Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM107384

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
ROCK RIDGE FEDERAL 3H

2. Name of Operator
MURCHISON OIL & GAS INC
Contact: CINDY COTTRELL
E-Mail: ccottrell@jdmii.com

9. API Well No.
30-015-39543-00-S1

3a. Address
LEGACY TOWER ONE 7250 DALLAS PKY, STE 1400
PLANO, TX 75024

3b. Phone No. (include area code)
Ph: 972-931-0700

10. Field and Pool, or Exploratory
PIERCE CROSSING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 30 T24S R29E SENE 1520FNL 350FEL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Murchison Oil & Gas, Inc. (MOGI) requests permission to install a Vapor Combustor Unit (VCU) at the Rock Ridge Federal 3H Tank Battery. This request is due to the fact that the cost of installing and operating equipment necessary to capture the gas exceeds the value of the gas over the life of the facility. MOGI understands that the following conditions apply:
1. MOGI may be required to provide economic justification and provide volume verification to the Authorized Officer upon request.
2. MOGI will comply with NTL-4A requirements.
3. If volume being combusted is less than 50 MCF of gas per day, it is considered ?unavoidably lost?, therefore, no royalty obligation shall be accrued and will not be required to be reported.
a. ?Unavoidably Lost? production shall mean (1) those gas vapors which are released (in this case combusted) from low-pressure storage tanks.
4. Essentially all measured combusted volumes over 50 MCF will require payment of royalties and

9/23/15
Filed for record
NMOCD

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 21 2015
RECEIVED

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #314101 verified by the BLM Well Information System
For MURCHISON OIL & GAS INC, sent to the Carlsbad
Committed to AFMSS for processing by LINDA DENNISTON on 09/09/2015 (15LD0714SE)

Name *(Printed/Typed)* CINDY COTTRELL — Title REGULATORY COORDINATOR

Signature (Electronic Submission) — Date 08/26/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By DUNCAN WHITLOCK — Title TECHNICAL LPET — Date 09/14/2015

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #314101 that would not fit on the form

32. Additional remarks, continued

volumes need to be reported on OGOR B reports as disposition code 08.
5. Per 43 CFR 3162.7-5(d)/Onshore Order No.3.III.I.1, site facility diagram must be submitted within 60 days of equipment installation.
6. This approval does not authorize any additional surface disturbance.
7. Subject to like approval from NMOCD.

Attached are the following:
? Site facility diagram of the current tank battery as well as the location of the VCU and the manifold line connecting the tanks to the VCU.
? Vapor Test Report dated October 21, 2014 showing volume being combusted as 20 MCF of gas per day.
? Specification sheet(s) for the VCU.

METCO
ENVIRONMENTAL

SOURCE EMISSIONS SURVEY
OF
EDGE MANUFACTURING AND TECHNOLOGY
EDGE XXV COMBUSTOR INLET DUCT
AND OUTLET STACK
CLEBURNE, TEXAS

JULY AND AUGUST 2014

TESTING COMPANY: METCO ENVIRONMENTAL
3226 COMMANDER DR.
CARROLLTON, TEXAS 75006
972-931-7127
FILE NUMBER 14-278

"I certify that I have personally checked and am familiar with the information submitted herein. The analytical results for laboratory methods performed by METCO Environmental met all the requirements of NELAC Standard, if applicable. Based on my inquiries of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete"

James R. Monfries
Senior Quality Assurance Manager

METCO ENVIRONMENTAL

File Number 14-278

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SOURCE EMISSIONS SURVEY
EDGE MANUFACTURING AND TECHNOLOGY
EDGE XXV COMBUSTOR INLET DUCT
AND OUTLET STACK
MIDLAND, TEXAS
FILE NUMBER 14-278

INTRODUCTION

METCO Environmental, 3226 Commander Dr., Carrollton, Texas, conducted a source emissions survey of Edge Manufacturing and Technology, located in Cleburne, Texas, on July 30 through August 1, 2014. The purpose of these tests was to determine the concentrations of carbon monoxide and total hydrocarbon being emitted to the atmosphere via the Edge XXV Combustor Outlet Stack, in order to meet the requirements of 40 CFR 60 Subpart OOOO. The visible emissions were also determined. The concentrations of total hydrocarbon were also determined at the Edge XXV Combustor Inlet Duct in order to determine the removal efficiency. The testing was performed at four different operating conditions. Condition I was performed while the unit was operating at 90-100% of the maximum design rate; Condition II at 70-100%; Condition III at 30-70%; and Condition IV at 0-30%. The fuel used during the testing was 100% propylene gas.

METCO Environmental is an accredited Air Emission Testing Body (AETB) having demonstrated conformance to the ASTM D-7036-04 standard by the Stack Accreditation Council (Certificate Number 2007.003.0113.1217). The sampling was performed by the following METCO personnel: Ryan Adam – Project Supervisor, Jesse Martindale, and Brandon Hopper. Ryan Adam served as the Qualified Individual on-site. The credentials for the Qualified Individual can be found in Appendix K of the report.

