July 3, 2024

Re: TC Energy - Rutledge Compressor Station
Annual Leak Monitoring Survey Report

TC Energy's Columbia Pipeline Group operates the Rutledge Compressor Station in Fallston, Maryland. Per 26.11.41.03B(3)(a) the Rutledge Compressor Station conducted its annual leak detection monitoring survey on June 21, 2024. In accordance with COMAR 26.11.41.07, each leak monitoring survey is required to be posted on a publicly available website for a period of two years from the survey date.

TC Energy - Rutledge Compressor Station

Leak Detection and Repair Report

Assessment Level Emission Report

MONTROSE ENVIRONMENTAL

Company:	**TC Energy USA**	**Facility:**	Rutledge	**Start Date:**	6/21/2024
District:	TCO	**Location:**	39.561770 / -76.477239	**End Date:**	6/21/2024
Assessment:	Rutledge : 06/21/2024				
Assessment Comments:	Subpart W GHG/MDE Scan at Rutledge Compressor Station on 06-21-2024. Units 1, 2, and 3 are Dry Seal Centrifugal Compressors. All 3 Units are Standby/Pressurized.				

Weather Conditions:	**Date / Time**	**Temp (F)**	**Wind Speed (mph)**	**Sky Conditions**
	June 21, 2024 6:00:00 AM	82	9	Clear, No clouds

Report Generation Date: 6/24/2024 7:58:27 AM

Leaks	**LDAR Leak Count:**	1
	Non-LDAR Leak Count:	0
	Total Leak Count:	1
Repair Status	**Repaired:**	1
	Delay of Repair:	0
	Unsuccessful Attempt:	0
	Leaking:	0

Assessment Emission Details - TC Energy USA - Assessment: Rutledge : 06/21/2024 06.00 AM - Report Generation Date: 6/24/2024 7:58:27 AM

Facility	Emission ID	Emission Type	Detection Date	Field Equipment Designation	Component	Sub Source	Emission Description	Detection Method Quantification Method	Status	Repair Status Date	Final Repair Due Date	Repair Confirm Method
Rutledge	1477100169	Leak	06/21/2024	Inlet/Discharge Piping	Valve - MDE	Grease Fitting	North Grease Fitting of Ball Valve on Inlet Line to AirCel, below Unit 3 Discharge Line.	Optical Gas Imaging/ Optical Gas Imaging	Repaired	6/21/2024	7/21/2024	Bubble Test

September 14, 2023

Re: TC Energy - Rutledge Compressor Station
Annual Leak Monitoring Survey Report

TC Energy's Columbia Pipeline Group operates the Rutledge Compressor Station in Fallston, Maryland. Per 26.11.41.03B(3)(a) the Rutledge Compressor Station conducted its annual leak detection monitoring survey on July 21, 2023. In accordance with COMAR 26.11.41.07, each leak monitoring survey is required to be posted on a publicly available website for a period of two years from the survey date.

TC Energy - Rutledge Compressor Station

Leak Detection and Repair Report

EMISSION DETAIL REPORT

Company:	TC Energy USA	**Facility:**	Rutledge	**Start Date:**	7/21/2023	**Technician:**	Zachary Deckert	**Leaks**	**LDAR Leak Count:**	1	**REPAIR STATUS**
									Non-LDAR Leak Count:	0	**Repaired:** 0 / **Delay of Repair:** 1 / **Unsuccessful Att:** 0
District:	CPG North	**Location:**	39.561770 / -76.477239	**End Date:**	7/21/2023	**Technician:**	Blake Mulherin		**Total Leak Count:**	1	

Assessment Comments: Subpart W GHG/MDE Scan at Rutledge Compressor Station conducted on 07-21-2023. Both Units 1 and 2 are Dry Seal Centrifugal Compressors and were Standby/Pressurized. Station and Unit Blowdowns are Combined. VPAC was used on Unit Blowdown Valves. VPAC determined all Blowdown Valves were Not Leaking. Fire Valves and Station ESD Valves are buried therefor cannot be VPACed, so Stack was wrote up as an Open-Ended Line. There are Two Condensate Tanks on Site. Emission 103100023 was remonitored on 08-09-2023 and was confirmed to be leaking. Emission 103100023 was remonitored on 8-21-2023 and was confirmed to be still leaking.

