Zn, Cr

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Matt Roberts/Matt, ALL4, 12/4/24, 11:30
   Received By: AREESE, ALS, 12/04/24 @1130
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: AIA LLC
Project: HFS OWS AOC-2

ALS Job #: EV24/2018
Login Date: 12/4/24
Login Time: 11:30
Login By: GW

Type of Shipping Container: ☒ Cooler ☐ Box ☐ Other: _____

Shipped Via: ☐ FedEx Ground ☐ FedEx Express ☐ UPS ☐ External Courier ☒ ALS Courier ☐ Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container? How Many? ____ Where? ____ Date: ____ Name: ____	☐	☐	☒
Was CoC filled out properly? (in ink, signed, dated, etc.)	☒	☐	☐
Did all bottles have labels?	☒	☐	☐
Did all bottle labels and tags agree with CoC?	☒	☐	☐
Were samples received within hold time?	☒	☐	☐
Did all bottles arrive in good condition?	☒	☐	☐
Was sufficient amount of sample sent for tests requested?	☒	☐	☐
Was correct preservation added to samples?	☒	☐	☐
Subcontract test containers added to subcontract bin?	☒	☐	☐
Wetchem test containers marked with applicable tests?	☒	☐	☒
Short hold time test containers delivered to analysts?	☐	☐	☒
VOA vials checked for bubbles?	☐	☐	☒
Bubbles in sample number(s): _____			
5035A kits received? Low kits: 5 High kits: ____	☒	☐	☐
5035A kits returned? Low kits: ____ High kits: ____	☐	☐	☒

Temperature upon receipt: 10.0 °C

On ice? ☒ Y ☐ N

Thermometer ID: 189

Other discrepancies:

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____
Outcome of call:

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

APPENDIX H -
SOIL MTCA TPH METHOD C WORKSHEETS

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 04/10/23
Site Name: HF Sinclair OWS D St
Sample Name: B-1-23 6'
Measured Soil TPH Concentration, mg/kg: 51.01

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	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 Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	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 compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 04/10/23
Site Name: HF Sinclair OWS D St
Sample Name: B-2-23 6'
Measured Soil TPH Concentration, mg/kg: 1,576.01

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	2,600	6.1E-01	Pass
	Cancer Risk (1)		2.8E-06	**Fail**
	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	33,000	4.8E-02	Pass
	Cancer Risk (1)		1.3E-07	Pass
Soil Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	170	---	**Fail**
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

(2) Warning: Check Residual Saturation (WAC 340-747(10))

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 04/13/23
Site Name: HF Sinclair OWS D St
Sample Name: B-3-23 5'
Measured Soil TPH Concentration, mg/kg: 100.72

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,000	1.0E-01	Pass
	Cancer Risk (1)		7.0E-07	Pass
	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	18,000	5.6E-03	Pass
	Cancer Risk (1)		6.7E-08	Pass
Soil Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	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 compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 04/13/23
Site Name: HF Sinclair OWS D St
Sample Name: B-4-23 5.5'
Measured Soil TPH Concentration, mg/kg: 159.01

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,200	1.3E-01	Pass
	Cancer Risk (1)		6.8E-07	Pass
	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	23,000	7.0E-03	Pass
	Cancer Risk (1)		3.9E-08	Pass
Soil Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	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 compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 12/02/24
Site Name: OWS AOC-2 B-Street
Sample Name: B-1-14 ft-120224
Measured Soil TPH Concentration, mg/kg: 83.13

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	2,200	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	Method C: Industrial Land Use			
	TPH Soil Cleanup Level (@ HI = 1)	40,000	2.1E-03	Pass
	Cancer Risk (1)		5.1E-09	Pass
Soil Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	830	---	Pass
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 12/02/24
Site Name: OWS AOC-2 B-Street
Sample Name: B-1-16 ft-120224
Measured Soil TPH Concentration, mg/kg: 51.13

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	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 Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	300	---	Pass
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 12/02/24
Site Name: OWS AOC-2 B-Street
Sample Name: B-1-20 ft-120224
Measured Soil TPH Concentration, mg/kg: 51.13

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	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 Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	300	---	Pass
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 12/02/24
Site Name: OWS AOC-2 B-Street
Sample Name: B-2-14 ft-120224
Measured Soil TPH Concentration, mg/kg: 51.13

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	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 Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	300	---	Pass
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

A4 Soil Cleanup Levels: Summary of Results. Refer to WAC 173-340-720, 740, 745, 747

Date: 12/02/24
Site Name: OWS AOC-2 B-Street
Sample Name: B-2-16 ft-120224
Measured Soil TPH Concentration, mg/kg: 51.13

Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective TPH Conc (mg/kg)	With Measured Soil Conc	
			HI or Risk	Pass or Fail
Soil Direct Contact Protection of Soil Incidental Ingestion and Dermal Contact: Human Health	**Method B: Unrestricted Land Use**			
	TPH Soil Cleanup Level (@ HI =1)	1,400	3.7E-02	Pass
	Cancer Risk (1)		1.1E-07	Pass
	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 Leaching Protection of Groundwater Quality	**Soil Concentration Protective of Target TPH Groundwater Concentration**			
	Protective TPH Soil Concentration, mg/kg =	300	---	Pass
	Target TPH Groundwater Concentration (µg/L)			
	500 Method A Potable Groundwater			
Remark:	*Petroleum fractionated data (EPH/VPH) and individual compounds tested in groundwater generated a Method B potable drinking water cleanup level of 340 µg/L (see Worksheet B2.1A). This level is below the most restrictive default Method A value of 500 µg/L. As a result, the Method A default potable groundwater cleanup level of 500 µg/L is selected as the target groundwater concentration to develop a TPH concentration in soil that is protective of potable groundwater.*			

Notes:

(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).*

Terrestrial Ecological Pathway: Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (*see* WAC 173-340-7490 through ~7494).