The sampling was performed according to Sampling Protocol 14-278 following the procedures set forth in the Code of Federal Regulations, Title 40, Chapter I, Part 60,

Appendix A, Methods 1, 2, 3C, 4, 10, 18, 22, and 25A; and in the "Sampling Procedures Manual, Texas Air Control Board, Revised July 1985". Any modifications are described in the Sampling and Analytical Procedures section of the report.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Emission Parameter	Condition-Run Number I-1	Condition-Run Number I-2	Condition-Run Number I-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	9.27	8.08	8.52	8.62	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.20	0.29	0.32	0.27	≤ 10
Excess Air @ Sampling Point - %	250.3	244.7	256.2	250.4	≥ 150
Total Hydrocarbon Destruction Efficiency - %	---	---	---	99.99	≥ 95

Emission Parameter	Condition-Run Number II-1	Condition-Run Number II-2	Condition-Run Number II-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	9.12	8.77	8.84	8.91	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.32	0.27	0.26	0.28	≤ 10
Excess Air @ Sampling Point - %	233.0	233.0	227.9	231.3	≥ 150
Total Hydrocarbon Destruction Efficiency - %	---	---	---	>99.99	≥ 95

Emission Parameter	Condition-Run Number III-1	Condition-Run Number III-2	Condition-Run Number III-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	4.50	6.58	6.76	5.95	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.11	0.21	0.15	0.16	≤ 10
Excess Air @ Sampling Point - %	250.3	264.8	182.3	232.5	≥ 150
Total Hydrocarbon Destruction Efficiency - %	---	---	---	>99.99	≥ 95

Emission Parameter	Condition-Run Number IV-1	Condition-Run Number IV-2	Condition-Run Number IV-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	2.53	3.01	3.76	3.10	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.29	0.34	0.63	0.42	≤ 10
Excess Air @ Sampling Point - %	385.9	352.7	505.7	414.8	≥ 150
Total Hydrocarbon Destruction Efficiency - %	---	---	---	>99.99	≥ 95

[1] Corrected to 3% carbon dioxide.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	Date	Time	Visible Emissions (min:sec)
I-1	07/31/14	0859-1011	00:00
I-2	07/31/14	1023-1135	00:00
I-3	07/31/14	1139-1253	00:00
Average			00:00
II-1	07/31/14	1317-1429	00:00
II-2	07/31/14	1432-1544	00:00
II-3	07/31/14	1546-1658	00:00
Average			00:00
III-1	08/01/14	0834-0946	00:00
III-2	08/01/14	0948-1100	00:00
III-3	08/01/14	1103-1227	00:00
Average			00:00
IV-1	08/01/14	1247-1359	00:00
IV-2	08/01/14	1400-1512	00:00
IV-3	08/01/14	1515-1627	00:00
Average			00:00
Allowable Visible Emissions			02:00

SUMMARY OF RESULTS

Edge XXV Combustor

Condition-Run Number	Inlet Duct Average Total Hydrocarbon Concentration as Propylene (lbs/hr)	Outlet Stack Average Total Hydrocarbon Emissions as Propylene (lbs/hr)	Destruction Efficiency (%)
I-1	---	0.001	---
I-2	---	0.001	---
I-3	---	0.001	---
Average	18.757	0.001	99.99
II-1	---	0.001	---
II-2	---	0.001	---
II-3	---	0.001	---
Average	73.916	0.001	>99.99
III-1	---	<0.001	---
III-2	---	0.001	---
III-2	---	<0.001	---
Average	43.047	<0.001	>99.99
IV-1	---	<0.001	---
IV-2	---	<0.001	---
IV-3	---	0.001	---
Average	14.645	<0.001	> 99.99

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

Edge XXV Combustor Inlet Duct

Condition-Run Number	I-1	I-2	I-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	0859-0956	1023-1123	1139-1239	---
Barometric Pressure "Hg	29.88	29.88	29.89	29.88
Duct Temperature -°F	73	71	69	71
Measured Flow Rate -- MCFD[1]	20.4	21.0	21.5	21.0
Measured Flow Rate -- DSCFM[1]	14	14	15	14
% Carbon Dioxide - % Vol. (Canister)	---	---	---	<0.180
% Hydrogen - % Vol. (Canister)	---	---	---	<0.447
% Carbon Monoxide - % Vol. (Canister)	---	---	---	<0.163
% Nitrogen - % Vol. (Canister)	---	---	---	58.0
% Oxygen - % Vol. (Canister)	---	---	---	14.0
Total Hydrocarbon Concentration as Propylene - ppmv	---	---	---	204,351
Total Hydrocarbon Concentration as Propylene - lbs/hr	---	---	---	18.757

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	I-1	I-2	I-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	0859-1005	1023-1129	1139-1246	---
Stack Flow Rate – ACFM	889	1,026	1,108	1,008
Stack Flow Rate – DSCFM[1]	325	362	391	359
% Water Vapor - % Volume	7.06	7.15	6.55	6.92
% Carbon Dioxide - % Vol. (Int. Bag)[2]	3.9	4.0	3.9	3.9
% Oxygen - % Vol. (Int. Bag)[2]	15.3	15.2	15.4	15.3
% Nitrogen - % Vol. (Int. Bag)[2]	80.8	80.8	80.8	80.8
% Methane - % Vol. (Int. Bag)	<0.0306	<0.0306	<0.0306	<0.0306
Molecular Weight – lb/lb-mole	28.44	28.44	28.53	28.47
% Excess Air @ Sampling Point	250.3	244.7	256.2	250.4
Stack Temperature -°F	884	933	941	919.3
Stack Pressure - "Hg	29.87	29.87	29.88	29.87

