FINAL REPORT

Methane and Carbon Dioxide Emissions from California Oil and Gas Operations

(Agreement No.: 08-416)

Prepared for:

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June 30, 2011

DISCLAIMER

The statements and conclusions in this report are those of the University and not necessarily those of the California Air Resources Board. The mention of commercial products, their source, or their use in connection with material reported herein is not to be construed as actual or implied endorsement of such products.

ACKNOWLEDGEMENT

The overall objective of this project was to gather fugitive emission information from oil and gas systems in order to improve the California greenhouse gases emissions inventory estimates. The project tasks were successfully accomplished by the project team with the great guidance and help from the staff at Air Resources Board (ARB). The project team would especially like to express its gratitude to the Project Officer, Mr. Joe Fischer of ARB, who provided valuable guidance and assistance in many ways.

This Final Report is submitted in fulfillment of ARB agreement number 08-416, *Methane Emissions from California Crude Oil Operations*, by California State University, Fullerton, under the sponsorship of the California Air Resources Board. Work was completed as of June 30, 2011.

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EXECUTIVE SUMMARY

The California oil and gas system is comprised of operations and facilities that extract, process, store, and transport crude oil to refineries and natural gas to utilities throughout the state. Recently, there has been a growing need to understand emissions of fugitive methane from these operations. Having current, reliable emission factors is a key component of this effort. The California Global Warming Solutions Act of 2006 (AB32) establishes a comprehensive program of regulatory and market based mechanisms to achieve real, cost-effective, quantifiable reductions of greenhouse gases (GHG). AB32 charges the Air Resources Board (ARB) as the agency responsible for monitoring and regulating many GHG emission sources to reduce state GHG emissions to 1990 levels by 2020.

A research team, led by Dr. Jeff Kuo of the Department of Civil and Environmental Engineering, California State University, Fullerton (CSUF) was awarded an 18-month contract by ARB to conduct sample gathering and emission testing at oil and gas facilities in California. The objective of this project was to gather fugitive emission information from oil and gas systems in order to improve the California GHG emissions inventory estimates. The results are to be used to support regulatory programs that achieve effective emission reductions from oil and gas operations and, consequently, minimize adverse environmental impacts from these potential emission sources.

The specific tasks of the project were successfully completed. A total of 37 oil and produced water samples from oil and gas facilities were collected and analyzed by flash analyses. The results of flash sample analyses illustrate that the approach is a viable way to gather fugitive emission information from oil and gas systems. Collection of more flash samples to cover different operating conditions and oil and gas characteristics is recommended for future work.

CHAPTER 1
INTRODUCTION

1.1 – Background

The California oil and gas system is comprised of operations and facilities that extract, process, store, and transport crude oil to refineries and natural gas to utilities throughout the state. Recently, there has been a growing need to understand emissions of fugitive methane from these operations. Having current, reliable emission factors is a key component of this effort. One of the most recently published documents used to estimate methane emissions is the 2004 American Petroleum Institute Compendium of Greenhouse Gas Methodologies for the Oil and Gas Industry. However, the emission factors contained in the compendium were obtained from a 1996 study and original data is no longer available.

The California Global Warming Solutions Act of 2006 (AB32) establishes a comprehensive program of regulatory and market based mechanisms to achieve real, cost-effective, quantifiable reductions of greenhouse gases (GHG). AB32 charges the Air Resources Board (ARB) as the agency responsible for monitoring and regulating many GHG emission sources to reduce state GHG emissions to 1990 levels by 2020.

A research team, led by Dr. Jeff Kuo of the Department of Civil and Environmental Engineering, California State University, Fullerton (CSUF) submitted a proposal to ARB in June of 2009 to conduct sample gathering and emission testing at oil and gas facilities in California. The proposal was prepared in accordance with the ARB's draft Test Plan – Methane Emissions from California Crude Oil Operations (ARB, 2009). This proposed project included gathering 31 liquid samples for laboratory flash analysis and using a Hi-Flow Sampler to check for fugitive methane from certain components such as crude oil well heads.

The ARB awarded an 18-month contract to CSUF from June 30, 2009 to December 31, 2010 (ARB approved a 6-month no-cost extension later). The total budget of this project was $50,000; approximately half of the total budget was for outside laboratory analyses and the balance was for labor, travel and other associated costs.

1.2 – Project Objective

The objective of this project was to gather fugitive emission information from oil and gas systems in order to improve the California GHG emissions inventory estimates. The results are to be used to support regulatory programs that achieve effective emission reductions from oil and gas operations, and, consequently, minimize adverse environmental impacts from these potential emission sources.

1.3 – Project Tasks

The specific tasks of the project included the following:

1. Provide assistance in finalizing the test protocol and the test program
2. Assemble source-test teams

3. Conduct testing at selected facilities (ARB to provide guidance/assistance)
4. Data analysis
5. Project management and report preparation

CHAPTER 2

PROJECT OUTCOMES AND KNOWLEDGE ATTAINED

2.1 – Project Outcomes

Although there were some modifications to the proposed tasks per guidance of ARB, all the tasks have been successfully completed. A detailed description of the project outcomes are described below.

Task 1 – Provide assistance in finalizing the test protocol and the test program

The CSUF team has worked with the ARB and provided some input to the test protocols and test program.

Task 2 – Assemble source-test teams

The field test teams were mainly comprised of undergraduate and graduate students of the Department of Civil and Environmental Engineering at CSUF. At least five students were involved in field sampling and they have learned practical experiences from real-life projects.

Task 3 – Conduct testing at selected facilities (ARB to provide guidance/assistance)

The field test teams visited more than ten different facilities to collect samples. It should be noted that the ARB staff provided great assistance and guidance in scheduling these events and in conducting field activities.

Task 4 – Data Analysis

The original proposal called for collection of 31 liquid samples for flash analysis. In actuality, 39 samples were collected and 37 of them were successfully analyzed by FESCO Petroleum Engineers (Alice, Texas). The list of the samples is shown below and the laboratory analyses results are included in Appendix A (The lab reports are shown in the order of the dates that the samples were taken and the names of the companies were blinded in the reports).

1. (06/17/10)
2. (06/17/10)
3. (06/17/10)
4. (07/13/10)
5. (07/14/10)
6. (07/19/10)
7. (07/19/10)
8. (08/09/10)
9. (08/09/10)
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24. (11/11/10)
25. (01/06/11)
26. (01/06/11)
27. (01/06/11)
28. (01/20/11)
29. (01/20/11)
30. (02/10/11)
31. (02/10/11)
32. (02/11/11)
33. (02/11/11)
34. (02/11/11)
35. (03/30/11)
36. (03/30/11)
37. (03/30/11)

Task 5 – Project management and report preparation

The ARB and the CSUF Project Team have had good communication throughout the entire project via phone calls, emails, as well as meetings in person at the job sites. This final report summarizes all the project activities.

2.2 – Knowledge Attained

Results of flash sample analyses provide a viable approach to gather fugitive emission information from oil and gas systems, which can be used to improve the California GHG emission inventory estimates.

CHAPTER 3

RECOMMENDATIONS

3.1 – Recommendations

Although the results of flash sample analyses illustrate that the approach is a viable way to gather fugitive emission information from crude oil and gas systems, only 37 samples were taken. It is warranted to collect more samples and to cover more different operating conditions and oil and gas characteristics.

REFERENCES

- ARB (2009). Test Plan and Protocol – Methane Emissions from California Crude Oil Operations (draft), California Air Resources Board, May 23, 2009.