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

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 EV24120097-01
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 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	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

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

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 EV24120097-01
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 DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	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	FAL
p-Terphenyl	NWEPH	**85.0**	12/27/2024	FAL
Toluene-d8	EPA-8260	**104**	12/17/2024	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**94.8**	12/16/2024	DS

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-01
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 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.

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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
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/13/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/13/2024 8:40:00 AM
CLIENT SAMPLE ID	W-130	WDOE ACCREDITATION:	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	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
2,4,5-Trichlorophenol	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	12/16/2024	DS

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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
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/13/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/13/2024 8:40:00 AM
CLIENT SAMPLE ID	W-130	WDOE ACCREDITATION:	C601

SAMPLE 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

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS 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

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ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE:	12/31/2024
		ALS JOB#:	EV24120097
		ALS SAMPLE#:	EV24120097-02
CLIENT CONTACT:	Matt Roberts	DATE RECEIVED:	12/13/2024
CLIENT PROJECT:	HFS OWS AOC-2	COLLECTION DATE:	12/13/2024 8:40:00 AM
CLIENT SAMPLE ID	W-130	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-03
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

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	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

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-03
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

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	**2.3**	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	ANALYSIS DATE	ANALYSIS BY
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
Terphenyl-d14	EPA-8270 SIM	**78.3**	12/16/2024	DS

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-03
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.

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-04
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 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

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE: ALS JOB#: ALS SAMPLE#:	12/31/2024 EV24120097 EV24120097-04
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 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	U	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	U	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
Dibenz[A,H]Anthracene	EPA-8270 SIM	**0.077**	0.020	1	UG/L	12/16/2024	DS
Benzo[G,H,I]Perylene	EPA-8270 SIM	**0.098**	0.020	1	UG/L	12/16/2024	DS
Total PAH	EPA-8270 SIM	**1.6**	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	U	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	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**67.5**	12/27/2024	FAL
p-Terphenyl	NWEPH	**74.2**	12/27/2024	FAL
Toluene-d8	EPA-8260	**102**	12/17/2024	DLC
2,4,6-Tribromophenol	EPA-8270 SIM	**67.8**	12/16/2024	DS
Terphenyl-d14	EPA-8270 SIM	**70.2**	12/16/2024	DS

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CERTIFICATE OF ANALYSIS

CLIENT:	ALL4 LLC 228 E. Champion St, Suite 101 Bellingham, WA 98225	DATE:	12/31/2024
		ALS JOB#:	EV24120097
		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 DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

MBLK-R503540 - Batch R503540 - Water by NWVPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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.

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CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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.

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

ALS Environmental

CERTIFICATE OF ANALYSIS

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

LABORATORY BLANK RESULTS

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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS 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	REPORTING 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

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	1.0	12/17/2024	RAL
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.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: ALL4 LLC
228 E. Champion St, Suite 101
Bellingham, WA 98225

CLIENT CONTACT: Matt Roberts
CLIENT PROJECT: HFS OWS AOC-2

DATE: 12/31/2024
ALS SDG#: EV24120097
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R503497 - Water by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
>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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

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

CERTIFICATE OF ANALYSIS

CLIENT: ALL4 LLC
228 E. Champion St, Suite 101
Bellingham, WA 98225

CLIENT CONTACT: Matt Roberts
CLIENT PROJECT: HFS OWS AOC-2

DATE: 12/31/2024
ALS SDG#: EV24120097
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS 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

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CERTIFICATE OF ANALYSIS

CLIENT: ALL4 LLC
228 E. Champion St, Suite 101
Bellingham, WA 98225

CLIENT CONTACT: Matt Roberts
CLIENT PROJECT: HFS OWS AOC-2

DATE: 12/31/2024
ALS SDG#: EV24120097
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
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

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental
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Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24120097

Date 12/13/24 Page 1 Of 1

PROJECT ID: HFS OWS AOC-2
REPORT TO COMPANY: ALLY LLC
PROJECT MANAGER: Matt Roberts
ADDRESS: 228 E Champion Street Suite 101
Bellingham, WA 98225
PHONE: 360-757-9571 P.O. #: 004531-0012
E-MAIL: mroberts@ally1nc.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☒	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 ~~SIM~~ (water)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify) See instructions	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): Hexane	EPH	VPH	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. W-131	12/13/24	0955	GW	1				X					X		X			X		X	X	X		
2. W-130		0840		2				X					X		X			X		X	X	X		
3. AOC2-DUP-1		0700		3				X					X		X			X		X	X	X		
4. AOC2-FEB-1	✓	0800	✓	4				X					X		X			X		X	X	X		
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								

SPECIAL INSTRUCTIONS dissolved metals: As, Cd, Cr, CrIII, CrVI, Pb, Ni, Hg, Zn *Did NOT field filter.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Olana Costa, ALLY, 12/13/24, Olana Costa
Received By: OMWaldhatt, AS, 12/13/24 1104
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER: Specify:

*Turnaround request less than standard may incur Rush Charges

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: All 4
Project: HFS OWS AOC-2

ALS Job #: EV2412009 7
Login Date: 12/13/24
Login Time: 11:46
Login By: GW

Type of Shipping Container: ☑ Cooler ☐ Box ☐ Other: _____

Shipped Via: ☐ FedEx Ground ☐ FedEx Express ☐ UPS ☐ External Courier ☐ ALS Courier ☑ Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container?	☐	☐	☑
How Many? ____ Where? _____ Date: _____ Name: _____			
Was CoC filled out properly? (in ink, signed, dated, etc.)	☑	☐	☐
Did all bottles have labels?	☑	☐	☐
Did all bottle labels and tags agree with CoC?	☑	☐	☐
Were samples received within hold time?	☑	☐	☐
Did all bottles arrive in good condition?	☑	☐	☐
Was sufficient amount of sample sent for tests requested?	☑	☐	☐
Was correct preservation added to samples?	☑	☐	☐
Subcontract test containers added to subcontract bin?	☑	☐	☐
Wetchem test containers marked with applicable tests?	☑	☐	☐
Short hold time test containers delivered to analysts?	☑	☐	☐
VOA vials checked for bubbles?	☑	☐	☐
Bubbles in sample number(s): None			
5035A kits received?	☐	☐	☑
Low kits: _____ High kits: _____			
5035A kits returned?	☐	☐	☑