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Normalized to 100%

SUMMARY OF RESULTS

Edge XXV Combustor Stack

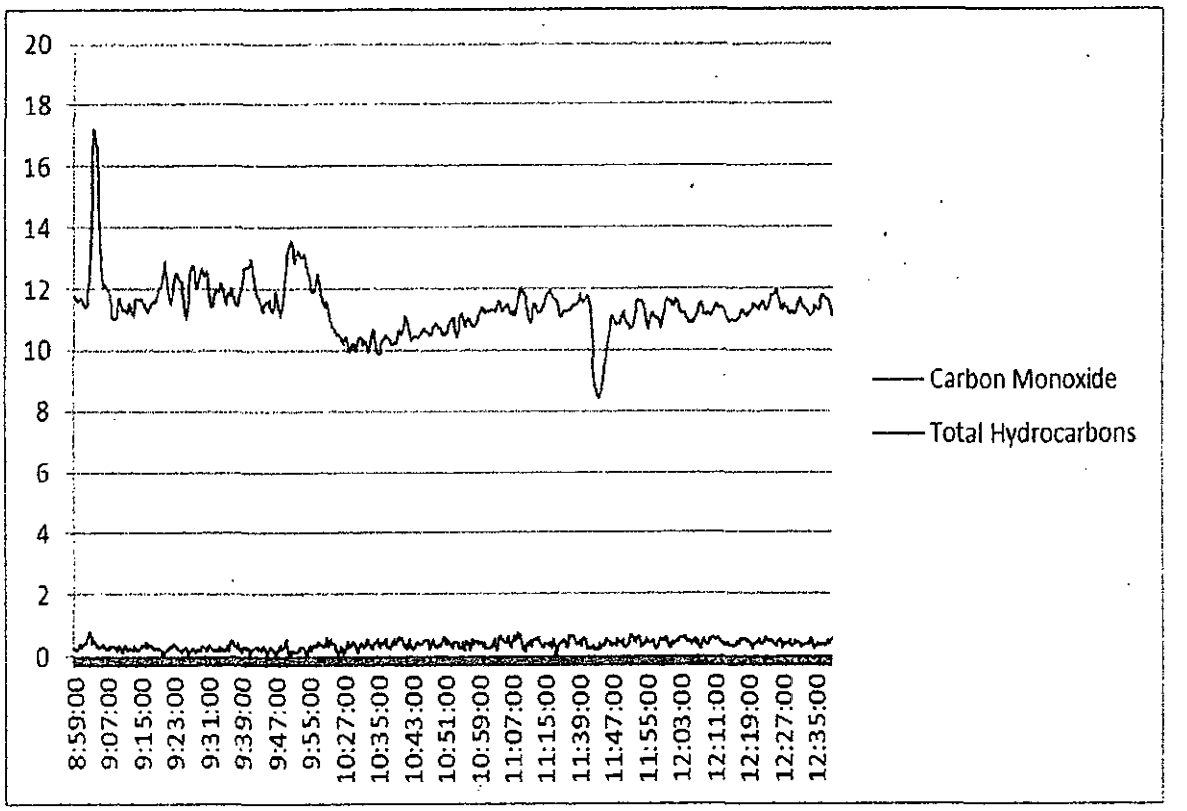
Condition-Run Number	I-1	I-2	I-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	0859-1005	1023-1129	1139-1246	---
Stack Flow Rate – DSCFM[1]	325	362	391	359
% Carbon Dioxide - % Vol. (Int. Bag)	3.9	4.0	3.9	3.93
% Water Vapor - % Volume	7.06	7.15	6.55	6.92
Carbon Monoxide Emissions - ppmvd	12.05	10.77	11.08	11.30
Carbon Monoxide Emissions - ppmvd[2]	9.27	8.08	8.52	8.62
Carbon Monoxide Emissions - lbs/hr	0.017	0.017	0.019	0.018
Total Hydrocarbon Emissions as Propane - ppmvw	0.26	0.39	0.42	0.36
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.20	0.29	0.32	0.27
Total Hydrocarbon Emissions as Propane - ppmvd	0.28	0.42	0.45	0.38
Total Hydrocarbon Emissions as Propylene - lbs/hr	*0.001*	*0.001*	*0.001*	*0.001*