Facility	Assesment Type (s)	Emission ID #	Emission Type	Detection Date	Component	Emission Description	LEL +/or Safety Hazard*	Repair Status	Repair Status Date	Final Attempt Due Date	DOR End Date
Rutledge	MDE, Subpart W (GHG)	1039100023	Leak	7/21/2023	Open-Ended Line - Subpart W (GHG), MDE	Open-Ended Line on Combined Unit and Station Vent Stack	No	Delay of Repair	8/21/2023	8/20/2023	7/21/2024

Comments: The leak has been placed on Delay of Repair due to repair requiring a blowdown. A request was made to the Maryland Department of Environment on September 13th, 2023.

LEL +/or Safety Hazard*

The following risk matrix is used to used to risk rank any possible leak/vent safety hazards.
The LEL/Safety Hazard Checkbox must be checked if a leak (or group of leaks) poses any significant hazard. Examples of this may be:

- Personal detector reads any LEL reading
- Personal detector reads any H2S or any H 2S leak
- Personal detector alarms for any reason (toxic, low O2, etc.)
- Emission is found near any possible ignition source (i.e. burner, electrical conduit, exposed wiring,etc.)
- Emission rate is so high that it poses a hazard
- Emission source ocation may cause inhalation hazard to facility personnel or public

The severity is primarily based on the LEL reading or ppm for any toxic gases (see fifth column under "Consequences ") The total leak rate is also taken into account on the severity

Severity	Consequences					Probability			
	People	Assets	Environment	Reputation	LEL/Toxic Gas Level	A	B	C	D
						Low	Slight	Mod.	High
0	No injury or health effect	No Damage	No effect (<0.01 cfm)	No impact	0% LEL and 0ppm Toxics within 0.5 m of source				
1	Slight inhalation/odor risk	Slight wear	Slight effect (0.01 – 0.05 cfm)	Slight impact	0% LEL and 0ppm Toxics within 0.5 m of source				
3	Minor fire/explosion injury risk or exposure risk	Minor Damage	Minor effect (0.05 – 1.0 cfm)	Minor impact	1-5% LEL and below alarm level Toxics within 0.5 m of source				
4	Moderate fire/explosion injury risk or exposure risk	Moderate Damage	Moderate Effect (1.0 – 10 cfm)	Moderate impact (Regulator involvement)	Cause of LEL of 1-5% and alarm level Toxics in building				
5	Extreme fire/explosion or toxic exposure fatality risk	Major Damage	Major Effect (>10.0 cfm)	Major impact (Regulator enforcement)	Cause of LEL 10% and over and above alarm level Toxics in building				

	LOW RISK	The risk is not serious. It does not require immediate action, but should be periodically revisited to ensure that risks remains acceptably low.
	MODERATE RISK	The risk is moderate. It requires further review of controlled responses to determine the potential for escalation and to ensure risk is within acceptable limits.
	HIGH RISK	The risk is high. It requires immediate action and prompt review of control and mitigation measures.

April 26, 2022

Re: TC Energy - Rutledge Compressor Station
Annual Leak Monitoring Survey Report

TC Energy's Columbia Pipeline Group operates the Rutledge Compressor Station in Fallston, Maryland. Per 26.11.41.03B(3)(a) the Rutledge Compressor Station conducted its annual leak detection monitoring survey on March 28, 2022. In accordance with COMAR 26.11.41.07, each leak monitoring survey is required to be posted on a publicly available website for a period of two years from the survey date.

TC Energy - Rutledge Compressor Station

Leak Detection and Repair Report

TARGET EMISSION SERVICES

EMISSION DETAIL REPORT

Company:	TC Energy USA	**Facility:**	Rutledge	**Start Date:**	3/28/2022	**Technician:**	Nicholas Santmyer	**Leaks**	LDAR Leak Count:	12	**Vents**	Repair Required:	0	**REPAIR STATUS**	
												Total:	0		
District:	CPG North	**Location:**	39.561770 / -76.477239	**End Date:**	3/28/2022	**Technician:**	Zachary Hudecek		Non-LDAR Leak Count:	0	**Mandatory Emission Tests**	Leak Tests:	3	**Repaired:**	**Delay of Repair:** / **Unsuccessful At**
												Vent Tests:	0		
									Total Leak Count:	12		No Emission Tests:	2		
												Total Tests	5		
Assessment Comments:	MDE Survey at Rutledge Compressor Station conducted on 03-28-2022. All Units are Dry Seal Centrifugal Compressors and were Standby/ Pressurized. Station and Unit Blowdowns are Combined. VPAC was Inconclusive, HiFlow Rates Were Split Between Blowdown Valves.													0	0 / 0