Low kits: _____ High kits: _____

Temperature upon receipt: 0.6 °C

On ice? ☑ Y ☐ N

Thermometer ID: 189

Other discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____
Outcome of call:

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

#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

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

SAMPLE SUMMARY

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	☐
EV25010121-04	All4-DUP-1	Water		22-Jan-2025 09:00	22-Jan-2025 11:35	☐

Client: ALL4 LLC **CASE NARRATIVE**
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-8260D	**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-8270 SIM	**Method: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	**Method:Calc-Cr3 (dissolved)**					Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA-200.8 (DISSOLVED)	**Method: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		2.5	UG/L	1	23-Jan-2025 16:54

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

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
CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED)	**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
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

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

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 EPA-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 BY EPA-8270 SIM	**Method: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 CALCULATION	**Method:Calc-Cr3 (dissolved)**					Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA-200.8 (DISSOLVED)	**Method: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.

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
CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED)	**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
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

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

Client: ALL4 LLC
Project: HFS OWS AOC-2
Sample ID: All4-FEB-1
Collection Date: 22-Jan-2025 08:40

ANALYTICAL REPORT
WorkOrder:EV25010121
Lab ID:EV25010121-03
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 18:07
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-8270 SIM	**Method:EPA-8270 SIM**			Prep:SW3510 / 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	**Method:Calc-Cr3 (dissolved)**					Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA-200.8 (DISSOLVED)	**Method: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

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

Client: ALL4 LLC
Project: HFS OWS AOC-2
Sample ID: All4-FEB-1
Collection Date: 22-Jan-2025 08:40

ANALYTICAL REPORT
WorkOrder:EV25010121
Lab ID:EV25010121-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED)	**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
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

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

Client: ALL4 LLC
Project: HFS OWS AOC-2
Sample ID: All4-DUP-1
Collection Date: 22-Jan-2025 09:00

ANALYTICAL REPORT
WorkOrder:EV25010121
Lab ID:EV25010121-04
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 EPA-8270 SIM	**Method: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 CALCULATION	**Method:Calc-Cr3 (dissolved)**					Analyst: PM
Chromium (III)	ND		2.0	UG/L	1	11-Feb-2025 10:43
ICP/MS METALS ANALYSIS BY EPA-200.8 (DISSOLVED)	**Method:EPA-6020 (dissolved)**			Prep:EPA 3010 / 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

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

Client: ALL4 LLC
Project: HFS OWS AOC-2
Sample ID: All4-DUP-1
Collection Date: 22-Jan-2025 09:00

ANALYTICAL REPORT
WorkOrder:EV25010121
Lab ID:EV25010121-04
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED)	**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
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

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

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 223218 (0)	**Test Name :** ICP/MS METALS ANALYSIS 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 :** SEMI-VOLATILE ORGANICS 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 :** VOLATILE ORGANICS 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: R504792 (0)	**Test Name :** HEXCHROME 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: R506307 (0)	**Test Name :** CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED)				**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: R506309 (0)	**Test Name :** CHROMIUM (III) BY CALCULATION				**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: R506312 (0)	**Test Name :** ENVIRONMENTAL ANALYSIS				**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

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R506314 (0)	**Test Name :** ENVIRONMENTAL ANALYSIS				**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
EV25010121-04	All4-DUP-1	22 Jan 2025 09:00			28 Jan 2025 12:00	1

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: 223356 (0) **Instrument: VOC_123** **Method: VOLATILE ORGANICS BY EPA-8260D**

MBLK Sample ID: **MB-012425W** Units: **UG/L** Analysis Date: **24-Jan-2025 10:00**
Client ID: Run ID: **VOC_123_505022** SeqNo: **8646187** PrepDate: **24-Jan-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	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 Sample ID: **BS-012425W** Units: **UG/L** Analysis Date: **24-Jan-2025 10:33**
Client ID: Run ID: **VOC_123_505022** SeqNo: **8646188** PrepDate: **24-Jan-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	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*				

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: 223356 (0) **Instrument: VOC_123** **Method: VOLATILE ORGANICS BY EPA-8260D**

LCSD Sample ID: **BSD-012425W** Units: **UG/L** Analysis Date: **24-Jan-2025 11:05**
Client ID: Run ID: **VOC_123_505022** SeqNo: **8646189** PrepDate: **24-Jan-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
1,2-Dichloroethane	11.02	2.0	10	0	110	50 - 150	11.31	2.55	25	
Benzene	10.52	2.0	10	0	105	74.7 - 143	10.95	4.04	20.5	
Toluene	11.05	2.0	10	0	111	71.7 - 139	11.48	3.79	20.5	
1,2-Dibromoethane	10.96	0.010	10	0	110	50 - 150	11.21	2.19	25	
Ethylbenzene	10.72	2.0	10	0	107	50 - 150	11.18	4.17	25	
m,p-Xylene	20.96	4.0	20	0	105	50 - 150	21.81	3.94	25	
o-Xylene	10.6	2.0	10	0	106	50 - 150	11.01	3.74	25	
Hexane	23.64	10	20	0	118	50 - 150	27.78	16.1	25	
Surr: Toluene-d8	*4.887*	*0*	*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) **Instrument: SVOC_107** **Method: SEMI-VOLATILE ORGANICS BY EPA-8270 SIM**

MBLK Sample ID: **MB-012225W** Units: **UG/L** Analysis Date: **23-Jan-2025 17:27**
Client ID: Run ID: **SVOC_107_504959** SeqNo: **8644834** PrepDate: **22-Jan-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	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 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: 223304 (0) **Instrument: SVOC_107** **Method: SEMI-VOLATILE ORGANICS BY EPA-8270 SIM**