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary

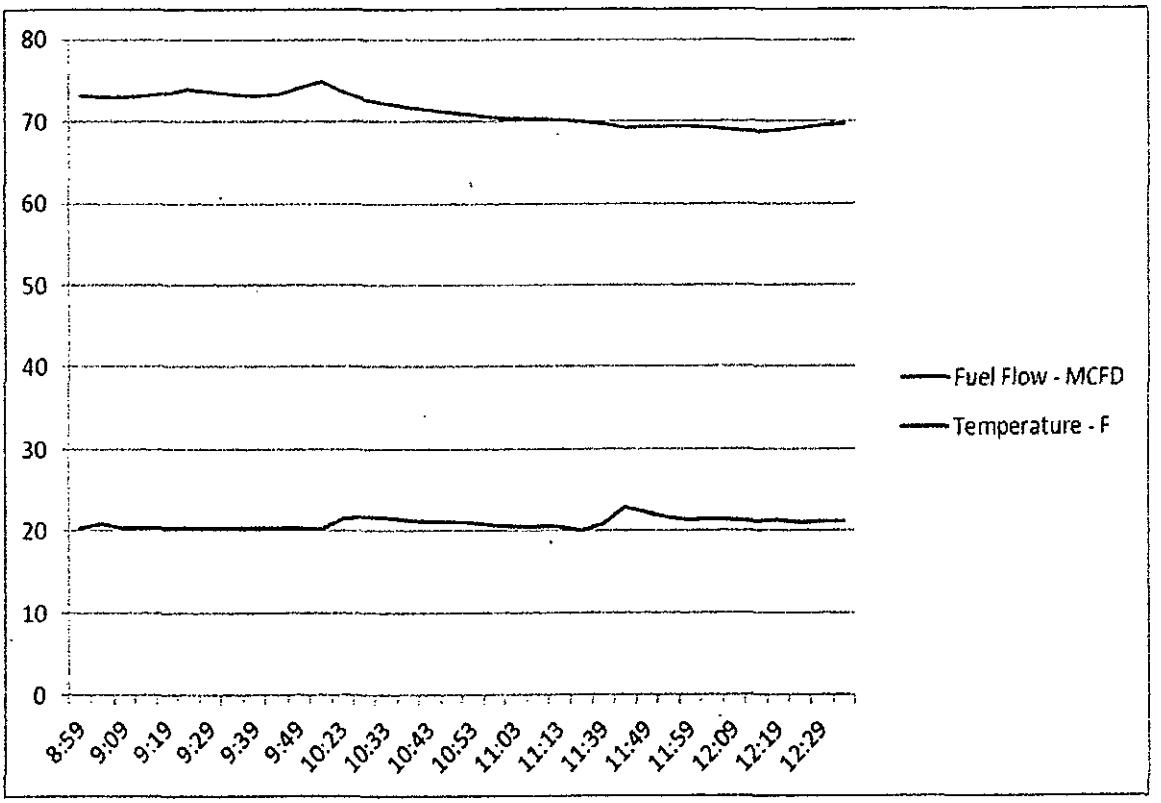
Condition I



SUMMARY OF RESULTS

Plant Operational Data Graph Summary

Condition I



SUMMARY OF RESULTS

Edge XXV Combustor Inlet Duct

Condition-Run Number	II-1	II-2	II-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	1317-1417	1432-1532	1546-1646	---
Barometric Pressure "Hg	*29.88*	*29.88*	*29.88*	29.33
Duct Temperature -°F	75	76	75	74
Measured Flow Rate – MCFD[1]	19.3	19.4	19.2	19.3
Measured Flow Rate – DSCFM[1]	13	13	13	13
% Carbon Dioxide - % Vol. (Canister)	---	---	---	<0.167
% Hydrogen - % Vol. (Canister)	---	---	---	<0.414
% Carbon Monoxide - % Vol. (Canister)	---	---	---	<0.151
% Nitrogen - % Vol. (Canister)	---	---	---	12.0
% Oxygen - % Vol. (Canister)	---	---	---	2.72
Total Hydrocarbon Concentration as Propylene - ppmv	---	---	---	867,250
Total Hydrocarbon Concentration as Propylene - lbs/hr	---	---	---	73.916

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	II-1	II-2	II-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	1317-1423	1432-1538	1546-1653	---
Stack Flow Rate – ACFM	929	954	901	928
Stack Flow Rate – DSCFM[1]	342	344	324	337
% Water Vapor - % Volume	5.73	6.06	5.72	5.84
% Carbon Dioxide - % Vol. (Int. Bag)[2]	4.1	4.1	4.2	4.1
% Oxygen - % Vol. (Int. Bag)[2]	15.0	15.0	14.9	15.0
% Nitrogen - % Vol. (Int. Bag)[2]	80.9	80.9	80.9	80.9
% Methane - % Vol. (Int. Bag)	<0.0306	<0.0306	<0.0306	<0.0306
Molecular Weight – lb/lb-mole	28.61	28.57	28.62	28.60
% Excess Air @ Sampling Point	233.0	233.0	227.9	231.3
Stack Temperature -°F	893	918	929	913.3
Stack Pressure - "Hg	29.87	29.87	29.87	29.87

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Normalized to 100%

SUMMARY OF RESULTS

Edge XXV Combustor Stack

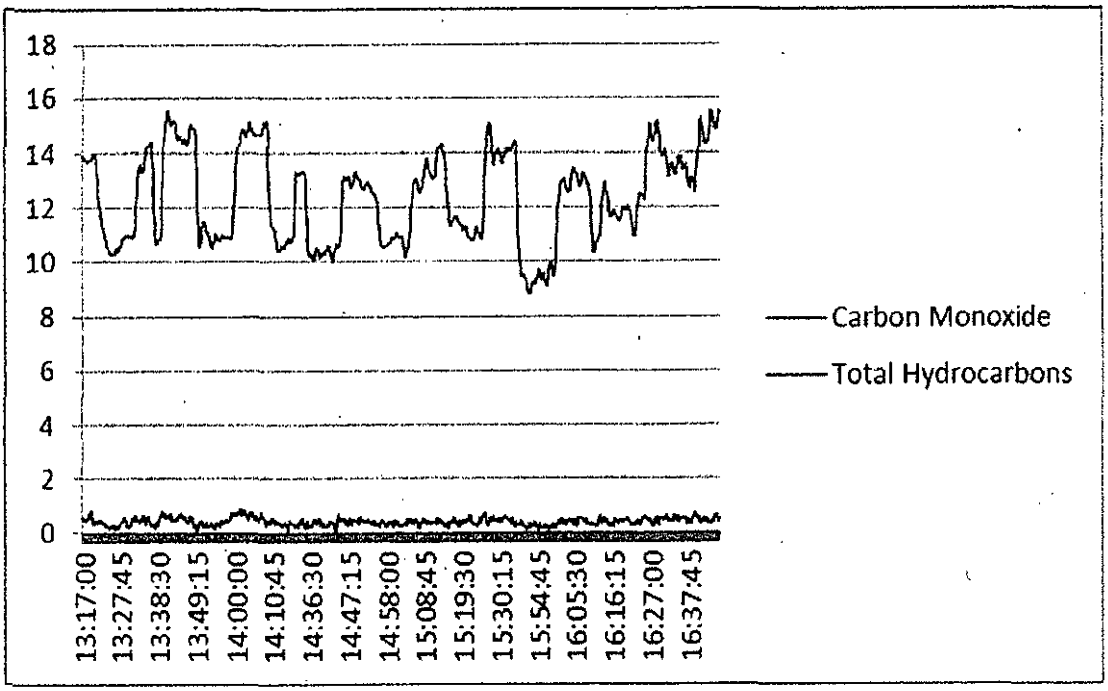
Condition-Run Number	II-1	II-2	II-3	Average
Date	07/31/14	07/31/14	07/31/14	---
Time	1317-1423	1432-1538	1546-1653	---
Stack Flow Rate – DSCFM[1]	342	344	324	337
% Carbon Dioxide - % Vol. (Int. Bag)	4.1	4.1	4.2	4.13
% Water Vapor - % Volume	5.73	6.06	5.72	5.84
Carbon Monoxide Emissions - ppmvd	12.47	11.99	12.37	12.28
Carbon Monoxide Emissions - ppmvd[2]	9.12	8.77	8.84	8.91
Carbon Monoxide Emissions - lbs/hr	0.019	0.018	0.017	0.018
Total Hydrocarbon Emissions as Propane - ppmvw	0.44	0.37	0.37	0.39
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.32	0.27	0.26	0.28
Total Hydrocarbon Emissions as Propane - ppmvd	0.47	0.39	0.39	0.42
Total Hydrocarbon Emissions as Propylene - lbs/hr	0.001	0.001	0.001	0.001