APPENDIX A – RESULTS OF LABORATORY ANALYSES

1. (06/17/10)
2. (06/17/10)
3. (06/17/10)
4. (07/13/10)
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6. (07/19/10)
7. (07/19/10)
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25. (01/06/11)
26. (01/06/11)
27. (01/06/11)
28. (01/20/11)
29. (01/20/11)
30. (02/10/11)
31. (02/10/11)
32. (02/11/11)
33. (02/11/11)
34. (02/11/11)
35. (03/30/11)
36. (03/30/11)
37. (03/30/11)

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
ALICE HYDRAULICS DIVISION: (361) 661-1538 • (361) 664-0736

ALICE.....(361) 664-3479
BEAUMONT.....(409) 842-3000
BRYAN.....(979) 775-1825
CANADIAN.....(806) 323-5050
CORPUS CHRISTI...(361) 882-4124
EDINBURG.....(956) 383-8378
EL CAMPO.....(979) 543-9451
HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
LAREDO.....(956) 724-7501
ODESSA.....(432) 332-3211
OZONA.....(325) 392-3773
REFUGIO.....(361) 526-4644
VICTORIA.....(361) 575-7533
LAFAYETTE, LA..(337) 896-3838
LIBERAL, KS.....(580) 778-3384
SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

November 19, 2010

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Attention: Mr. Jeff Kuo

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy -
Extended Liquid Analyses

The invoice was mailed separately.

Thank you.

Yours very truly,

FESCO, Ltd.

David Dannhaus

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/hmc

September 16, 2010

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Sample @ 14.7 psig & 97 °F

Date Sampled: 06/17/2010

Job Number: 03896.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.051	0.006	0.006
Carbon Dioxide	0.298	0.058	0.052
Methane	0.122	0.023	0.008
Ethane	0.134	0.040	0.016
Propane	0.294	0.092	0.051
Isobutane	0.290	0.108	0.066
n-Butane	0.713	0.255	0.163
2,2 Dimethylpropane	0.002	0.001	0.001
Isopentane	0.741	0.307	0.210
n-Pentane	0.960	0.394	0.273
2,2 Dimethylbutane	0.042	0.020	0.014
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.355	0.165	0.120
2 Methylpentane	0.344	0.162	0.117
3 Methylpentane	0.255	0.118	0.086
n-Hexane	0.530	0.247	0.180
Heptanes Plus	94.870	98.006	98.637
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9172	(Water=1)
°API Gravity	22.77	@ 60°F
Molecular Weight	264.1	
Vapor Volume	11.02	CF/Gal
Weight	7.64	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9113	(Water=1)
°API Gravity	23.77	@ 60°F
Molecular Weight	254.0	
Vapor Volume	11.39	CF/Gal
Weight	7.59	Lbs/Gal

Base Conditions: 14.730 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: MRFdjv
Cylinder ID: W-246

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.298	0.058	0.052
Nitrogen	0.051	0.006	0.006
Methane	0.122	0.023	0.008
Ethane	0.134	0.040	0.016
Propane	0.294	0.092	0.051
Isobutane	0.290	0.108	0.066
n-Butane	0.715	0.256	0.164
Isopentane	0.741	0.307	0.210
n-Pentane	0.960	0.394	0.273
Other C-6's	0.995	0.464	0.338
Heptanes	5.276	2.454	1.962
Octanes	7.534	3.912	3.205
Nonanes	4.768	2.838	2.373
Decanes Plus	74.917	87.790	90.129
Benzene	0.075	0.024	0.023
Toluene	0.282	0.107	0.102
E-Benzene	1.457	0.637	0.609
Xylenes	0.561	0.243	0.234
n-Hexane	0.530	0.247	0.180
2,2,4 Trimethylpentane	0.000	0.000	0.000
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.9113	(Water=1)
°API Gravity	23.77	@ 60°F
Molecular Weight	254.0	
Vapor Volume	11.39	CF/Gal
Weight	7.59	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9356	(Water=1)
Molecular Weight	305.5	

Characteristics of Stock Tank:

°API Gravity	23.43	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	1.12	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-246	---
Pressure, PSIG	14.7	11	---
Temperature, °F	97	81	---

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.051	0.006	0.006
Carbon Dioxide	0.298	0.058	0.052
Methane	0.122	0.023	0.008
Ethane	0.134	0.040	0.016
Propane	0.294	0.092	0.051
Isobutane	0.290	0.108	0.066
n-Butane	0.713	0.255	0.163
2,2 Dimethylpropane	0.002	0.001	0.001
Isopentane	0.741	0.307	0.210
n-Pentane	0.960	0.394	0.273
2,2 Dimethylbutane	0.042	0.020	0.014
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.355	0.165	0.120
2 Methylpentane	0.344	0.162	0.117
3 Methylpentane	0.255	0.118	0.086
n-Hexane	0.530	0.247	0.180
Methylcyclopentane	1.096	0.439	0.363
Benzene	0.075	0.024	0.023
Cyclohexane	0.628	0.242	0.208
2-Methylhexane	0.166	0.088	0.066
3-Methylhexane	0.267	0.139	0.106
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C-7's	2.769	1.364	1.081
n-Heptane	0.349	0.182	0.138
Methylcyclohexane	1.622	0.738	0.627
Toluene	0.282	0.107	0.102
Other C-8's	5.129	2.720	2.226
n-Octane	0.782	0.454	0.352
E-Benzene	1.457	0.637	0.609
M & P Xylenes	0.222	0.098	0.093
O-Xylene	0.339	0.146	0.142
Other C-9's	4.459	2.641	2.216
n-Nonane	0.310	0.197	0.156
Other C-10's	5.615	3.655	3.123
n-decane	0.238	0.166	0.134
Undecanes(11)	5.697	3.805	3.297
Dodecanes(12)	5.283	3.811	3.349
Tridecanes(13)	5.293	4.095	3.647
Tetradecanes(14)	4.430	3.671	3.314
Pentadecanes(15)	4.392	3.898	3.562
Hexadecanes(16)	3.699	3.509	3.234
Heptadecanes(17)	3.215	3.225	3.000
Octadecanes(18)	2.994	3.162	2.959
Nonadecanes(19)	2.755	3.031	2.853
Eicosanes(20)	2.564	2.932	2.776
Heneicosanes(21)	2.179	2.622	2.497
Docosanes(22)	2.177	2.730	2.615
Tricosanes(23)	1.940	2.521	2.429
Tetracosanes(24)	1.568	2.112	2.044
Pentacosanes(25)	1.645	2.298	2.234
Hexacosanes(26)	1.554	2.249	2.196
Heptacosanes(27)	1.467	2.202	2.160
Octacosanes(28)	1.255	1.948	1.917
Nonacosanes(29)	1.430	2.292	2.263
Triacontanes(30)	1.397	2.310	2.289
Hentriacontanes Plus(31+)	12.130	25.546	32.237
Total	100.000	100.000	100.000

August 2, 2010

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Separator Hydrocarbon Liquid
Sample @ 22 psig & 100 °F

Date Sampled: 06/17/2010

Job Number: 03897.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.028	0.004	0.004
Carbon Dioxide	0.191	0.043	0.041
Methane	0.677	0.151	0.052
Ethane	0.386	0.136	0.056
Propane	0.846	0.307	0.180
Isobutane	0.378	0.163	0.106
n-Butane	1.377	0.572	0.386
2,2 Dimethylpropane	0.006	0.003	0.002
Isopentane	1.009	0.486	0.351
n-Pentane	1.548	0.739	0.538
2,2 Dimethylbutane	0.014	0.008	0.006
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.272	0.147	0.113
2 Methylpentane	0.528	0.289	0.219
3 Methylpentane	0.415	0.223	0.172
n-Hexane	1.325	0.705	0.546
Heptanes Plus	91.002	96.026	97.229
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.8770	(Water=1)
°API Gravity	29.85	@ 60°F
Molecular Weight	221.7	
Vapor Volume	12.55	CF/Gal
Weight	7.31	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.8661	(Water=1)
°API Gravity	31.88	@ 60°F
Molecular Weight	207.5	
Vapor Volume	13.25	CF/Gal
Weight	7.22	Lbs/Gal