LCS Sample ID: **BS-012225W** Units: **UG/L** Analysis Date: **23-Jan-2025 17:53**
Client ID: Run ID: **SVOC_107_504959** SeqNo: **8644835** PrepDate: **22-Jan-2025** DF: **1**

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 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: 223304 (0) **Instrument: SVOC_107** **Method: SEMI-VOLATILE ORGANICS BY EPA-8270 SIM**

LCSD Sample ID: **BSD-012225W** Units: **UG/L** Analysis Date: **23-Jan-2025 18:19**
Client ID: Run ID: **SVOC_107_504959** SeqNo: **8644836** PrepDate: **22-Jan-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	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	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	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	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	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	20 - 150	3.599	11	30	
Benzo[G,H,I]Perylene	3.643	0.020	5	0	72.9	43 - 140	4.006	9.51	21	
Surr: Terphenyl-d14	*2.195*	*0*	*2.5*	*0*	*87.8*	*50 - 147*	*2.428*	*10.1*	*25*	

The following samples were analyzed in this batch:

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: R504792 (0) **Instrument:** Manual Entry II **Method:** HEXCHROME BY EPA-7196 (DISSOLVED) (DISSOLVED)

MBLK Sample ID: **MBLK-R504792** Units: **UG/L** Analysis Date: **22-Jan-2025 15:14**
Client ID: Run ID: **Manual Entry II_504792** SeqNo: **8641402** PrepDate: DF: **1**

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** Analysis Date: **22-Jan-2025 15:14**
Client ID: Run ID: **Manual Entry II_504792** SeqNo: **8641401** PrepDate: DF: **1**

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** Analysis Date: **22-Jan-2025 15:14**
Client ID: Run ID: **Manual Entry II_504792** SeqNo: **8641400** PrepDate: DF: **1**

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	0	7.8	

The following samples were analyzed in this batch:

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: 223218 (0) **Instrument: ICPMS_130** **Method: ICP/MS METALS ANALYSIS BY EPA-200.8 (DISSOLVED) (DISSOLVED)**

MBLK Sample ID: **MB-012325W** Units: **UG/L** Analysis Date: **23-Jan-2025 16:16**
Client ID: Run ID: **ICPMS_130_504965** SeqNo: **8647029** PrepDate: **23-Jan-2025** DF: **1**

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** Analysis Date: **23-Jan-2025 17:58**
Client ID: Run ID: **ICPMS_130_504965** SeqNo: **8647042** PrepDate: **23-Jan-2025** DF: **1**

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** Analysis Date: **23-Jan-2025 16:23**
Client ID: Run ID: **ICPMS_130_504965** SeqNo: **8647030** PrepDate: **23-Jan-2025** DF: **1**

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	2.97	R
Lead	121.5	1.0	125	0	97.2	87.5 - 107	128.3	5.45	2.43	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	3.89	R

The following samples were analyzed in this batch:

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: EV25010121

QC BATCH REPORT

Batch ID: R506307 (0) **Instrument:** Manual Entry II **Method:** CV MERCURY ANALYSIS BY EPA-245.1 (DISSOLVED) (DISSOLVED)

MBLK Sample ID: **MBLK-R506307** Units: **UG/L** Analysis Date: **24-Jan-2025 13:00**
Client ID: Run ID: **Manual Entry II_506307** SeqNo: **8672853** PrepDate: DF: **1**

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** Analysis Date: **24-Jan-2025 13:00**
Client ID: Run ID: **Manual Entry II_506307** SeqNo: **8672852** PrepDate: DF: **1**

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** Analysis Date: **24-Jan-2025 13:00**
Client ID: Run ID: **Manual Entry II_506307** SeqNo: **8672851** PrepDate: DF: **1**

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	7.94	

The following samples were analyzed in this batch:

Client: ALL4 LLC
Project: HFS OWS AOC-2
WorkOrder: **EV25010121**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

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

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:** **22-Jan-2025 11:35**

Client Name: ALL05-BELLINGHAM **Received by:** **Olivia Wyatt**

Completed By: */S/ Kristina Wahl* (eSignature) 22-Jan-2025 13:54 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

Matrices: **water** Carrier name: **ALS Courier**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	10.2 C On ice	189	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV25010121

Date 1/22/25 Page 1 Of 1

PROJECT ID: HFS DWS AOC-2
REPORT TO COMPANY: ALL4 LLC
PROJECT MANAGER: Matt Roberts
ADDRESS: 228 E Champion Street suite 101
Bellingham, WA 98225
PHONE: 360-757-9571 P.O. #: 004531-0012
E-MAIL: mroberts@all4inc.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8260 ☒	BTEX by EPA 8021 ☐	MTBE by EPA 8260 ☐	MTBE by EPA 8021 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐	Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐	RCRA-8 ☐	Pri Pol ☐	TAL ☐	Metals Other (Specify)	TCLP-Metals ☐	VOA ☐	Semi-Vol ☐	Pest ☐	Herbs ☐	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
																								See instructions						Hexane	EPH	VPH						
1. W-130	1/22/25	~~10:00~~ 9:40	Grab					↓									↓							↓						↓	↓	↓					9	
2. W-131	↓	10:45	↓																																	9	
3. ALL4-FEB-1		8:40																																		9	
4. ALL4-DUP-1		9:00																																		9	
5.																																				9	
6.																																					
7.																																					
8.																																					
9.																																					
10.																																					

SPECIAL INSTRUCTIONS: dissolved metals: As, Cd, Cr, CrIII, CrVI, Pb, Ni, Hg, Zn * Did NOT field filter

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: Vanessa Spring, ALL4 1/22/25 11am
Received By: AFREESE, ALS, 01/22/25 @1135
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: 10 Standard ☐ 5 ☐ 3 ☐ 2 ☐ 1 ☐ SAME DAY ☐
Fuels & Hydrocarbon Analysis: 5 Standard ☒ 3 ☐ 1 ☐ SAME DAY ☐
OTHER: Specify:
*Turnaround request less than standard may incur Rush Charges

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

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

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.