Emission ID #	Emission Type	Detection Date	Process Block	Field Equipment Designation	Component	Sub Source	Operating Mode	Emission Description	LEL +/or Safety Hazard*	Emission Severity	Gas Type	Previous Leak (emission id)	Rate (cfm)	Detection Method / Quantification Method	N/A	Repair Recommendation	Initial PPM Reading	LDAR Tag ID	Bubble Test	Repair Status	Repair Status Date	First Attempt Due Date	Final Attempt Due Date	DOR Reason	DOR Approver Name	Final PPM Reading	Repair Confirmation Method
85610103	Leak	03/28/2022	Compressor Cent. Dry Seal	Unit 3	Connector - MDE	Flange Connection	Standby/Pressurized	Flange on Cooling Gas Inlet Line, Unit 3, Floor Level.	No	LOW	Sweet Gas		0.07	Optical Gas Imaging/ Optical Gas Imaging		Replace gasket/seal and tighten connection	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610104	Leak	03/28/2022	Compressor Cent. Dry Seal	Unit 3	Connector - MDE	Flange Connection	Standby/Pressurized	Suction Bypass Line, Unit 3, Floor Level.	No	LOW	Sweet Gas		0.05	Optical Gas Imaging/ Optical Gas Imaging		Replace gasket/seal and tighten connection	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610105	Leak	03/28/2022	Compressor Cent. Dry Seal	Unit 2	Connector - MDE	Threaded Connection	Standby/Pressurized	Union North of 90 on Start Gas Line, Unit 2.	No	LOW	Sweet Gas		0.04	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610106	Leak	03/28/2022	Compressor Cent. Dry Seal	Unit 2	Connector - MDE	Threaded Connection	Standby/Pressurized	Plug on Southwest Side of Unit 2.	No	LOW	Sweet Gas		0.06	Optical Gas Imaging/ Optical Gas Imaging		Reseal connection and tighten	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610107	Leak	03/28/2022	Separator/Filter	Main suction scrubber	Connector - MDE	Threaded Connection	N/A	Bottom Threaded Connection of Vent Valve on Level Switch, East of Main Suction Scrubber.	No	LOW	Sweet Gas		0.06	Optical Gas Imaging/ Optical Gas Imaging		Reseal connection and tighten	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610108	Leak	03/28/2022	Separator/Filter	Main suction scrubber	Connector - MDE	Threaded Connection	N/A	Top Threaded Connection of Bottle Below South Transmitter, East of Main Suction Scrubber.	No	LOW	Sweet Gas		0.08	Optical Gas Imaging/ Optical Gas Imaging		Reseal connection and tighten	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610109	Leak	03/28/2022	Separator/Filter	Main suction scrubber	Connector - MDE	Threaded Connection	N/A	Top Hammer Union on Top Line of North Level Switch, East of Main Suction Scrubber.	No	LOW	Sweet Gas		0.09	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610110	Leak	03/28/2022	Separator/Filter	South cooling gas scrubber, unit 1	Connector - MDE	Threaded Connection	N/A	South Threaded Connection of Check Valve on Cooling Gas Scrubber Drain Line, Unit 1.	No	LOW	Sweet Gas		0.06	Optical Gas Imaging/ Optical Gas Imaging		Reseal connection and tighten	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610112	Leak	03/28/2022	Separator/Filter	North cooling gas scrubber, unit 3	Connector - MDE	Threaded Connection	N/A	Union on Top Line of Level Switch, Cooling Gas Scrubber, Unit 3.	No	LOW	Sweet Gas		0.09	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610113	Leak	03/28/2022	Separator/Filter	Main discharge scrubber	Connector - MDE	Threaded Connection	N/A	Top Threaded Connection of Level Switch, South of Main Discharge Scrubber.	No	LOW	Sweet Gas		0.06	Optical Gas Imaging/ Optical Gas Imaging		Reseal connection and tighten	-	-	Yes	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
85610114	Leak	03/28/2022	Compressor Cent. Dry Seal	Unit 1	Open-ended Line - MDE	Valve Seat	Standby/Pressurized	OEL Units 1, 2, and 3 Blowdown Valves.	No	MEDIUM	Sweet Gas		0.39	Optical Gas Imaging/ HiFlow		Replace seal(s)	-	-	No	Delay of Repair	03/28/2022	-	04/27/2022	Shutdown required	Murali Ramamoorthy	-	-
						TOTAL							1.51														