Base Conditions: 14.730 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: MRF
Cylinder ID: W-882

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.191	0.043	0.041
Nitrogen	0.028	0.004	0.004
Methane	0.677	0.151	0.052
Ethane	0.386	0.136	0.056
Propane	0.846	0.307	0.180
Isobutane	0.378	0.163	0.106
n-Butane	1.383	0.575	0.388
Isopentane	1.009	0.486	0.351
n-Pentane	1.548	0.739	0.538
Other C-6's	1.228	0.666	0.510
Heptanes	7.354	4.024	3.364
Octanes	9.958	6.021	5.183
Nonanes	6.133	4.262	3.738
Decanes Plus	64.239	80.079	83.293
Benzene	0.131	0.048	0.049
Toluene	0.417	0.184	0.185
E-Benzene	1.656	0.842	0.847
Xylenes	1.113	0.564	0.570
n-Hexane	1.325	0.705	0.546
2,2,4 Trimethylpentane	0.001	0.001	0.001
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.8661	(Water=1)
°API Gravity	31.88	@ 60°F
Molecular Weight	207.5	
Vapor Volume	13.25	CF/Gal
Weight	7.22	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9009	(Water=1)
Molecular Weight	269.1	

Characteristics of Stock Tank:

°API Gravity	30.75	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	1.36	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-882*	---
Pressure, PSIG	22	20	---
Temperature, °F	100	82	---

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.028	0.004	0.004
Carbon Dioxide	0.191	0.043	0.041
Methane	0.677	0.151	0.052
Ethane	0.386	0.136	0.056
Propane	0.846	0.307	0.180
Isobutane	0.378	0.163	0.106
n-Butane	1.377	0.572	0.386
2,2 Dimethylpropane	0.006	0.003	0.002
Isopentane	1.009	0.486	0.351
n-Pentane	1.548	0.739	0.538
2,2 Dimethylbutane	0.014	0.008	0.006
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.272	0.147	0.113
2 Methylpentane	0.528	0.289	0.219
3 Methylpentane	0.415	0.223	0.172
n-Hexane	1.325	0.705	0.546
Methylcyclopentane	1.464	0.682	0.594
Benzene	0.131	0.048	0.049
Cyclohexane	0.742	0.333	0.301
2-Methylhexane	0.304	0.186	0.147
3-Methylhexane	0.488	0.295	0.236
2,2,4 Trimethylpentane	0.001	0.001	0.001
Other C-7's	3.420	1.959	1.635
n-Heptane	0.935	0.568	0.451
Methylcyclohexane	2.284	1.209	1.081
Toluene	0.417	0.184	0.185
Other C-8's	6.325	3.902	3.359
n-Octane	1.349	0.910	0.743
E-Benzene	1.656	0.842	0.847
M & P Xylenes	0.644	0.329	0.329
O-Xylene	0.470	0.235	0.240
Other C-9's	5.432	3.743	3.305
n-Nonane	0.701	0.520	0.433
Other C-10's	6.676	5.055	4.545
n-decane	0.633	0.511	0.434
Undecanes(11)	5.966	4.635	4.226
Dodecanes(12)	4.984	4.182	3.867
Tridecanes(13)	5.535	4.980	4.668
Tetradecanes(14)	4.338	4.181	3.972
Pentadecanes(15)	4.032	4.162	4.003
Hexadecanes(16)	3.049	3.364	3.262
Heptadecanes(17)	2.735	3.191	3.123
Octadecanes(18)	2.873	3.529	3.475
Nonadecanes(19)	2.669	3.416	3.383
Eicosanes(20)	2.140	2.846	2.835
Heneicosanes(21)	1.819	2.545	2.550
Docosanes(22)	1.702	2.482	2.502
Tricosanes(23)	1.545	2.336	2.368
Tetracosanes(24)	1.338	2.097	2.135
Pentacosanes(25)	1.221	1.984	2.029
Hexacosanes(26)	1.188	2.000	2.054
Heptacosanes(27)	1.133	1.978	2.042
Octacosanes(28)	0.953	1.721	1.782
Nonacosanes(29)	0.961	1.791	1.861
Triacontanes(30)	0.947	1.821	1.899
Hentriacontanes Plus(31+)	5.804	15.272	20.278
Total	100.000	100.000	100.000

November 9, 2010

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Sample @ 28 psig & 109 °F

Date Sampled: 06/17/2010

Job Number: 03890.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.020	0.003	0.003
Carbon Dioxide	0.292	0.069	0.065
Methane	0.627	0.147	0.051
Ethane	0.348	0.129	0.053
Propane	0.865	0.330	0.194
Isobutane	0.565	0.256	0.167
n-Butane	1.688	0.737	0.498
2,2 Dimethylpropane	0.008	0.004	0.003
Isopentane	1.404	0.711	0.515
n-Pentane	1.957	0.982	0.717
2,2 Dimethylbutane	0.036	0.021	0.016
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.654	0.371	0.286
2 Methylpentane	0.741	0.426	0.324
3 Methylpentane	0.531	0.300	0.233
n-Hexane	1.119	0.637	0.490
Heptanes Plus	89.145	94.876	96.385
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.8776	(Water=1)
°API Gravity	29.73	@ 60°F
Molecular Weight	212.9	
Vapor Volume	13.09	CF/Gal
Weight	7.31	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.8639	(Water=1)
°API Gravity	32.30	@ 60°F
Molecular Weight	196.9	
Vapor Volume	13.93	CF/Gal
Weight	7.20	Lbs/Gal

Base Conditions: 14.730 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: MRFdjv
Cylinder ID: W-852

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.292	0.069	0.065
Nitrogen	0.020	0.003	0.003
Methane	0.627	0.147	0.051
Ethane	0.348	0.129	0.053
Propane	0.865	0.330	0.194
Isobutane	0.565	0.256	0.167
n-Butane	1.696	0.741	0.501
Isopentane	1.404	0.711	0.515
n-Pentane	1.957	0.982	0.717
Other C-6's	1.963	1.118	0.859
Heptanes	11.083	6.270	5.295
Octanes	12.652	7.947	6.897
Nonanes	6.701	4.873	4.301
Decanes Plus	55.018	73.882	77.970
Benzene	0.155	0.060	0.061
Toluene	0.635	0.294	0.297
E-Benzene	2.026	1.083	1.092
Xylenes	0.874	0.466	0.471
n-Hexane	1.119	0.637	0.490
2,2,4 Trimethylpentane	0.001	0.001	0.001
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.8639	(Water=1)
°API Gravity	32.30	@ 60°F
Molecular Weight	196.9	
Vapor Volume	13.93	CF/Gal
Weight	7.20	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9117	(Water=1)
Molecular Weight	279.0	

Characteristics of Stock Tank:

°API Gravity	31.66	@ 60°F
Reid Vapor Pressure (ASTM D-5191)		psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-852	0
Pressure, PSIG	28	24	0
Temperature, °F	109	84	0

