2030 Afton Place
Farmington, NM 87401
(505) 325-6622

Analysis No: HM20220088
Cust No: 33700-10420

Well/Lease Information

Customer Name:	HARVEST MIDSTREAM	Source:	STATION INLET
Well Name:	El Cedro Station Manzanares Inlet	Well Flowing:	Y
County/State:	Rio Arriba NM	Pressure:	293 PSIG
Location:		Flow Temp:	72 DEG. F
Lease/PA/CA:		Ambient Temp:	66 DEG. F
Formation:		Flow Rate:	165 MCF/D
Cust. Stn. No.:		Sample Method:	Purge & Fill
		Sample Date:	09/27/2022
		Sample Time:	10.15 AM
		Sampled By:	Ryan Antonson
Heat Trace:	N	Sampled by (CO):	Harves Mid
Remarks:	Calculated Molecular Weight = 19.1034		

Analysis

Component:	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0578	0.0579	0.0060	0.00	0.0006
CO2	10.2645	10.2742	1.7550	0.00	0.1560
Methane	88.6428	88.7269	15.0580	895.29	0.4910
Ethane	0.8409	0.8417	0.2250	14.88	0.0087
Propane	0.1442	0.1443	0.0400	3.63	0.0022
Iso-Butane	0.0170	0.0170	0.0060	0.55	0.0003
N-Butane	0.0185	0.0185	0.0060	0.60	0.0004
Neopentane 2,2 dmc3	0.0000	0.0000	0.0000	0.00	0.0000
I-Pentane	0.0045	0.0045	0.0020	0.18	0.0001
N-Pentane	0.0041	0.0041	0.0010	0.16	0.0001
Neohexane	0.0001	N/R	0.0000	0.00	0.0000
2-3-Dimethylbutane	0.0001	N/R	0.0000	0.00	0.0000
Cyclopentane	0.0001	N/R	0.0000	0.00	0.0000
2-Methylpentane	0.0006	N/R	0.0000	0.03	0.0000
3-Methylpentane	0.0002	N/R	0.0000	0.01	0.0000
C6	0.0008	0.0058	0.0000	0.04	0.0000
Methylcyclopentane	0.0001	N/R	0.0000	0.00	0.0000
Benzene	0.0002	N/R	0.0000	0.01	0.0000
Cyclohexane	0.0003	N/R	0.0000	0.01	0.0000
2-Methylhexane	0.0000	N/R	0.0000	0.00	0.0000
3-Methylhexane	0.0000	N/R	0.0000	0.00	0.0000
2-2-4-Trimethylpentane	0.0000	N/R	0.0000	0.00	0.0000
i-heptanes	0.0001	N/R	0.0000	0.01	0.0000
Heptane	0.0005	N/R	0.0000	0.03	0.0000

Methylcyclohexane	0.0008	N/R	0.0000	0.04	0.0000
Toluene	0.0005	N/R	0.0000	0.02	0.0000
2-Methylheptane	0.0002	N/R	0.0000	0.01	0.0000
4-Methylheptane	0.0001	N/R	0.0000	0.01	0.0000
i-Octanes	0.0000	N/R	0.0000	0.00	0.0000
Octane	0.0003	N/R	0.0000	0.02	0.0000
Ethylbenzene	0.0000	N/R	0.0000	0.00	0.0000
m, p Xylene	0.0002	N/R	0.0000	0.01	0.0000
o Xylene (& 2,2,4 tmc7)	0.0000	N/R	0.0000	0.00	0.0000
i-C9	0.0001	N/R	0.0000	0.01	0.0000
C9	0.0001	N/R	0.0000	0.01	0.0000
i-C10	0.0002	N/R	0.0000	0.01	0.0000
C10	0.0000	N/R	0.0000	0.00	0.0000
i-C11	0.0000	N/R	0.0000	0.00	0.0000
C11	0.0000	N/R	0.0000	0.00	0.0000
C12P	0.0000	N/R	0.0000	0.00	0.0000
Total	100.00	100.095	17.099	915.59	0.6596

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0023	CYLINDER #:	16
BTU/CU.FT IDEAL:	917.7	CYLINDER PRESSURE:	304 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	919.8	ANALYSIS DATE:	09/28/2022
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	903.8	ANALYIS TIME:	09:43:55 AM
DRY BTU @ 15.025:	938.2	ANALYSIS RUN BY:	PATRICIA KING
REAL SPECIFIC GRAVITY:	0.6608		

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.
GPA Standard: GPA 2286-14
GC: SRI Instruments 8610 **Last Cal/Verify: 09/28/2022**
GC Method: C12+BTEX Gas

HARVEST MIDSTREAM

WELL ANALYSIS COMPARISON

Lease: El Cedro Station Manzanares Inlet STATION INLET 09/28/2022
Stn. No.: 33700-10420
Mtr. No.:

Smpl Date:	09/27/2022	02/07/2020
Test Date:	09/28/2022	02/12/2020
Run No:	HM20220088	HM200008
Nitrogen:	0.0578	0.0566
CO2:	10.2645	8.9772
Methane:	88.6428	89.7679
Ethane:	0.8409	0.9558
Propane:	0.1442	0.1715
I-Butane:	0.0170	0.0262
N-Butane:	0.0185	0.0266
2,2 dmc3:	0.0000	0.0000
I-Pentane:	0.0045	0.0073
N-Pentane:	0.0041	0.0056
Neohexane:	0.0001	0.0000
2-3-	0.0001	0.0001
Cyclopentane:	0.0001	0.0001
2-Methylpentane:	0.0006	0.0005
3-Methylpentane:	0.0002	0.0002
C6:	0.0008	0.0005
Methylcyclopentane:	0.0001	0.0001
Benzene:	0.0002	0.0002
Cyclohexane:	0.0003	0.0003
2-Methylhexane:	0.0000	0.0001
3-Methylhexane:	0.0000	0.0000
2-2-4-	0.0000	0.0000
i-heptanes:	0.0001	0.0001
Heptane:	0.0005	0.0004
Methylcyclohexane:	0.0008	0.0008
Toluene:	0.0005	0.0006
2-Methylheptane:	0.0002	0.0002
4-Methylheptane:	0.0001	0.0001
i-Octanes:	0.0000	0.0001
Octane:	0.0003	0.0002
Ethylbenzene:	0.0000	0.0000
m, p Xylene:	0.0002	0.0002
o Xylene (& 2,2,4	0.0000	0.0000
i-C9:	0.0001	0.0001
C9:	0.0001	0.0001
i-C10:	0.0002	0.0000
C10:	0.0000	0.0000
i-C11:	0.0000	0.0000
C11:	0.0000	0.0000
C12P:	0.0000	0.0000
BTU:	919.8	934.7
GPM:	17.1020	17.1180
SPG:	0.6608	0.6495

2030 Afton Place, Farmington, NM 87401 - (505) 325-6622

304#

GAS ANALYSIS SERVICE

10 PSIG Precharge

C6+ ☐ C9+ ☐ C12+ ☐ C12+ BTEX ☐ Helium ☐

Other

Date 9/27/2022 ☒AM ☐PM

Time 10:15

Sampled By:(Co.) Harvest Midstream

Sampled by:(Person) Ryan Antonson

Well Flowing: ☒ Yes ☐ No

Company: Harvest Midstream

Heat Trace: ☐ Yes ☒ No

Well Name: El Cedro Station

Flow Pressure (PSIG): 293

Location: El Cedro Station

Flow Temp (°F): 72°

County/State: Rio Arriba

Ambient Temp (°F): 66

Formation:

Flow Rate (MCF/D): 165

Source: ☐ Meter Run ☐ Tubing ☐ Casing ☐ Bradenhead ☒ Other Station Inlet

Sample Type: ☒ Spot ☐ Composite Sample Method: ☒ Purge & Fill ☐ Other

Meter Number:

Cylinder Number: 16

Contact: Harvest Midstream

Remarks: Extended Gas Analysis of El Cedro Manzanares Inlet

33700-10420 HM20220088

ASME Relief Valve Sizing

18-Oct-23

Enter One Value Only — SCFM
or — MMscf/d
or — lb/hr

Flow Required — MMscf/D

644	Relieving Pressure (Psig)	
12.50	Atmospheric Pressure (Psia)	
70	Relieving Temp (F)	
0.68	Specific Gravity of Gas (SG)	
0.860	ASME Flow Coefficient (K)	
344	Gas Constant (C)	
6.733	Area (in**2)	

Calculated		
Relief Valve Capacity	76,741	SCFM
	110.506	MMscf/d
	238,923	lb/hr
Or Area	-	Area (In**2)

PSV Manufacturer: Anderson Greenwood
Orifice Size: 6.733 sq in (FB)
Relief Pressure: 644 psig
PSV Relief Capacity at Relief Pressure: 76,741 SCFM
Duration: 11 min
Gas Loss: 844 Mcf

Sizing Calculations

657	Relieving Pressure	P (psia)	(Selected Relieving Pressure Should Include Allowable Buildup.)
590	Relieving Temp	T (Deg R)	
14.7	P base	psia	
520	T base	Deg R	
1.0	Z base		
1.0	Z relieving	z	(Can assume z = 1.0 to be conservative.)
19.7	Molecular Weight	M	=SG*MW of Air (28.964)
0.05189	Gas Density	lb/ft**3	=Pbase*(MW)/(Zbase*R(10.73)*Tbase) (At exit conditions, STP)
0.860	Flow Coefficient	K	(Use Manufacture's Coefficient.)
344	Gas Constant	C	(Normally 344 for .6 SG, Natural Gas)
-	SCFM		
-	MMscf/d		
-	lb/hr		
6.7330	Actual Flow Area	A (in**2)	