Date of Report: February 3, 2025
Samples Submitted: January 23, 2025
Laboratory Reference: 2501-223
Project: EV25010121

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date 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*				

Date of Report: February 3, 2025
Samples Submitted: January 23, 2025
Laboratory Reference: 2501-223
Project: EV25010121

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date 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*				

Date of Report: February 3, 2025
Samples Submitted: January 23, 2025
Laboratory Reference: 2501-223
Project: EV25010121

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date 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*				

Date of Report: February 3, 2025
Samples Submitted: January 23, 2025
Laboratory Reference: 2501-223
Project: EV25010121

VOLATILE PETROLEUM HYDROCARBONS

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date 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*				

Date of Report: February 3, 2025
Samples Submitted: January 23, 2025
Laboratory Reference: 2501-223
Project: EV25010121

VOLATILE PETROLEUM HYDROCARBONS
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date 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*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0128W1									
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.

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.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

01-223

Date 1/23/2025 Page 1 Of 1

PROJECT ID:	EV25010121
REPORT TO COMPANY	ALS Environmental
PROJECT MANAGER:	Carl Nott
ADDRESS:	8620 Holly Drive Suite 100
	Everett, WA 98208
PHONE:	(425) 356-2600 P.O.#:: 32-EV25010121
E-MAIL:	carl.nott@alsglobal.com
INVOICE TO COMPANY: SAME	
ATTENTION:	
ADDRESS:	

	SAMPLE I.D.	DATE AND TIME	MATRIX	LAB#	ANALYSIS REQUESTED NWWPH	NUMBER OF CONTAINERS
1	EV25010121-01	1/22/2025 9:40:00 AM	Water		X	
2	EV25010121-02	1/22/2025 10:45:00 AM	Water		X	
3	EV25010121-03	1/22/2025 8:40:00 AM	Water		X	
4	EV25010121-04	1/22/2025 9:00:00 AM	Water		X	

SPECIAL INSTRUCTIONS:

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: ALS 1-23 12:10
   Received By: Jordan Prell 1-23 12:10
2. Relinquished By:
   Received By:

PLEASE EMAIL RESULTS BY NOON ON:

2/5/2025

OTHER:

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
Project Manager

Date: *02/05/2025*

CLIENT: ALS Everett
Project: EV25010121
Work Order: 2501411

Work Order 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 Everett
Project: 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:

* - 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

CLIENT: ALS Everett
Project: EV25010121

Lab ID: 2501411-001 **Collection Date:** 1/22/2025 9:40:00 AM
Client Sample ID: **EV25010121-01** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 46555		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
Client Sample ID: **EV25010121-02** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 46555		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

CLIENT: ALS Everett
Project: EV25010121

Lab ID: 2501411-003 **Collection Date:** 1/22/2025 8:40:00 AM
Client Sample ID: **EV25010121-03** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 46555		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
Client Sample ID: **EV25010121-04** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 46555		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 Date: **1/24/2025**	RunNo: **97398**
Client ID: **MBLKW**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029849**

Analyte	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 Date: **1/24/2025**	RunNo: **97399**
Client ID: **MBLKW**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029860**

Analyte	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: **LCS-46555**	SampType: **LCS**	Units: **µg/L**	Prep Date: **1/24/2025**	RunNo: **97398**
Client ID: **LCSW**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029850**

Analyte	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				

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 Date: **1/24/2025**	RunNo: **97399**
Client ID: **LCSW**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029861**

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 Date: **1/24/2025**	RunNo: **97398**
Client ID: **LCSW02**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029851**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	414	80.0	1,250	0	33.1	5	92.3	353.0	16.0	20	
Aliphatic Hydrocarbon (C10-C12)	309	40.0	625.0	0	49.4	12.8	95.6	261.2	16.7	20	
Aliphatic Hydrocarbon (C12-C16)	435	40.0	625.0	0	69.5	21.9	106	376.4	14.3	20	
Aliphatic Hydrocarbon (C16-C21)	471	40.0	625.0	0	75.4	20.7	113	425.4	10.2	20	
Aliphatic Hydrocarbon (C21-C34)	486	40.0	625.0	0	77.8	24.7	117	474.0	2.56	20	
Surr: 1-Chlorooctadecane	421		500.0		84.1	50	150		0		

Sample ID: **LCSD-46555**	SampType: **LCSD**	Units: **µg/L**	Prep Date: **1/24/2025**	RunNo: **97399**
Client ID: **LCSW02**	Batch ID: **46555**		Analysis Date: **2/3/2025**	SeqNo: **2029862**

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		

Work Order: 2501411
CLIENT: ALS Everett
Project: EV25010121

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2501411-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/24/2025** RunNo: **97398**
Client ID: **EV25010121-02** Batch ID: **46555** Analysis Date: **2/3/2025** SeqNo: **2029855**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	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: **DUP** Units: **µg/L** Prep Date: **1/24/2025** RunNo: **97399**
Client ID: **EV25010121-02** Batch ID: **46555** Analysis Date: **2/3/2025** SeqNo: **2029866**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	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	
Aromatic Hydrocarbon (C21-C34)	ND	37.8		0	0			0		25	
Surr: o-Terphenyl	390		472.8		82.4	50	150		0		

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 Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	2.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

2501411

Date 1/23/2025 Page _____ Of _____

PROJECT ID:	EV25010121		
REPORT TO COMPANY	ALS Environmental		
PROJECT MANAGER:	Carl Nott		
ADDRESS:	8620 Holly Drive Suite 100		
	Everett, WA 98208		
PHONE:	(425) 356-2600	P.O.#::	32-EV25010121
E-MAIL:	carl.nott@alsglobal.com		
INVOICE TO COMPANY: SAME			
ATTENTION:			
ADDRESS:			

SAMPLE I.D.	DATE AND TIME	MATRIX	LAB#	ANALYSIS REQUESTED: NWEPH	NUMBER OF CONTAINERS
EV25010121-01	1/22/2025 9:40:00 AM	Water		X	
EV25010121-02	1/22/2025 10:45:00 AM	Water		X	
EV25010121-03	1/22/2025 8:40:00 AM	Water		X	
EV25010121-04	1/22/2025 9:00:00 AM	Water		X	