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.020	0.003	0.003
Carbon Dioxide	0.292	0.069	0.065
Methane	0.627	0.147	0.051
Ethane	0.348	0.129	0.053
Propane	0.865	0.330	0.194
Isobutane	0.565	0.256	0.167
n-Butane	1.688	0.737	0.498
2,2 Dimethylpropane	0.008	0.004	0.003
Isopentane	1.404	0.711	0.515
n-Pentane	1.957	0.982	0.717
2,2 Dimethylbutane	0.036	0.021	0.016
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.654	0.371	0.286
2 Methylpentane	0.741	0.426	0.324
3 Methylpentane	0.531	0.300	0.233
n-Hexane	1.119	0.637	0.490
Methylcyclopentane	2.624	1.286	1.122
Benzene	0.155	0.060	0.061
Cyclohexane	1.263	0.595	0.540
2-Methylhexane	0.349	0.225	0.178
3-Methylhexane	0.569	0.362	0.290
2,2,4 Trimethylpentane	0.001	0.001	0.001
Other C-7's	5.691	3.428	2.868
n-Heptane	0.587	0.375	0.299
Methylcyclohexane	3.274	1.822	1.633
Toluene	0.635	0.294	0.297
Other C-8's	8.667	5.620	4.852
n-Octane	0.711	0.505	0.413
E-Benzene	2.026	1.083	1.092
M & P Xylenes	0.585	0.315	0.316
O-Xylene	0.288	0.152	0.155
Other C-9's	6.353	4.602	4.074
n-Nonane	0.348	0.271	0.227
Other C-10's	6.147	4.893	4.411
n-decane	0.336	0.286	0.243
Undecanes(11)	5.166	4.219	3.857
Dodecanes(12)	4.241	3.741	3.468
Tridecanes(13)	4.343	4.108	3.860
Tetradecanes(14)	3.435	3.480	3.315
Pentadecanes(15)	3.165	3.435	3.311
Hexadecanes(16)	2.582	2.995	2.911
Heptadecanes(17)	2.292	2.811	2.759
Octadecanes(18)	2.224	2.872	2.835
Nonadecanes(19)	2.098	2.822	2.802
Eicosanes(20)	1.841	2.574	2.571
Heneicosanes(21)	1.533	2.256	2.266
Docosanes(22)	1.459	2.238	2.261
Tricosanes(23)	1.323	2.103	2.137
Tetracosanes(24)	1.157	1.905	1.944
Pentacosanes(25)	1.032	1.763	1.808
Hexacosanes(26)	1.040	1.842	1.897
Heptacosanes(27)	0.958	1.759	1.820
Octacosanes(28)	0.880	1.670	1.733
Nonacosanes(29)	0.904	1.772	1.846
Triacontanes(30)	0.866	1.751	1.830
Hentriacontanes Plus(31+)	5.997	16.588	22.082
Total	100.000	100.000	100.000

April 5, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Low Pressure Separator Hydrocarbon Liquid
Spot Sample @ 52 psig & 130 °F

Date Sampled: 07/13/2010 Job Number: 10727.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.032	0.005	0.005
Carbon Dioxide	0.129	0.031	0.030
Methane	1.247	0.297	0.106
Ethane	0.953	0.358	0.151
Propane	2.061	0.798	0.481
Isobutane	0.605	0.278	0.186
n-Butane	2.291	1.015	0.704
2,2 Dimethylpropane	0.028	0.015	0.011
Isopentane	1.337	0.687	0.510
n-Pentane	1.847	0.941	0.705
2,2 Dimethylbutane	0.018	0.011	0.008
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.384	0.221	0.175
2 Methylpentane	0.806	0.470	0.368
3 Methylpentane	0.611	0.350	0.278
n-Hexane	1.310	0.757	0.597
Heptanes Plus	86.341	93.766	95.685
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.8592	(Water=1)
°API Gravity	33.19	@ 60°F
Molecular Weight	209.5	
Vapor Volume	13.01	CF/Gal
Weight	7.16	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.8419	(Water=1)
°API Gravity	36.57	@ 60°F
Molecular Weight	189.1	
Vapor Volume	14.13	CF/Gal
Weight	7.01	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-1158

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.129	0.031	0.030
Nitrogen	0.032	0.005	0.005
Methane	1.247	0.297	0.106
Ethane	0.953	0.358	0.151
Propane	2.061	0.798	0.481
Isobutane	0.605	0.278	0.186
n-Butane	2.319	1.030	0.715
Isopentane	1.337	0.687	0.510
n-Pentane	1.847	0.941	0.705
Other C-6's	1.819	1.052	0.829
Heptanes	8.890	5.163	4.461
Octanes	11.602	7.427	6.642
Nonanes	8.650	6.334	5.790
Decanes Plus	53.702	73.079	76.965
Benzene	0.293	0.115	0.121
Toluene	1.255	0.591	0.612
E-Benzene	0.207	0.112	0.116
Xylenes	1.741	0.945	0.978
n-Hexane	1.310	0.757	0.597
2,2,4 Trimethylpentane	0.001	0.001	0.001
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.8419	(Water=1)
°API Gravity	36.57	@ 60°F
Molecular Weight	189.1	
Vapor Volume	14.13	CF/Gal
Weight	7.01	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.8867	(Water=1)
Molecular Weight	271.0	

Characteristics of Stock Tank:

°API Gravity	35.32	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	1.64	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-1158*	W-928
Pressure, PSIG	52	30	29
Temperature, °F	130	71	69

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.032	0.005	0.005
Carbon Dioxide	0.129	0.031	0.030
Methane	1.247	0.297	0.106
Ethane	0.953	0.358	0.151
Propane	2.061	0.798	0.481
Isobutane	0.605	0.278	0.186
n-Butane	2.291	1.015	0.704
2,2 Dimethylpropane	0.028	0.015	0.011
Isopentane	1.337	0.687	0.510
n-Pentane	1.847	0.941	0.705
2,2 Dimethylbutane	0.018	0.011	0.008
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.384	0.221	0.175
2 Methylpentane	0.806	0.470	0.368
3 Methylpentane	0.611	0.350	0.278
n-Hexane	1.310	0.757	0.597
Methylcyclopentane	1.800	0.895	0.801
Benzene	0.293	0.115	0.121
Cyclohexane	0.932	0.446	0.415
2-Methylhexane	0.462	0.302	0.245
3-Methylhexane	0.671	0.433	0.355
2,2,4 Trimethylpentane	0.001	0.001	0.001
Other C-7's	3.476	2.082	1.823
n-Heptane	1.550	1.005	0.822
Methylcyclohexane	2.543	1.437	1.321
Toluene	1.255	0.591	0.612
Other C-8's	7.113	4.589	4.146
n-Octane	1.946	1.401	1.176
E-Benzene	0.207	0.112	0.116
M & P Xylenes	1.303	0.711	0.732
O-Xylene	0.438	0.234	0.246
Other C-9's	7.207	5.194	4.812
n-Nonane	1.443	1.141	0.978
Other C-10's	6.638	5.257	4.960
n-decane	1.044	0.901	0.786
Undecanes(11)	5.556	4.514	4.319
Dodecanes(12)	4.149	3.642	3.533
Tridecanes(13)	3.904	3.674	3.613
Tetradecanes(14)	2.971	2.995	2.986
Pentadecanes(15)	2.530	2.732	2.756
Hexadecanes(16)	2.051	2.367	2.408
Heptadecanes(17)	1.965	2.398	2.463
Octadecanes(18)	2.050	2.634	2.721
Nonadecanes(19)	1.843	2.466	2.563
Eicosanes(20)	1.460	2.031	2.123
Heneicosanes(21)	1.342	1.964	2.065
Docosanes(22)	1.270	1.938	2.049
Tricosanes(23)	1.128	1.784	1.897
Tetracosanes(24)	1.031	1.689	1.804
Pentacosanes(25)	0.913	1.552	1.665
Hexacosanes(26)	0.910	1.602	1.727
Heptacosanes(27)	0.796	1.453	1.573
Octacosanes(28)	0.828	1.565	1.700
Nonacosanes(29)	0.869	1.694	1.847
Triacontanes(30)	0.794	1.597	1.747
Hentriacontanes Plus(31+)	7.659	20.631	23.656
Total	100.000	100.000	100.000