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary

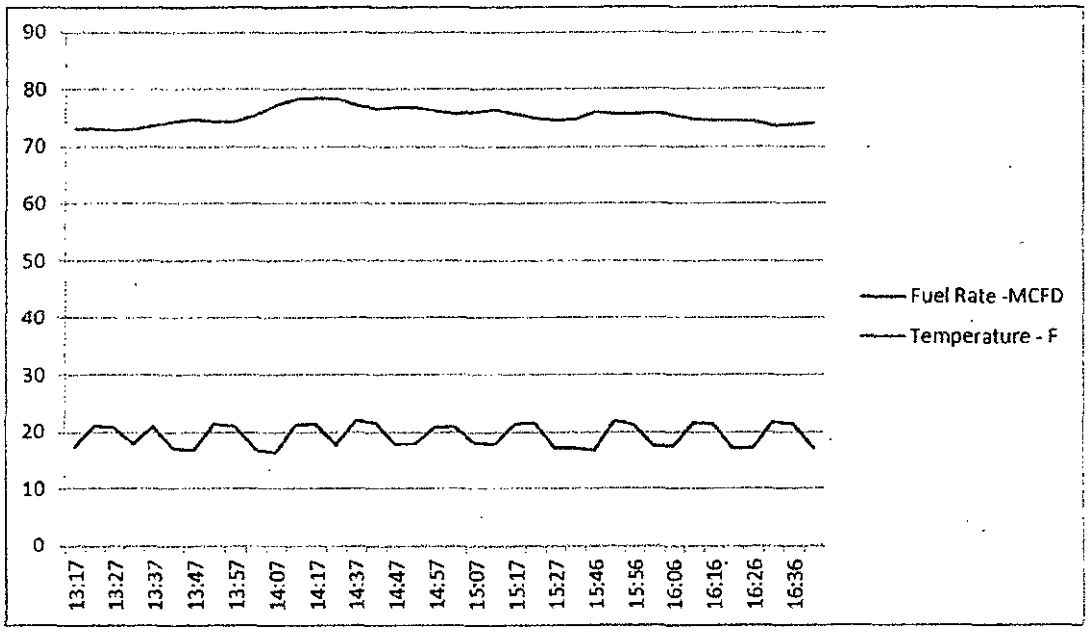
Condition II



SUMMARY OF RESULTS

Plant Operational Data Graph Summary

Condition II



SUMMARY OF RESULTS

Edge XXV Combustor Inlet Duct

Condition-Run Number	III-1	III-2	III-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	0834-0934	0948-1048	1103-1203	---
Barometric Pressure "Hg	29.97	29.97	29.97	29.26
Duct Temperature -°F	64	67	68	74
Measured Flow Rate – MCFD	11.6	11.2	11.3	51.7
Measured Flow Rate – DSCFM[1]	8	8	8	38
% Carbon Dioxide - % Vol. (Canister)	---	---	---	<0.190
% Hydrogen - % Vol. (Canister)	---	---	---	<0.470
% Carbon Monoxide - % Vol. (Canister)	---	---	---	<0.172
% Nitrogen - % Vol. (Canister)	---	---	---	16.3
% Oxygen - % Vol. (Canister)	---	---	---	3.72
Total Hydrocarbon Concentration as Propylene - ppmv	---	---	---	820,725
Total Hydrocarbon Concentration as Propylene - lbs/hr	---	---	---	43.047

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	III-1	III-2	III-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	0834-0941	0948-1055	1103-1218	---
Stack Flow Rate – ACFM	1,193	1,058	939	1,063
Stack Flow Rate – DSCFM[1]	403	365	333	367
% Water Vapor - % Volume	5.96	6.30	6.10	6.12
% Carbon Dioxide - % Vol. (Int. Bag)[2]	3.9	3.3	3.5	3.6
% Oxygen - % Vol. (Int. Bag)[2]	15.3	15.6	14.1	15.0
% Nitrogen - % Vol. (Int. Bag)[2]	80.8	81.1	82.4	81.4
% Methane - % Vol. (Int. Bag)	<0.0306	<0.0306	<0.0306	<0.0306
Molecular Weight – lb/lb-mole	28.57	28.45	28.45	28.49
% Excess Air @ Sampling Point	250.3	264.8	182.3	232.5
Stack Temperature -°F	1,017	980	944	980
Stack Pressure - "Hg	29.96	29.96	29.96	29.96