LEL +/or Safety Hazard*

The following risk matrix is used to used to risk rank any possible leak/vent safety hazards.
The LEL/Safety Hazard Checkbox must be checked if a leak (or group of leaks) poses any significant hazard.
Examples of this may be:

- Personal detector reads any LEL reading
- Personal detector reads any H2S or any H2S leak
- Personal detector alarms for any reason (toxic, low O2. etc.)
- Emission is found near any possible ignition source (i.e. burner, electrical conduit, exposed wiring, etc.)
- Emission rate is so high that it poses a hazard
- Emission source location may cause inhalation hazard to facility personnel or public

The severity is primarily based on the LEL reading or ppm for any toxic gases (see fifth column under "Consequences").
The total leak rate is also taken into account on the severity.

Severity	Consequences					Probability			
	People	Assets	Environment	Reputation	LEL/Toxic Gas Level	A Low	B Slight	C Mod.	D High
0	No injury or health effect	No Damage	No effect (<0.01 cfm)	No impact	0% LEL and 0ppm Toxics within 0.5 m of source				
1	Slight inhalation/odor risk	Slight wear	Slight effect (0.01 – 0.05 cfm)	Slight impact	0% LEL and 0ppm Toxics within 0.5 m of source				
3	Minor fire/explosion injury risk or exposure risk	Minor Damage	Minor effect (0.05 – 1.0 cfm)	Minor impact	1-5% LEL and below alarm level Toxics within 0.5 m of source				
4	Moderate fire/explosion injury risk or exposure risk	Moderate Damage	Moderate Effect (1.0 – 10 cfm)	Moderate impact (Regulator involvement)	Cause of LEL of 1-5% and alarm level Toxics in building				
5	Extreme fire/explosion or toxic exposure fatality risk	Major Damage	Major Effect (>10.0 cfm)	Major impact (Regulator enforcement)	Cause of LEL 10% and over and above alarm level Toxics in building				

	LOW RISK	The risk is not serious. It does not require immediate action, but should be periodically revisited to ensure that risks remains acceptably low.
	MODERATE RISK	The risk is moderate. It requires further review of controlled responses to determine the potential for escalation and to ensure risk is within acceptable limits.
	HIGH RISK	The risk is high. It requires immediate action and prompt review of control and mitigation measures.

April 26, 2021

Re: TC Energy - Rutledge Compressor Station
Annual Leak Monitoring Survey Report

TC Energy's Columbia Pipeline Group operates the Rutledge Compressor Station in Fallston, Maryland. Per 26.11.41.03B(3)(a) the Rutledge Compressor Station conducted its initial leak detection monitoring survey on March 2, 2021. In accordance with COMAR 26.11.41.07, each leak monitoring survey is required to be posted on a publicly available website for a period of two years from the survey date. This posting fulfills TC Energy's obligation to meet that requirement.

TC Energy - Rutledge Compressor Station

Leak Detection and Repair Report April 2021

TARGET EMISSION SERVICES

EMISSION DETAIL REPORT

Company:	TC Energy USA	**Facility:**	Rutledge	**Start Date:**	3/2/2021	**Technician:**	Sebastian Smith
District:	CPG North	**Location:**	39.561770 / -76.477239	**End Date:**	3/2/2021	**Technician:**	Matthew Fuller

Leaks

LDAR Leak Count:	13	Vents	Repair Required: 0
			Total: 0
Non-LDAR Leak Count:	0	Mandatory Emission Tests	Leak Tests: 0
			Vent Tests: 0
Total Leak Count:	13		No Emission Tests: 0
			Total Tests 0

Assessment Comments: MDE Survey at Rutledge on 03/02/2021. All Units are Dry Seal Centrifugal Compressors and were standby Pressurized. Station and Unit Blowdowns are combined. Station Blowdown Valves are Burried. Acoustic VPAC was used to identify leaking Unit Isolation Valves; all Unit Blowdowns were Identified as leaking.