April 5, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Spot Sample @ 82 psig & N/A °F

Date Sampled: 07/14/2010

Job Number: 10725.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.034	0.004	0.004
Carbon Dioxide	0.270	0.050	0.045
Methane	1.992	0.366	0.122
Ethane	0.417	0.121	0.048
Propane	1.061	0.317	0.178
Isobutane	0.285	0.101	0.063
n-Butane	1.513	0.517	0.334
2,2 Dimethylpropane	0.017	0.007	0.005
Isopentane	0.908	0.360	0.249
n-Pentane	1.155	0.454	0.317
2,2 Dimethylbutane	0.005	0.002	0.002
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.217	0.096	0.071
2 Methylpentane	0.359	0.162	0.118
3 Methylpentane	0.378	0.167	0.124
n-Hexane	0.555	0.247	0.182
Heptanes Plus	90.834	97.028	98.140
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9138	(Water=1)
°API Gravity	23.35	@ 60°F
Molecular Weight	284.1	
Vapor Volume	10.21	CF/Gal
Weight	7.61	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9034	(Water=1)
°API Gravity	25.12	@ 60°F
Molecular Weight	263.0	
Vapor Volume	10.90	CF/Gal
Weight	7.53	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-241

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.270	0.050	0.045
Nitrogen	0.034	0.004	0.004
Methane	1.992	0.366	0.122
Ethane	0.417	0.121	0.048
Propane	1.061	0.317	0.178
Isobutane	0.285	0.101	0.063
n-Butane	1.529	0.524	0.339
Isopentane	0.908	0.360	0.249
n-Pentane	1.155	0.454	0.317
Other C-6's	0.959	0.428	0.314
Heptanes	4.950	2.200	1.785
Octanes	5.826	2.876	2.406
Nonanes	5.234	2.939	2.519
Decanes Plus	73.582	88.535	90.968
Benzene	0.133	0.040	0.040
Toluene	0.472	0.171	0.165
E-Benzene	0.086	0.036	0.035
Xylenes	0.550	0.230	0.222
n-Hexane	0.555	0.247	0.182
2,2,4 Trimethylpentane	0.002	0.001	0.001
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.9034	(Water=1)
°API Gravity	25.12	@ 60°F
Molecular Weight	263.0	
Vapor Volume	10.90	CF/Gal
Weight	7.53	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9283	(Water=1)
Molecular Weight	325.1	

Characteristics of Stock Tank:

°API Gravity	24.22	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	1.61	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-341*	------
Pressure, PSIG	82	55	------
Temperature, °F	N/A	71	------

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.034	0.004	0.004
Carbon Dioxide	0.270	0.050	0.045
Methane	1.992	0.366	0.122
Ethane	0.417	0.121	0.048
Propane	1.061	0.317	0.178
Isobutane	0.285	0.101	0.063
n-Butane	1.513	0.517	0.334
2,2 Dimethylpropane	0.017	0.007	0.005
Isopentane	0.908	0.360	0.249
n-Pentane	1.155	0.454	0.317
2,2 Dimethylbutane	0.005	0.002	0.002
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.217	0.096	0.071
2 Methylpentane	0.359	0.162	0.118
3 Methylpentane	0.378	0.167	0.124
n-Hexane	0.555	0.247	0.182
Methylcyclopentane	1.171	0.449	0.375
Benzene	0.133	0.040	0.040
Cyclohexane	0.339	0.125	0.109
2-Methylhexane	0.169	0.085	0.064
3-Methylhexane	0.345	0.172	0.132
2,2,4 Trimethylpentane	0.002	0.001	0.001
Other C-7's	2.354	1.083	0.888
n-Heptane	0.571	0.285	0.217
Methylcyclohexane	1.070	0.466	0.400
Toluene	0.472	0.171	0.165
Other C-8's	3.859	1.912	1.618
n-Octane	0.896	0.498	0.389
E-Benzene	0.086	0.036	0.035
M & P Xylenes	0.343	0.144	0.138
O-Xylene	0.207	0.085	0.084
Other C-9's	4.473	2.475	2.147
n-Nonane	0.762	0.465	0.371
Other C-10's	4.361	2.652	2.343
n-decane	0.621	0.413	0.336
Undecanes(11)	4.716	2.942	2.636
Dodecanes(12)	4.436	2.989	2.716
Tridecanes(13)	4.553	3.290	3.030
Tetradecanes(14)	3.756	2.907	2.713
Pentadecanes(15)	3.529	2.926	2.765
Hexadecanes(16)	2.837	2.514	2.395
Heptadecanes(17)	2.835	2.656	2.555
Octadecanes(18)	2.931	2.891	2.797
Nonadecanes(19)	2.812	2.889	2.812
Eicosanes(20)	2.102	2.245	2.198
Heneicosanes(21)	1.988	2.235	2.200
Docosanes(22)	1.933	2.264	2.242
Tricosanes(23)	1.758	2.134	2.126
Tetracosanes(24)	1.549	1.948	1.950
Pentacosanes(25)	1.488	1.942	1.952
Hexacosanes(26)	1.456	1.969	1.988
Heptacosanes(27)	1.348	1.891	1.917
Octacosanes(28)	1.342	1.945	1.980
Nonacosanes(29)	1.424	2.132	2.177
Triacontanes(30)	1.330	2.053	2.103
Hentriacontanes Plus(31+)	18.479	36.707	41.037
Total	100.000	100.000	100.000

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
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SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

November 16, 2010

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Attention: Mr. Jeff Kuo

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy -
Extended Gas Analyses
Flash Liberation of Separator Water

The invoice was mailed separately.

Thank you.

Yours very truly,

FESCO, Ltd.

David Dannhaus

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/eg

August 2, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 07/19/2010

Date Analyzed: 07/28/2010

Job Number: J04255

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	48	0
Temperature, °F	N/A	70
Gas Water Ratio (1)	------	0.59
Gas Specific Gravity (2)	------	1.235
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved From Water Flashed From
48 psig & N/A °F to 0 psig & 70 °F

Date Sampled: 07/19/2010 Job Number: 04255.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Nitrogen	8.633	
Carbon Dioxide	19.023	
Methane	24.853	
Ethane	19.649	5.254
Propane	16.776	4.621
Isobutane	1.686	0.552
n-Butane	5.021	1.583
2-2 Dimethylpropane	0.041	0.016
Isopentane	0.989	0.362
n-Pentane	0.875	0.317
Hexanes	0.879	0.362
Heptanes Plus	1.575	0.536
Totals	100.000	13.600

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.021	(Air=1)
Molecular Weight	86.76	
Gross Heating Value	4358	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.235	(Air=1)
Compressibility (Z)	0.9916	
Molecular Weight	35.47	
Gross Heating Value		
Dry Basis	1441	BTU/CF
Saturated Basis	1417	BTU/CF