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Normalized to 100%

SUMMARY OF RESULTS

Edge XXV Combustor Stack

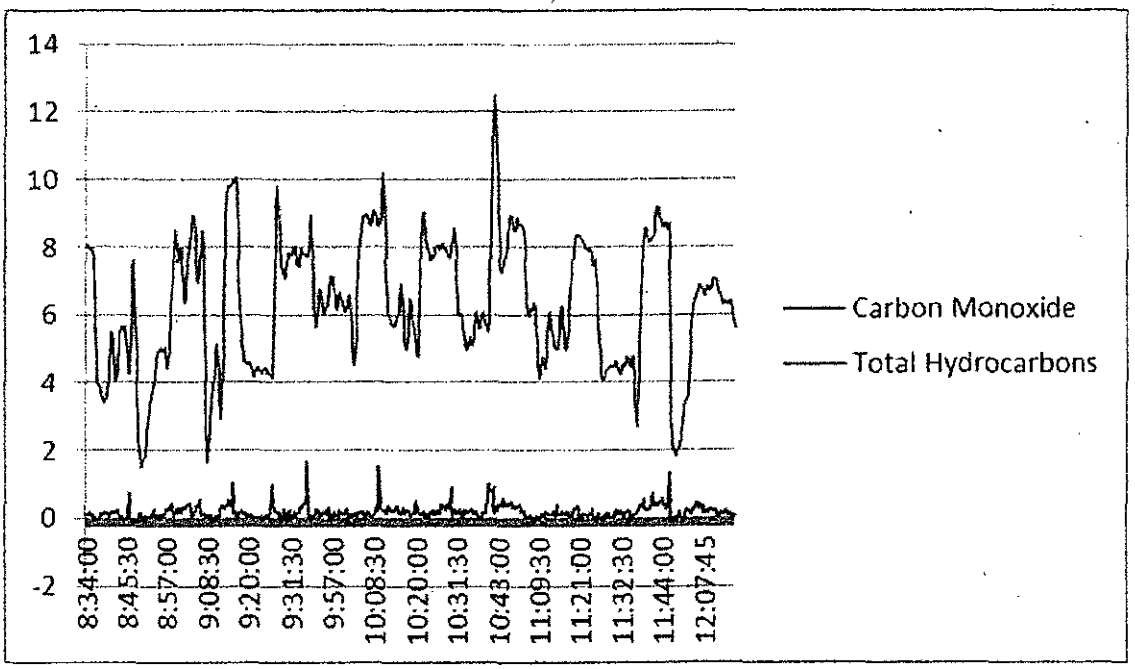
Condition-Run Number	III-1	III-2	III-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	0834-0941	0948-1055	1103-1218	---
Stack Flow Rate – DSCFM[1]	403	365	333	367
% Carbon Dioxide - % Vol. (Int. Bag)	3.9	3.3	3.5	3.57
% Water Vapor - % Volume	5.96	6.30	6.10	6.12
Carbon Monoxide Emissions - ppmvd	5.85	7.24	7.89	6.99
Carbon Monoxide Emissions - ppmvd[2]	4.50	6.58	6.76	5.95
Carbon Monoxide Emissions - lbs/hr	0.010	0.012	0.011	0.011
Total Hydrocarbon Emissions as Propane - ppmvw	0.14	0.23	0.17	0.18
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.11	0.21	0.15	0.16
Total Hydrocarbon Emissions as Propane - ppmvd	0.15	0.25	0.18	0.19
Total Hydrocarbon Emissions as Propylene - lbs/hr	<0.001	0.001	<0.001	<0.001

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary

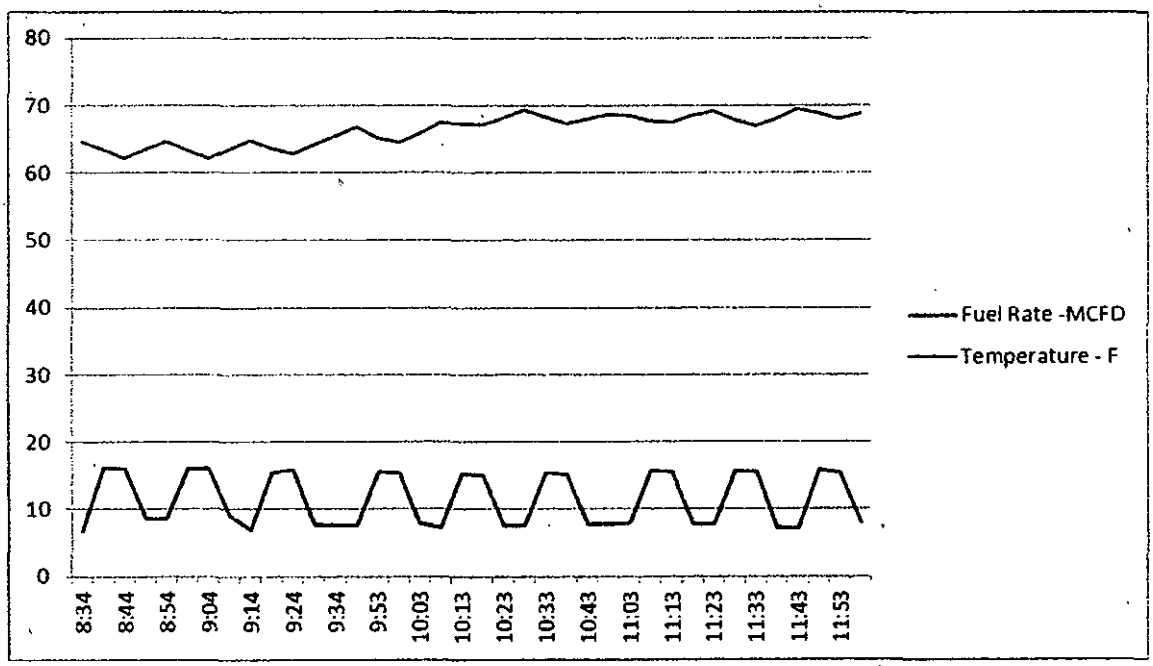
Condition III



SUMMARY OF RESULTS

Plant Operational Data Graph Summary

Condition III



SUMMARY OF RESULTS

Edge XXV Combustor Inlet Duct

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	1247-1347	1400-1500	1515-1615	---
Barometric Pressure "Hg	29.97	29.97	29.97	29.97
Duct Temperature -°F	80	87	93	87
Measured Flow Rate – MCFD	4.7	4.4	4.2	4.2
Measured Flow Rate – DSCFM[1]	3	3	3	3
% Carbon Dioxide - % Vol. (Canister)	---	---	---	<0.230
% Hydrogen - % Vol. (Canister)	---	---	---	<0.570
% Carbon Monoxide - % Vol. (Canister)	---	---	---	<0.208
% Nitrogen - % Vol. (Canister)	---	---	---	24.0
% Oxygen - % Vol. (Canister)	---	---	---	5.49
Total Hydrocarbon Concentration as Propylene - ppmv	---	---	---	744,592
Total Hydrocarbon Concentration as Propylene - lbs/hr	---	---	---	14.645