REPAIR STATUS

Repaired:	Delay of Repair:	Unsuccessful Attempt:
11	2	0

Emission ID #	Emission Type	Detection Date	Process Block	Field Equipment Designation	Component	Sub Source	Operating Mode	Emission Description	LEL +/or Safety Hazard*	Emission Severity	Gas Type	Previous Leak (emission id)	Rate (cfm)	Detection Method / Quantification Method	N/A	Repair Recommendation	Initial PPM Reading	LDAR Tag ID	Bubble Test	Repair Status	Repair Status Date	First Attempt Due Date	Final Attempt Due Date	DOR Start Date	DOR End Date	DOR Reason	DOR Approver Name	Final PPM Reading	Repair Confirmation Method
35611076	Leak	03/02/2021	Separator/Filter	Main suction scrubber	Connector - MDE	Threaded Connection	N/A	Bottom Threading to Pressure Transmitter, Suction Line to Inlet Scrubber.	No	LOW	Sweet Gas		0.02	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611077	Leak	03/02/2021	Separator/Filter	Main suction scrubber	Connector - MDE	Threaded Connection	N/A	Top Thread to East Level Switch on Hydrocarbon Tank, Main Suction Scrubber.	No	LOW	Sweet Gas		0.03	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611078	Leak	03/02/2021	Compressor Cent. Dry Seal	North cooling gas scrubber, unit 1	Connector - MDE	Threaded Connection	Standby/Pressurized	South Threading to Union on Drain Line from North Cooling Gas Scrubber, Unit 1.	No	LOW	Sweet Gas		0.08	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611079	Leak	03/02/2021	Compressor Cent. Dry Seal	South cooling gas scrubber, unit 1	Connector - MDE	Flange Connection	Standby/Pressurized	South Flange, Valve 108, Bottom Horizontal 3" Valve to South Cooling Gas Scrubber, Unit 1.	No	LOW	Sweet Gas		0.08	Optical Gas Imaging/ Optical Gas Imaging		Replace gasket/seal and tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611080	Leak	03/02/2021	Compressor Cent. Dry Seal	South cooling gas scrubber, unit 1	Connector - MDE	Flange Connection	Standby/Pressurized	West Threading to Differential Pressure Meter, South Cooling Gas Scrubber, Unit 1.	No	LOW	Sweet Gas		0.05	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Delay of Repair	04/01/2021	-	04/01/2021	04/01/2021	04/01/2022	Shutdown Required	Wayne Cook	-	-
35611081	Leak	03/02/2021	Compressor Cent. Dry Seal	North cooling gas scrubber, unit 2	Valve - MDE	Grease Fitting	Standby/Pressurized	Grease Fitting, Unit 2 Cooling Gas Linr Valve.	No	LOW	Sweet Gas		0.01	Optical Gas Imaging/ Optical Gas Imaging		Tighten valve packing	-	-	No	Repaired	03/02/2021	-	04/01/2021	-	-	-	-	-	OGI
35611082	Leak	03/02/2021	Compressor Cent. Dry Seal	Unit 2	Connector - MDE	Threaded Connection	Standby/Pressurized	Top Tubing Union on Unit side of Pressure Differential Line over Suction Loading Valve, Unit 2.	No	LOW	Sweet Gas		0.01	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/02/2021	-	04/01/2021	-	-	-	-	-	OGI
35611083	Leak	03/02/2021	Compressor Cent. Dry Seal	Unit 2	Connector - MDE	Threaded Connection	Standby/Pressurized	Tubing Union to Elbow North of Pressure Differential Meter over Suction Loading Valve, Unit 2.	No	LOW	Sweet Gas		0.01	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/02/2021	-	04/01/2021	-	-	-	-	-	OGI
35611084	Leak	03/02/2021	Compressor Cent. Dry Seal	Unit 2	Connector - MDE	Threaded Connection	Standby/Pressurized	Tubing Union to Elbow Below of Pressure Differential Meter over Suction Loading Valve, Unit 2.	No	LOW	Sweet Gas		0.01	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/02/2021	-	04/01/2021	-	-	-	-	-	OGI
35611085	Leak	03/02/2021	Compressor Cent. Dry Seal	Unit 3	Connector - MDE	Threaded Connection	Standby/Pressurized	Top Union, Filter Dump, Cooling Gas System, Unit 3.	No	LOW	Sweet Gas		0.03	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611086	Leak	03/02/2021	Compressor Cent. Dry Seal	Unit 3	Valve - MDE	Valve Stem	Standby/Pressurized	Packing, Discharge Valve, Unit 3.	No	MEDIUM	Sweet Gas		0.12	Optical Gas Imaging/ Optical Gas Imaging		Tighten valve packing	-	-	Yes	Delay of Repair	04/01/2021	-	04/01/2021	04/01/2021	04/01/2022	Shutdown Required	Wayne Cook	-	-
35611087	Leak	03/02/2021	Separator/Filter	Main discharge scrubber	Connector - MDE	Threaded Connection	N/A	Top Threading Connection to South Level Switch, Hydrocarbon Tank, Main Discharge Scrubber.	No	LOW	Sweet Gas		0.08	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
35611088	Leak	03/02/2021	Separator/Filter	Unit 3	Connector - MDE	Threaded Connection	N/A	Top Threading Connection to North Level Switch, Hydrocarbon Tank, Main Discharge Scrubber.	No	LOW	Sweet Gas		0.08	Optical Gas Imaging/ Optical Gas Imaging		Tighten connection	-	-	Yes	Repaired	03/17/2021	-	04/01/2021	-	-	-	-	-	Bubble Test
TOTAL													0.61																