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: DJV
Cylinder ID: WF-3s

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Nitrogen	8.633		6.818
Carbon Dioxide	19.023		23.601
Methane	24.853		11.236
Ethane	19.649	5.254	16.656
Propane	16.776	4.621	20.854
Isobutane	1.686	0.552	2.763
n-Butane	5.021	1.583	8.227
2,2 Dimethylpropane	0.041	0.016	0.083
Isopentane	0.989	0.362	2.012
n-Pentane	0.875	0.317	1.780
2,2 Dimethylbutane	0.016	0.007	0.039
Cyclopentane	0.042	0.018	0.083
2,3 Dimethylbutane	0.154	0.063	0.374
2 Methylpentane	0.176	0.073	0.428
3 Methylpentane	0.135	0.055	0.328
n-Hexane	0.356	0.146	0.865
Methylcyclopentane	0.166	0.057	0.394
Benzene	0.765	0.214	1.685
Cyclohexane	0.109	0.037	0.258
2-Methylhexane	0.047	0.022	0.133
3-Methylhexane	0.047	0.021	0.133
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.091	0.040	0.254
n-Heptane	0.076	0.035	0.215
Methylcyclohexane	0.054	0.022	0.149
Toluene	0.118	0.040	0.307
Other C8's	0.065	0.030	0.202
n-Octane	0.013	0.007	0.042
Ethylbenzene	0.001	0.000	0.003
M & P Xylenes	0.006	0.002	0.018
O-Xylene	0.001	0.000	0.003
Other C9's	0.015	0.008	0.053
n-Nonane	0.001	0.001	0.004
Other C10's	0.000	0.000	0.000
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	13.600	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 1.235 (Air=1)
Compressibility (Z) ---------- 0.9916
Molecular Weight ---------- 35.47

Gross Heating Value
Dry Basis ---------- 1441 BTU/CF
Saturated Basis ---------- 1417 BTU/CF

August 2, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 07/19/2010

Date Analyzed: 07/29/2010

Job Number: J04256

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	60	0
Temperature, °F	110	70
Gas Water Ratio (1)	------	0.54
Gas Specific Gravity (2)	------	0.965
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved From Water Flashed From
60 psig & 110 °F to 0 psig & 70 °F

Date Sampled: 07/19/2010 Job Number: 04256.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Nitrogen	7.281	
Carbon Dioxide	28.390	
Methane	54.707	
Ethane	4.742	1.268
Propane	1.896	0.522
Isobutane	0.244	0.080
n-Butane	0.674	0.212
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.261	0.095
n-Pentane	0.242	0.088
Hexanes	0.739	0.304
Heptanes Plus	0.824	0.307
Totals	100.000	2.877

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.142	(Air=1)
Molecular Weight	90.66	
Gross Heating Value	4613	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.965	(Air=1)
Compressibility (Z)	0.9962	
Molecular Weight	27.84	
Gross Heating Value		
Dry Basis	812	BTU/CF
Saturated Basis	799	BTU/CF

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: DJV
Cylinder ID: WF-4s

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Nitrogen	7.281		7.326
Carbon Dioxide	28.390		44.874
Methane	54.707		31.522
Ethane	4.742	1.268	5.121
Propane	1.896	0.522	3.003
Isobutane	0.244	0.080	0.509
n-Butane	0.674	0.212	1.407
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.261	0.095	0.676
n-Pentane	0.242	0.088	0.627
2,2 Dimethylbutane	0.012	0.005	0.037
Cyclopentane	0.058	0.024	0.146
2,3 Dimethylbutane	0.016	0.007	0.050
2 Methylpentane	0.125	0.052	0.387
3 Methylpentane	0.118	0.048	0.365
n-Hexane	0.410	0.169	1.269
Methylcyclopentane	0.152	0.052	0.459
Benzene	0.142	0.040	0.398
Cyclohexane	0.180	0.061	0.544
2-Methylhexane	0.037	0.017	0.133
3-Methylhexane	0.037	0.017	0.133
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.079	0.034	0.281
n-Heptane	0.050	0.023	0.180
Methylcyclohexane	0.036	0.014	0.127
Toluene	0.029	0.010	0.096
Other C8's	0.049	0.023	0.194
n-Octane	0.012	0.006	0.049
Ethylbenzene	0.005	0.002	0.019
M & P Xylenes	0.004	0.002	0.015
O-Xylene	0.002	0.001	0.008
Other C9's	0.008	0.004	0.036
n-Nonane	0.002	0.001	0.009
Other C10's	0.000	0.000	0.000
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	2.877	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.965 (Air=1)
Compressibility (Z) ---------- 0.9962
Molecular Weight ---------- 27.84

Gross Heating Value
Dry Basis ---------- 812 BTU/CF
Saturated Basis ---------- 799 BTU/CF

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
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ALICE.....(361) 664-3479
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HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
LAREDO.....(956) 724-7501
ODESSA.....(432) 332-3211
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REFUGIO.....(361) 526-4644
VICTORIA.....(361) 575-7533
LAFAYETTE, LA..(337) 896-3838
LIBERAL, KS.....(580) 778-3384
SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

November 16, 2010

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy -
Extended Gas Analyses (11)
Flash Liberation of Separator Water (11)

The invoice was mailed separately.

Thank you.

Yours very truly,

FESCO, Ltd.

David Dannhaus

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/eg

September 16, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/24/2010

Job Number: J04537.301

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	185	0
Temperature, °F	80	70
Gas Water Ratio (1)	------	1.93
Gas Specific Gravity (2)	------	0.583
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 4, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 185 psig & 80 °F to 0 psig & 70 °F

Date Sampled: 08/09/2010 Job Number: 04537.301

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.498	
Carbon Dioxide	1.306	
Methane	97.356	
Ethane	0.324	0.087
Propane	0.058	0.016
Isobutane	0.015	0.005
n-Butane	0.045	0.014
2-2 Dimethylpropane	0.014	0.005
Isopentane	0.021	0.008
n-Pentane	0.025	0.009
Hexanes	0.068	0.028
Heptanes Plus	0.270	0.109
Totals	100.000	0.281

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.482	(Air=1)
Molecular Weight	100.64	
Gross Heating Value	5142	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.583	(Air=1)
Compressibility (Z)	0.9978	
Molecular Weight	16.86	
Gross Heating Value		
Dry Basis	1016	BTU/CF
Saturated Basis	1000	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: JF
Processor: MRF
Cylinder ID: W-8

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.498		0.827
Carbon Dioxide	1.306		3.408
Methane	97.356		92.617
Ethane	0.324	0.087	0.578
Propane	0.058	0.016	0.152
Isobutane	0.015	0.005	0.052
n-Butane	0.045	0.014	0.155
2,2 Dimethylpropane	0.014	0.005	0.060
Isopentane	0.021	0.008	0.090
n-Pentane	0.025	0.009	0.107
2,2 Dimethylbutane	0.001	0.000	0.005
Cyclopentane	0.005	0.002	0.021
2,3 Dimethylbutane	0.002	0.001	0.010
2 Methylpentane	0.013	0.005	0.066
3 Methylpentane	0.013	0.005	0.066
n-Hexane	0.034	0.014	0.174
Methylcyclopentane	0.023	0.008	0.115
Benzene	0.025	0.007	0.116
Cyclohexane	0.022	0.007	0.110
2-Methylhexane	0.003	0.001	0.018
3-Methylhexane	0.003	0.001	0.018
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.018	0.008	0.106
n-Heptane	0.008	0.004	0.048
Methylcyclohexane	0.030	0.012	0.175
Toluene	0.044	0.015	0.240
Other C8's	0.028	0.013	0.183
n-Octane	0.005	0.003	0.034
Ethylbenzene	0.004	0.002	0.025
M & P Xylenes	0.016	0.006	0.101
O-Xylene	0.004	0.002	0.025
Other C9's	0.016	0.008	0.120
n-Nonane	0.003	0.002	0.023
Other C10's	0.011	0.006	0.092
n-Decane	0.001	0.001	0.008
Undecanes (11)	0.006	0.004	0.055
Totals	100.000	0.281	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.583 (Air=1)
Compressibility (Z) ---------- 0.9978
Molecular Weight ---------- 16.86