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	1247-1354	1400-1506	1515-1621	---
Stack Flow Rate – ACFM	454	476	480	470
Stack Flow Rate – DSCFM[1]	172	182	180	178
% Water Vapor - % Volume	6.85	6.16	6.31	6.44
% Carbon Dioxide - % Vol. (Int. Bag)	2.8	3.0	2.3	2.7
% Oxygen - % Vol. (Int. Bag)	16.9	16.6	17.7	17.1
% Nitrogen - % Vol. (Int. Bag)	80.3	80.4	80.0	80.2
% Methane - % Vol. (Int. Bag)	<0.0306	<0.0306	<0.0306	<0.0306
Molecular Weight – lb/lb-mole	28.36	28.46	28.38	28.40
% Excess Air @ Sampling Point	385.9	352.7	505.7	414.8
Stack Temperature -°F	845	842	864	850
Stack Pressure - "Hg	29.96	29.96	29.96	29.96

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)

SUMMARY OF RESULTS

Edge XXV Combustor Stack

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	08/01/14	08/01/14	08/01/14	---
Time	1247-1354	1400-1506	1515-1621	---
Stack Flow Rate – DSCFM[1]	172	182	180	178
% Carbon Dioxide - % Vol. (Int. Bag)	2.8	3.0	2.3	2.7
% Water Vapor - % Volume	6.85	6.16	6.31	6.44
Carbon Monoxide Emissions - ppmvd	2.36	3.01	2.88	2.75
Carbon Monoxide Emissions - ppmvd[2]	2.53	3.01	3.76	3.10
Carbon Monoxide Emissions - lbs/hr	0.002	0.002	0.002	0.002
Total Hydrocarbon Emissions as Propane - ppmvw	0.27	0.34	0.48	0.36
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.29	0.34	0.63	0.42
Total Hydrocarbon Emissions as Propane - ppmvd	0.29	0.36	0.51	0.39
Total Hydrocarbon Emissions as Propylene - lbs/hr	<0.001	<0.001	0.001	<0.001

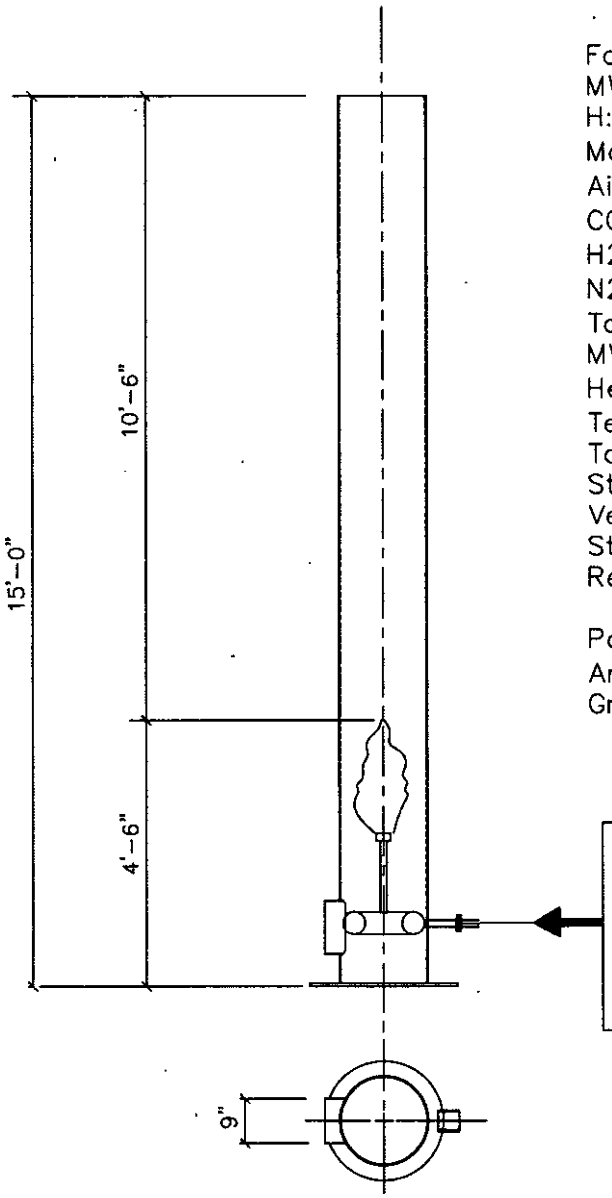
[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

MANUFACTURING & TECHNOLOGY

2606 W CR 130, Midland TX 79705
432-687-7060

THERMAL OXIDATION CALCULATIONS

Flow Rate	0.2894 SCFS (25000 SCFD)
Temperature (vapor)	560 deg. R
Pav	10.4 in.W.C.
Temperature (air)	545 deg. R
Hgt:D Ratio	7.5
Diameter	18 in.
Ambient air density	0.0725 lb./cf



	C	H		
Formula	36	6		
MW avg	42.00			
H:C Ratio	0.1667			
Mass flow	0.0321	Lbs/sec		
Air required	0.5452	Lbs/sec	7.1742	SCFS
CO2	0.1008	Lbs/sec	0.8700	SCFS
H2O	0.0412	Lbs/sec	1.7500	SCFS
N2	0.4300	Lbs/sec	5.8200	SCFS
Total Exit Mass	0.5727	Lbs/sec	7.5566	SCFS
MW	28.72			
Heat Input	644.10 BTU/sec.			
Temperature rise	1124.61 deg. F/sec			
Total Volume	23.03 ACFS			
Stack Area	1.77 SF			
Velocity	13.03 fps			
Stack height	10.50 ft.			
Residence	0.81 sec.			
Pdraft	0.0968 in.WC			
Area req'd (air)	96.69 in.2			
Grill size	11in. x 9in.			