-	Given SCFM solving for Area (in**2)	=(SCFM*Density*60)/(K*C*P*(SQRT(M/zT)))
-	Given MMscf/d solving for Area (in**2)	=(MMscfd*Density*1000000/24)/(K*C*P*(SQRT(M/zT)))
-	Given lb/hr solving for Area (in**2)	=(lb/hr)/(K*C*P*(SQRT(M/zT)))
76,741	Given Area Solving for SCFM	=(K*A*C*P)/(Density*60)*(SQRT(M/zT))
110.506	Given Area Solving for MMscf/d	=(K*A*C*P)/(Density*1000000/24)*(SQRT(M/zT))
238,923	Given Area Solving for lb/hr	=(K*A*C*P)*(SQRT(M/zT))

Note: Reference equations are from Appendix 11, Section VIII of the ASME Boiler and Pressure Vessel Code.

CUSTOMER: Harvest Midstream
ADDRESS: El Cedro Twin Peaks
PO#:

QUADCO, LLC
SAFETY RELIEF VALVE REPORT ©

R.O. NO: 10030026
DATE REC'D: 6/3/2021
ITEM: 11 of 52

Priority: Standard **Type**: Repair

IDENTIFICATION
CUST ID # PSV-9112
LOC B Turbine 1st Stage Discharge
MFG A.g.co
TYPE NO 2733 34
SERIAL NO 5538 H
ORIFICE FB
INLET 3 in 300# RF FLG
OUTLET 4 in 150# RF FLG
PREVIOUS R.O. 10025679-38
P.I.D.

VALVE DATA

	Current	Required
SET PRESS	650	650
BACK PRESS	Atm.	Atm.
C.D. PRESS	650	650
TEMP	Amb.	Amb.
BLOWDOWN	Adj.	Adj.
CAPACITY	76489 scfm	76489 scfm
MEDIA	Vapor	Vapor
VALVE CONVERSION	No	
CODE STAMP	UV NB	

MATERIAL/ DESIGN
Pilot
BASE: C.S
BODY: C.S.
TRIM: S.S./303
SPRING: S.S.
CAP & LEVER: Closed
COMPLETED BY Valdez, James
DATE 7/26/2021

ORIGINAL NAMEPLATE DATA
TYPE 2733 34
SET PRESS 456
BACK PRE N.O.T
C.D. PRESS N.O.T.
TEMP N.O.T
CAP. 51365 scfm
BLOWDOWN N.O.T.
MANUFACTURED
CODE STAMP UV NB

WORK
× Pretest
Reset
Overhaul
Warranty
Assembly

PRELIMINARY TEST RESULTS
TEST MEDIA Nitrogen **GAUGE S/N** QF5K-4
SET PRESSURE 650 **CAL DUE** 9/1/2021
BLOWDOWN Adj. **TESTED BY** Valdez, James
TIGHTNESS Good **TEST DATE** 7/26/2021

SPRING DATA CHECKED?
SPRING #
REPLACE No

AS FOUND ADJ
COMP SCREW
LOWER ADJ RING
UPPER ADJ RING
OVERLAP COLLAR

DISASSEMBLED BY: **DATE** **INSPECTED BY:** **DATE**

ITEM	AS FOUND CONDITION	WORK PERFORMED	INSPECTOR COMMENTS
BONNET			
BODY			
INTERNAL PARTS			1-630 PSI 2-629 PSI 3-630 PSI Inline Test Tested Good @ 650 PSI OK To Use

Previous Repair Company: **R.O. Number:** **Date:**

RECORD OF PARTS REQUIRED FOR REPAIR

PART NUMBER	DESCRIPTION	P.O. #

FINAL ASSEMBLY ADJUSTMENT
COMPRESSION SCREW
LOWER ADJUSTMENT RING
UPPER ADJUSTMENT RING
OVERLAP COLLAR
ASSEMBLED BY: **DATE**
DUPLICATE TAG INSTALLED ○ Yes ● No

RECORD OF FINAL TEST RESULTS
TEST MEDIA Nitrogen **GAUGE S/N** QF5K-4
SET PRESSURE 650 **CAL DUE** 9/1/2021
BLOWDOWN Adj. **TESTED BY** Valdez, James
TIGHTNESS Good **TEST DATE** 7/26/2021

RECORD OF FINAL ASSEMBLY
ADJ LKD & SEALED Yes
NAMEPLATE INSTALLED Yes
VR'D No
If No VR Cert. is issued, Give Reason Below: Test Only
FINAL ASSEM. BY: Chavez-Ramirez, Lionel **DATE** 7/26/2021

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Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

DEFINITIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 277048
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

DEFINITIONS

For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application:

- this application's operator, hereinafter "this operator";
- venting and/or flaring, hereinafter "vent or flare";
- any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";
- the statements in (and/or attached to) this, hereinafter "the statements in this";
- and the past tense will be used in lieu of mixed past/present tense questions and statements.