Gross Heating Value
Dry Basis ---------- 1016 BTU/CF
Saturated Basis ---------- 1000 BTU/CF

September 4, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/25/2010

Job Number: J04537.201

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	120	0
Temperature, °F	84	70
Gas Water Ratio (1)	------	1.14
Gas Specific Gravity (2)	------	0.616
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst. J E

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 4, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 120 psig & 84 °F to 0 psig & 70 °F

Date Sampled: 08/09/2010 Job Number: 04537.201

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	2.189	
Carbon Dioxide	2.134	
Methane	93.942	
Ethane	0.612	0.164
Propane	0.085	0.023
Isobutane	0.026	0.009
n-Butane	0.057	0.018
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.016	0.006
n-Pentane	0.000	0.000
Hexanes	0.330	0.136
Heptanes Plus	0.609	0.242
Totals	100.000	0.597

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.413	(Air=1)
Molecular Weight	98.63	
Gross Heating Value	5024	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.616	(Air=1)
Compressibility (Z)	0.9977	
Molecular Weight	17.79	
Gross Heating Value		
Dry Basis	1016	BTU/CF
Saturated Basis	999	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-1

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	2.189		3.447
Carbon Dioxide	2.134		5.280
Methane	93.942		84.721
Ethane	0.612	0.164	1.035
Propane	0.085	0.023	0.211
Isobutane	0.026	0.009	0.085
n-Butane	0.057	0.018	0.186
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.016	0.006	0.065
n-Pentane	0.000	0.000	0.000
2,2 Dimethylbutane	0.002	0.001	0.010
Cyclopentane	0.009	0.004	0.035
2,3 Dimethylbutane	0.006	0.002	0.029
2 Methylpentane	0.046	0.019	0.223
3 Methylpentane	0.061	0.025	0.296
n-Hexane	0.206	0.085	0.998
Methylcyclopentane	0.081	0.028	0.383
Benzene	0.054	0.015	0.237
Cyclohexane	0.083	0.028	0.393
2-Methylhexane	0.008	0.004	0.045
3-Methylhexane	0.009	0.004	0.051
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.040	0.017	0.223
n-Heptane	0.017	0.008	0.096
Methylcyclohexane	0.051	0.020	0.282
Toluene	0.075	0.025	0.389
Other C8's	0.052	0.024	0.322
n-Octane	0.011	0.006	0.071
Ethylbenzene	0.007	0.003	0.042
M & P Xylenes	0.034	0.013	0.203
O-Xylene	0.009	0.003	0.054
Other C9's	0.040	0.020	0.284
n-Nonane	0.008	0.005	0.058
Other C10's	0.019	0.011	0.151
n-Decane	0.004	0.002	0.032
Undecanes (11)	0.007	0.004	0.063
Totals	100.000	0.597	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.616 (Air=1)
Compressibility (Z) ---------- 0.9977
Molecular Weight ---------- 17.79

Gross Heating Value
Dry Basis ---------- 1016 BTU/CF
Saturated Basis ---------- 999 BTU/CF

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/25/2010

Job Number: J04537.101

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	117	0
Temperature, °F	82	70
Gas Water Ratio (1)	------	1.41
Gas Specific Gravity (2)	------	0.605
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 117 psig & 82 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010 Job Number: 04537.101

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	5.169	
Carbon Dioxide	1.795	
Methane	92.470	
Ethane	0.189	0.051
Propane	0.000	0.000
Isobutane	0.000	0.000
n-Butane	0.000	0.000
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.000	0.000
n-Pentane	0.000	0.000
Hexanes	0.208	0.086
Heptanes Plus	0.169	0.071
Totals	100.000	0.207

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.584	(Air=1)
Molecular Weight	103.59	
Gross Heating Value	5400	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.605	(Air=1)
Compressibility (Z)	0.9980	
Molecular Weight	17.48	
Gross Heating Value		
Dry Basis	960	BTU/CF
Saturated Basis	944	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-4

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	5.169		8.282
Carbon Dioxide	1.795		4.519
Methane	92.470		84.846
Ethane	0.189	0.051	0.325
Propane	0.000	0.000	0.000
Isobutane	0.000	0.000	0.000
n-Butane	0.000	0.000	0.000
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.000	0.000	0.000
n-Pentane	0.000	0.000	0.000
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.001	0.000	0.004
2,3 Dimethylbutane	0.005	0.002	0.025
2 Methylpentane	0.036	0.015	0.177
3 Methylpentane	0.048	0.020	0.237
n-Hexane	0.118	0.049	0.582
Methylcyclopentane	0.032	0.011	0.154
Benzene	0.010	0.003	0.045
Cyclohexane	0.002	0.001	0.010
2-Methylhexane	0.001	0.000	0.006
3-Methylhexane	0.001	0.000	0.006
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.031	0.013	0.176
n-Heptane	0.003	0.001	0.017
Methylcyclohexane	0.011	0.004	0.062
Toluene	0.019	0.006	0.100
Other C8's	0.012	0.006	0.076
n-Octane	0.002	0.001	0.013
Ethylbenzene	0.002	0.001	0.012
M & P Xylenes	0.011	0.004	0.067
O-Xylene	0.003	0.001	0.018
Other C9's	0.006	0.003	0.043
n-Nonane	0.002	0.001	0.015
Other C10's	0.010	0.006	0.081
n-Decane	0.001	0.001	0.008
Undecanes (11)	0.010	0.006	0.094
Totals	100.000	0.207	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.605 (Air=1)
Compressibility (Z) ---------- 0.9980
Molecular Weight ---------- 17.48

Gross Heating Value
Dry Basis ---------- 960 BTU/CF
Saturated Basis ---------- 944 BTU/CF

September 4, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/24/2010

Job Number: J04537.001

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	108	0
Temperature, °F	81	70
Gas Water Ratio (1)	------	0.87
Gas Specific Gravity (2)	------	0.625
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 108 psig & 81 °F to 0 psig & 70 °F

Date Sampled: 08/09/2010 Job Number: 04537.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.000	
Carbon Dioxide	2.406	
Methane	95.317	
Ethane	0.544	0.145
Propane	0.097	0.027
Isobutane	0.040	0.013
n-Butane	0.061	0.019
2-2 Dimethylpropane	0.031	0.012
Isopentane	0.038	0.014
n-Pentane	0.005	0.002
Hexanes	0.418	0.172
Heptanes Plus	1.043	0.407
Totals	100.000	0.811

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.433	(Air=1)
Molecular Weight	99.16	
Gross Heating Value	5024	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.625	(Air=1)
Compressibility (Z)	0.9974	
Molecular Weight	18.06	
Gross Heating Value		
Dry Basis	1058	BTU/CF
Saturated Basis	1041	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-3