BURNER

Vs	=892 fps
Mach exit	=.249xVs=222 fps
AREA	=0.1245 in.2
△ P	=10.4 in.WC
Lf	=1.90 ft.

REV.	DESCRIPTION	DATE
1	REVISED PER TEST DATA	9/3/14

18x15' COMBUSTOR

DATA SHEET

Murchion Oil and Gas

Rock Ridge Federal #3H

Eddy NM

Hy-Bon Engineering
IQR Survey Services

Survey Date: 10/21/14

Surveyed By: Tommy Heredia

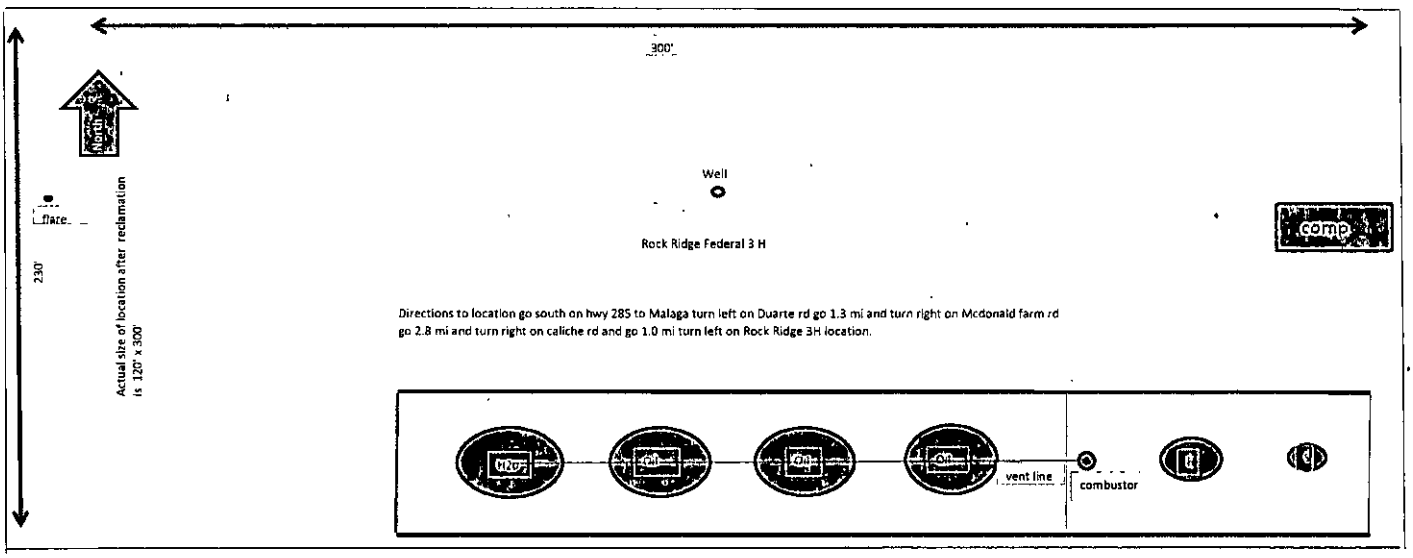
Base Input Parameters

	Measurment 1	Measurment 2	Measurment 3	Measurment 4	Measurment 5	Measurment 6
Measured Volume	19.80	0.00	0.00	0.00		
Atmospheric Press.	30.11	30.11	30.11	30.11		
Tank Vapor Temp.	66.00	66.00	66.00	66.00		
Tank Vapor MW	40.95	0.00	0.00	0.00		
Tank Vapor % VOC	67.43%	0.00%	0.00%	0.00%		
Tank Vapor % HAP	2.82487089	0	0	0		

EMISSIONS CALCULATIONS // VOC's ton/yr

	Site	Measured Volume V_{ACT} MACFD	Corrected Volume V_{STD} MSCFD	Tank Vapor MW MW_{TV} lb/lb-mole	Total Emissions E_{tot} ton/yr	Tank Vapor VOC X_{VOC} lb/lb	Tank Vapor HAP X_{hap} lb/lb	VOC Emissions E_{VOC} tpy	E_{hap} tpy
1	*Measurment 1*	19.800	19.76	40.95	388.60	67.43%	2.82%	262.04	10.98
2		0.000	0.00	0.00	0.00	0.00%	0.00%	0.00	0.00
3		0.000	0.00	0.00	0.00	0.00%	0.00%	0.00	0.00
4		0.000	0.00	0.60	0.00	0.00%	0.00%	0.00	0.00
5		0.000	0.00	0.00	0.00	0.00%	0.00%	0.00	0.00
6		0.000	0.00	0.00	0.00	0.00%	0.00%	0.00	0.00

TOTAL SITE EMISSIONS - VOC's TPY / HAP's TPY	262.04	10.98


300'
North
flare
230'
Actual size of location after reclamation is 120' x 300'
Well
Rock Ridge Federal 3 H
comp
Directions to location go south on hwy 285 to Malaga turn left on Duarte rd go 1.3 mi and turn right on Mcdonald farm rd go 2.8 mi and turn right on caliche rd and go 1.0 mi turn left on Rock Ridge 3H location.
H2O
oil
Gas
oil
vent line
combustor