SPECIAL INSTRUCTIONS:

SIGNATURES (Name, Company, Date, Time):

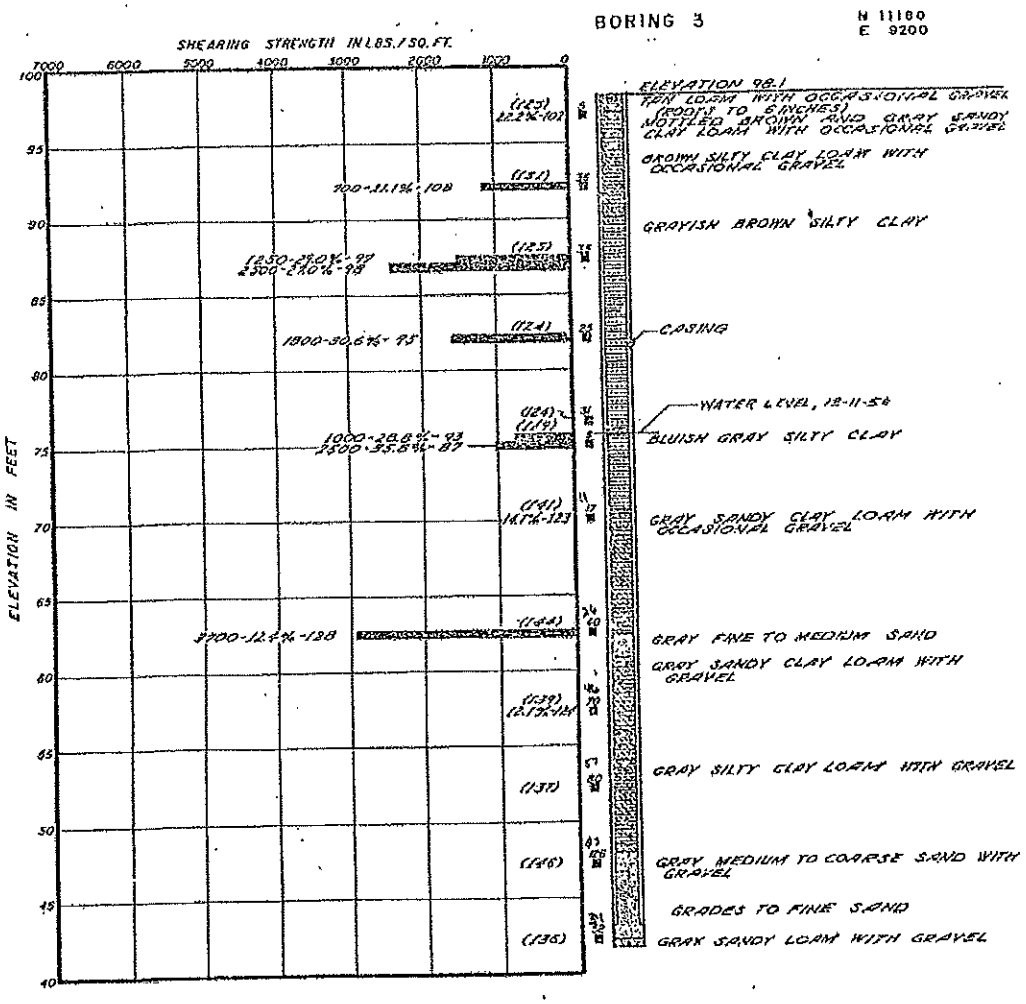
1. Relinquished By: ALS 1-23 12:54
   Received By: ATG 1/23/25 12:55PM
2. Relinquished By:
   Received By:

PLEASE EMAIL RESULTS BY NOON ON:

2/5/2025

OTHER:

APPENDIX J -
SOIL BORELOG B-3-57



SOURCE: Dames & Moore, 1957, Job No. 68-AN-1. "Report of Preliminary Foundation Investigation, Proposed Northwest Refinery, Anacortes, Washington" for Texaco Inc.

Figure A-19
Log of Boring B-3-57

Job No. 33759284

URS

RP752 Facility Siting Project
Anacortes, Washington

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 BY:

ALL4 LLC
228 East Champion Street
Bellingham, WA 98225

SUBMITTED TO:

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

Section Name **Page Number**

LIST OF APPENDICES

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.

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-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:

- NWTPH-EPH: Extractable Petroleum Hydrocarbons (EPH)
- NWTPH-VPH: Volatile Petroleum Hydrocarbons (VPH)
- EPA Method 8260: Benzene, toluene, ethylbenzene, and total xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC)
- EPA Method 8270 SIM: Polycyclic Aromatic Hydrocarbons (PAHs)
- EPA Method 6020 & 7471: 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
- EPA Method 200.8 & 7471: 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 regulatory-approved 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.

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.

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.