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QUESTIONS

Action 277048

QUESTIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 277048
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

QUESTIONS

Prerequisites	
Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.	
Incident Operator	**[373888] Harvest Four Corners, LLC**
Incident Type	**Flare**
Incident Status	**Closure Not Approved**
Incident Well	*Unavailable.*
Incident Facility	**[fAPP2123052765] HARVEST FOUR CORNERS GATHER SYSTEM**
Only valid Vent, Flare or Vent with Flaring incidents (selected above in the Application Details section) that are assigned to your current operator can be amended with this C-129A application.	

Determination of Reporting Requirements	
Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide addional guidance.	
Was this vent or flare caused by an emergency or malfunction	Yes
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	No
Is this considered a submission for a vent or flare event	**Yes, major venting and/or flaring of natural gas.**
An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during venting and/or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.	
Was there **at least 50 MCF** of natural gas vented and/or flared during this event	Yes
Did this vent or flare result in the release of **ANY** liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water	No
Was the vent or flare within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

Equipment Involved	
Primary Equipment Involved	Valve
Additional details for Equipment Involved. Please specify	PSV

Representative Compositional Analysis of Vented or Flared Natural Gas	
Please provide the mole percent for the percentage questions in this group.	
Methane (CH4) percentage	89
Nitrogen (N2) percentage, if greater than one percent	0
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (C02) percentage, if greater than one percent	10
Oxygen (02) percentage, if greater than one percent	0
If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.	
Methane (CH4) percentage quality requirement	*Not answered.*
Nitrogen (N2) percentage quality requirement	*Not answered.*
Hydrogen Sufide (H2S) PPM quality requirement	*Not answered.*
Carbon Dioxide (C02) percentage quality requirement	*Not answered.*
Oxygen (02) percentage quality requirement	*Not answered.*

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QUESTIONS (continued)

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 277048
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	10/04/2023
Time vent or flare was discovered or commenced	09:11 AM
Time vent or flare was terminated	09:22 AM
Cumulative hours during this event	0

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Midstream Emergency Maintenance | Valve | Natural Gas Vented | Released: 844 Mcf | Recovered: 0 Mcf | Lost: 844 Mcf.
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: | | Other (Specify) | Released: 0 (Unknown Released Amount) | Recovered: 0 | Lost: 0 .
Additional details for Measured or Estimated Volume(s). Please specify	*Not answered.*
Is this a gas only submission (i.e. only significant Mcf values reported)	**Yes, according to supplied volumes this appears to be a "gas only" report.**

Venting or Flaring Resulting from Downstream Activity	
Was this vent or flare a result of downstream activity	No
Was notification of downstream activity received by this operator	*Not answered.*
Downstream OGRID that should have notified this operator	*Not answered.*
Date notified of downstream activity requiring this vent or flare	
Time notified of downstream activity requiring this vent or flare	*Not answered.*

Steps and Actions to Prevent Waste	
For this event, this operator could not have reasonably anticipated the current event and it was beyond this operator's control	True
Please explain reason for why this event was beyond this operator's control	Upset at Milagro plant caused PSVs to lift
Steps taken to limit the duration and magnitude of vent or flare	Operator shut down the unit as soon as they could.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Out of operator's control

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ACKNOWLEDGMENTS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 277048
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

ACKNOWLEDGMENTS

☑	I acknowledge that with this application I will be amending an existing incident file (assigned to this operator) for a vent or flare event, pursuant to 19.15.27 and 19.15.28 NMAC.
☑	I acknowledge that amending an incident file does not replace original submitted application(s) or information and understand that any C-129 forms submitted to the OCD will be logged and stored as public record.
☑	I hereby certify the statements in this amending report are true and correct to the best of my knowledge and acknowledge that any false statement may be subject to civil and criminal penalties under the Oil and Gas Act.
☑	I acknowledge that the acceptance of any C-129 forms by the OCD does not relieve this operator of liability should their operations have failed to adequately investigate, report, and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment.
☑	I acknowledge that OCD acceptance of any C-129 forms does not relieve this operator of responsibility for compliance with any other applicable federal, state, or local laws and/or regulations.

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CONDITIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 277048
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

CONDITIONS

Created By	Condition	Condition Date
jdeal	If the information provided in this report requires further amendment(s), submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event.	10/18/2023