LEL +/or Safety Hazard*

The following risk matrix is used to used to risk rank any possible leak/vent safety hazards.
The LEL/Safety Hazard Checkbox must be checked if a leak (or group of leaks) poses any significant hazard.
Examples of this may be:

- Personal detector reads any LEL readine
- Personal detector reads any H2S or any H2S leak
- Personal detector alarms for any reason (toxic, low O2, etc.)
- Emission is found near any possible ignition source (i.e. burner, electrical conduit, exposed wirine, etc.)
- Emission rate is so hish that it poses a hazard
- Emission source location may cause inhalation hazard to facility personnel or public

The severity is primarily based on the LEL reading or ppm for any toxic gases (see fifth column under "Consequences").
The total leak rate is also taken into account on the severity.

Severity	Consequences					Probability			
	People	Assets	Environment	Reputation	LEL/Toxic Gas Level	A	B	C	D
						Low	Slight	Mod.	High
0	No injury or health effect	No Damage	No effect (<0.01 cfm)	No impact	0% LEL and 0ppm Toxics within 0.5 m of source				
1	Slight inhalation/odor risk	Slight wear	Slight effect (0.01 – 0.05 cfm)	Slight impact	0% LEL and 0ppm Toxics within 0.5 m of source				
3	Minor fire/explosion injury risk or exposure risk	Minor Damage	Minor effect (0.05 – 1.0 cfm)	Minor impact	1-5% LEL and below alarm level Toxics within 0.5 m of source				
4	Moderate fire/explosion injury risk or exposure risk	Moderate Damage	Moderate Effect (1.0 – 10 cfm)	Moderate impact (Regulator involvement)	Cause of LEL of 1-5% and alarm level Toxics in building				
5	Extreme fire/explosion or toxic exposure fatality risk	Major Damage	Major Effect (>10.0 cfm)	Major impact (Regulator enforcement)	Cause of LEL 10% and over and above alarm level Toxics in building				

	LOW RISK	The risk is not serious. It does not require immediate action, but should be periodically revisited to ensure that risks remains acceptably low.
	MODERATE RISK	The risk is moderate. It requires further review of controlled responses to determine the potential for escalation and to ensure risk is within acceptable limits.
	HIGH RISK	The risk is high. It requires immediate action and prompt review of control and mitigation measures.