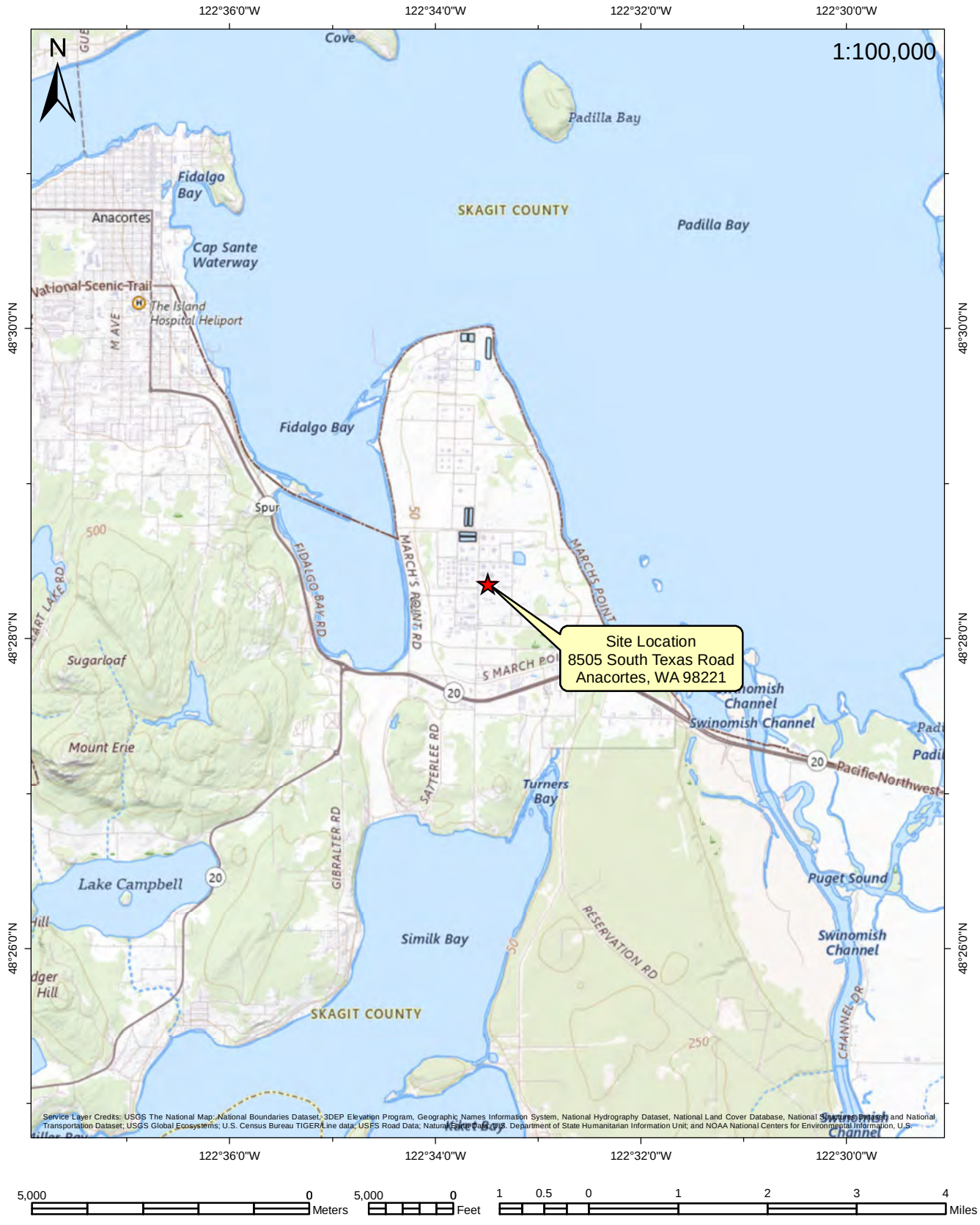
Washington State Department of Ecology (Ecology). November 1, 2021. Agreed Order for Interim Action – Oily Water Sewer (SWMU-1). No. DE 16298.

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

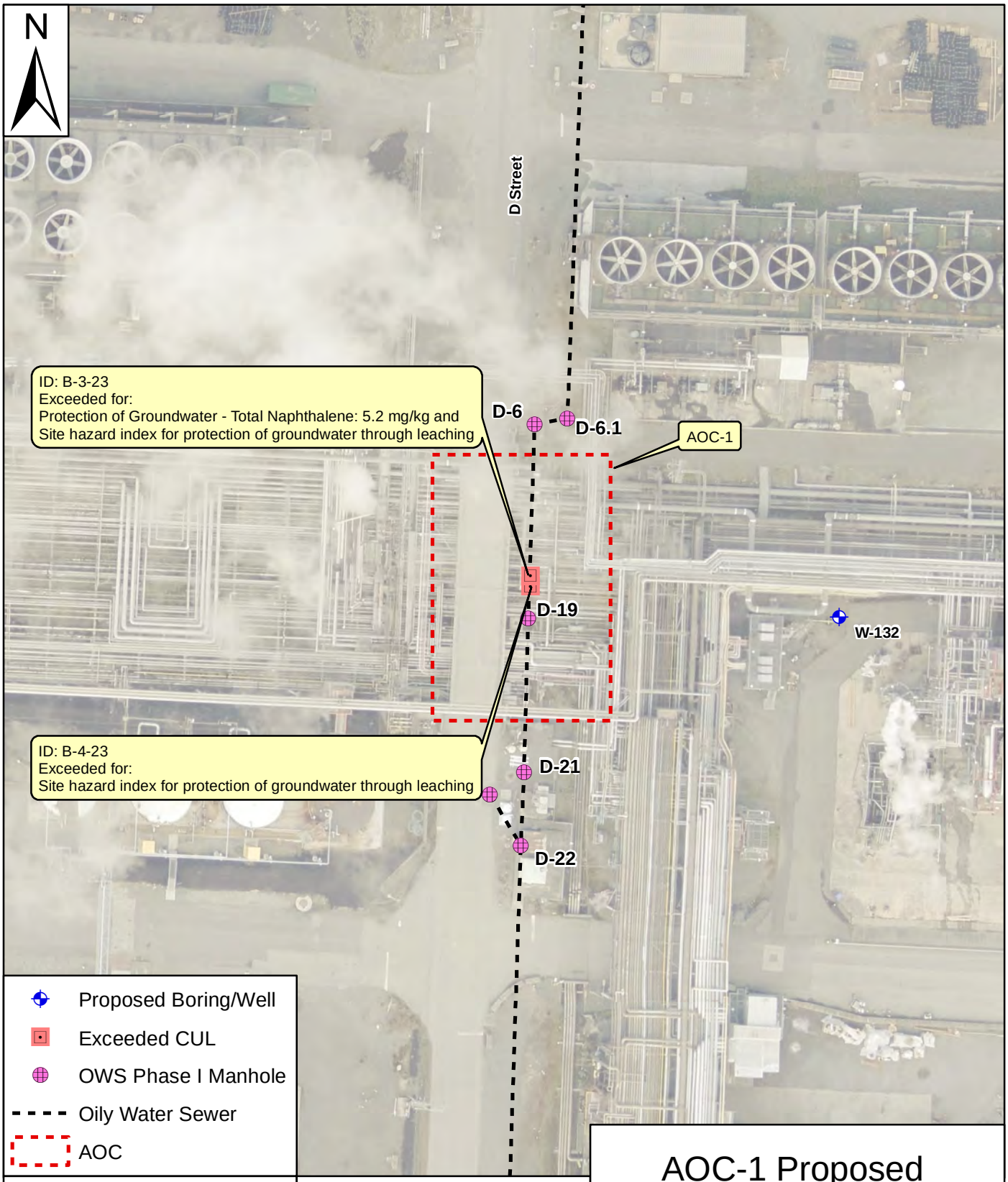
Washington State Department of Ecology (Ecology). 2024. Model Toxics Control Act Cleanup Regulation Chapter 173-340 WAC. Publication No. 94-06.

Washington State Department of Ecology (Ecology). December 2008. Minimum Standards for Construction and Maintenance of Wells WAC 173-160-400.

APPENDIX A -
FIGURES



Prepared for:	Prepared by:	Site Location Map	
HF Sinclair	ALL4	Oily Water Sewer 5/9/2024	Figure A-1



All data are approximate and should be used for relative location reference only.

AOC-1 Proposed Monitoring Well Location

Prepared for: HF Sinclair

Prepared by: ALL4

8505 South Texas Road
Anacortes, WA 98221

OWS AOC-1 Investigation 2025

1/14/2025

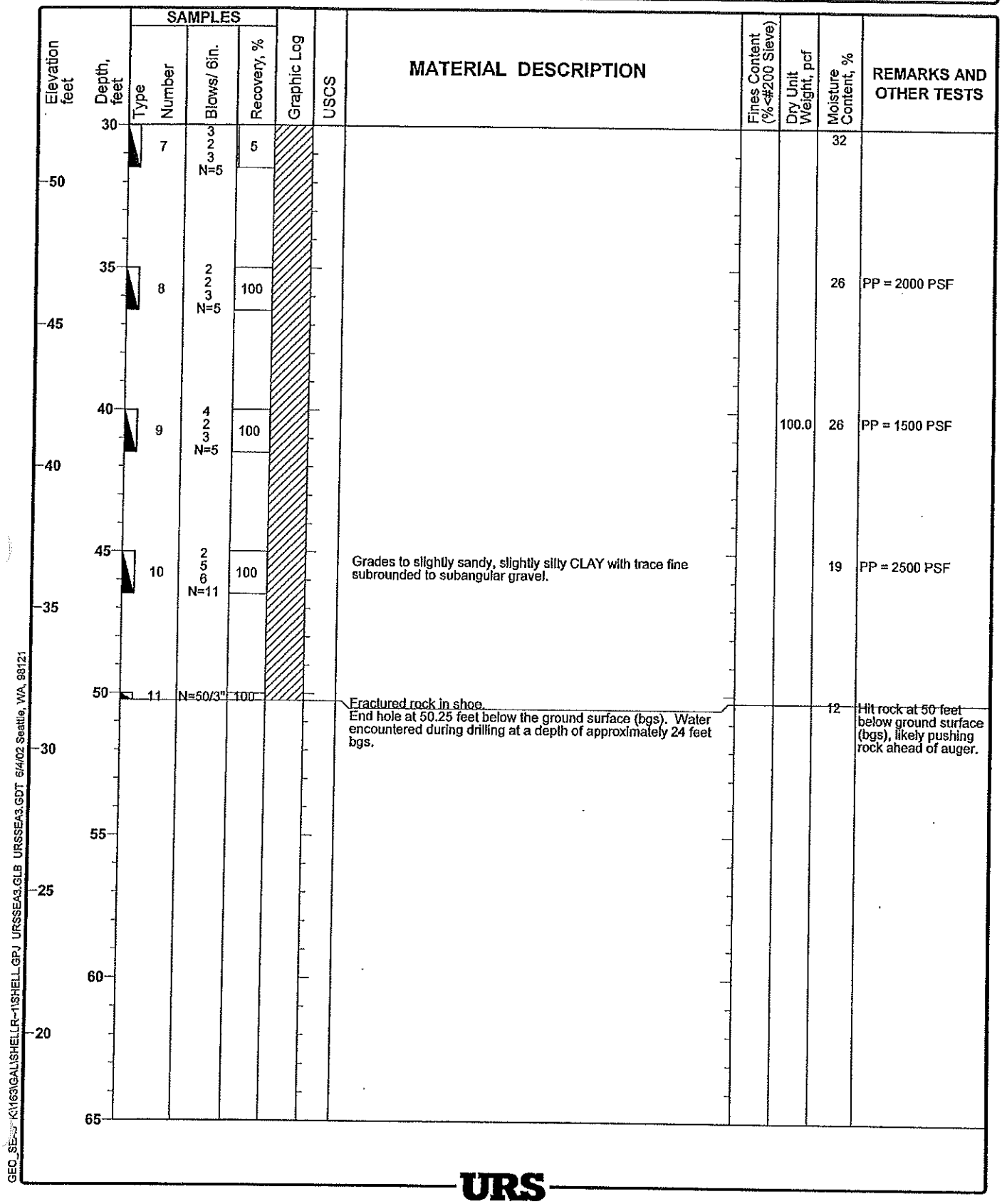
Figure A-2

APPENDIX L -
BORELOG B1-02

Project: Shell Oil Products Puget Sound Refinery
Project Location: Anacortes, Washington
Project Number: 53-03000548.00

Log of Boring B1-02

Sheet 2 of 2



GEO_SEA K:\163\GAL\SHELLR~1\SHELL.GPJ URSSEA3.GLB URSSEA3.GDT 6/4/02 Seattle, WA, 98121

URS

Figure A-1.2