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.000		0.000
Carbon Dioxide	2.406		5.863
Methane	95.317		84.658
Ethane	0.544	0.145	0.906
Propane	0.097	0.027	0.237
Isobutane	0.040	0.013	0.129
n-Butane	0.061	0.019	0.196
2,2 Dimethylpropane	0.031	0.012	0.124
Isopentane	0.038	0.014	0.152
n-Pentane	0.005	0.002	0.020
2,2 Dimethylbutane	0.005	0.002	0.024
Cyclopentane	0.010	0.004	0.039
2,3 Dimethylbutane	0.009	0.004	0.043
2 Methylpentane	0.057	0.024	0.272
3 Methylpentane	0.076	0.031	0.363
n-Hexane	0.261	0.107	1.245
Methylcyclopentane	0.101	0.035	0.471
Benzene	0.193	0.054	0.835
Cyclohexane	0.093	0.032	0.433
2-Methylhexane	0.009	0.004	0.050
3-Methylhexane	0.009	0.004	0.050
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.044	0.019	0.242
n-Heptane	0.020	0.009	0.111
Methylcyclohexane	0.059	0.024	0.321
Toluene	0.159	0.053	0.811
Other C8's	0.069	0.032	0.421
n-Octane	0.015	0.008	0.095
Ethylbenzene	0.016	0.006	0.094
M & P Xylenes	0.078	0.030	0.459
O-Xylene	0.018	0.007	0.106
Other C9's	0.048	0.024	0.336
n-Nonane	0.017	0.010	0.121
Other C10's	0.056	0.033	0.438
n-Decane	0.007	0.004	0.055
Undecanes (11)	0.032	0.020	0.280
Totals	100.000	0.811	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.625 (Air=1)
Compressibility (Z) ---------- 0.9974
Molecular Weight ---------- 18.06

Gross Heating Value
Dry Basis ---------- 1058 BTU/CF
Saturated Basis ---------- 1041 BTU/CF

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/24/2010

Job Number: J04537.401

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	117	0
Temperature, °F	90	70
Gas Water Ratio (1)	------	1.33
Gas Specific Gravity (2)	------	0.680
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 4, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 117 psig & 90 °F to 0 psig & 70 °F

Date Sampled: 08/09/2010 Job Number: 04537.401

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	8.583	
Carbon Dioxide	2.455	
Methane	85.243	
Ethane	1.133	0.303
Propane	0.194	0.053
Isobutane	0.040	0.013
n-Butane	0.068	0.021
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.072	0.026
n-Pentane	0.045	0.016
Hexanes	1.255	0.516
Heptanes Plus	0.912	0.332
Totals	100.000	1.282

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.157	(Air=1)
Molecular Weight	91.20	
Gross Heating Value	4607	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.680	(Air=1)
Compressibility (Z)	0.9975	
Molecular Weight	19.64	
Gross Heating Value		
Dry Basis	1001	BTU/CF
Saturated Basis	984	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-2

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	8.583		12.239
Carbon Dioxide	2.455		5.500
Methane	85.243		69.614
Ethane	1.133	0.303	1.734
Propane	0.194	0.053	0.435
Isobutane	0.040	0.013	0.118
n-Butane	0.068	0.021	0.201
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.072	0.026	0.264
n-Pentane	0.045	0.016	0.165
2,2 Dimethylbutane	0.001	0.000	0.004
Cyclopentane	0.012	0.005	0.043
2,3 Dimethylbutane	0.024	0.010	0.105
2 Methylpentane	0.191	0.079	0.838
3 Methylpentane	0.268	0.109	1.176
n-Hexane	0.759	0.312	3.329
Methylcyclopentane	0.232	0.080	0.994
Benzene	0.175	0.049	0.696
Cyclohexane	0.167	0.057	0.715
2-Methylhexane	0.007	0.003	0.036
3-Methylhexane	0.006	0.003	0.031
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.056	0.024	0.283
n-Heptane	0.012	0.006	0.061
Methylcyclohexane	0.037	0.015	0.185
Toluene	0.069	0.023	0.324
Other C8's	0.045	0.021	0.252
n-Octane	0.010	0.005	0.058
Ethylbenzene	0.006	0.002	0.032
M & P Xylenes	0.024	0.009	0.130
O-Xylene	0.006	0.002	0.032
Other C9's	0.032	0.016	0.206
n-Nonane	0.007	0.004	0.046
Other C10's	0.014	0.008	0.101
n-Decane	0.003	0.002	0.022
Undecanes (11)	0.004	0.002	0.031
Totals	100.000	1.282	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.680 (Air=1)
Compressibility (Z) ---------- 0.9975
Molecular Weight ---------- 19.64

Gross Heating Value
Dry Basis ---------- 1001 BTU/CF
Saturated Basis ---------- 984 BTU/CF

September 16, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/09/2010

Date Analyzed: 08/25/2010

Job Number: J04537.501

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	29	0
Temperature, °F	82	70
Gas Water Ratio (1)	------	0.35
Gas Specific Gravity (2)	------	0.638
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 4, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 29 psig & 82 °F to 0 psig & 70 °F

Date Sampled: 08/09/2010 Job Number: 04537.501

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.000	
Carbon Dioxide	4.961	
Methane	92.809	
Ethane	0.662	0.177
Propane	0.271	0.075
Isobutane	0.179	0.059
n-Butane	0.176	0.055
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.130	0.048
n-Pentane	0.170	0.062
Hexanes	0.269	0.111
Heptanes Plus	0.373	0.157
Totals	100.000	0.742

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.615	(Air=1)
Molecular Weight	104.45	
Gross Heating Value	5456	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.638	(Air=1)
Compressibility (Z)	0.9975	
Molecular Weight	18.43	
Gross Heating Value		
Dry Basis	1017	BTU/CF
Saturated Basis	1001	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-5

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.000		0.000
Carbon Dioxide	4.961		11.844
Methane	92.809		80.768
Ethane	0.662	0.177	1.080
Propane	0.271	0.075	0.648
Isobutane	0.179	0.059	0.564
n-Butane	0.176	0.055	0.555
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.130	0.048	0.509
n-Pentane	0.170	0.062	0.665
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.003	0.001	0.011
2,3 Dimethylbutane	0.005	0.002	0.023
2 Methylpentane	0.038	0.016	0.178
3 Methylpentane	0.058	0.024	0.271
n-Hexane	0.165	0.068	0.771
Methylcyclopentane	0.057	0.020	0.260
Benzene	0.025	0.007	0.106
Cyclohexane	0.000	0.000	0.000
2-Methylhexane	0.003	0.001	0.016
3-Methylhexane	0.003	0.001	0.016
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.063	0.027	0.339
n-Heptane	0.007	0.003	0.038
Methylcyclohexane	0.016	0.006	0.085
Toluene	0.054	0.018	0.270
Other C8's	0.016	0.007	0.096
n-Octane	0.007	0.004	0.043
Ethylbenzene	0.005	0.002	0.029
M & P Xylenes	0.034	0.013	0.196
O-Xylene	0.009	0.003	0.052
Other C9's	0.010	0.005	0.068
n-Nonane	0.008	0.005	0.056
Other C10's	0.035	0.020	0.268
n-Decane	0.005	0.003	0.039
Undecanes (11)	0.016	0.010	0.136
Totals	100.000	0.742	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.638 (Air=1)
Compressibility (Z) ---------- 0.9975
Molecular Weight ---------- 18.43

Gross Heating Value
Dry Basis ---------- 1017 BTU/CF
Saturated Basis ---------- 1001 BTU/CF

September 28, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/10/10

Date Analyzed: 08/24/2010

Job Number: J04538.001

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	65	0
Temperature, °F	63	70
Gas Water Ratio (1)	------	1.25
Gas Specific Gravity (2)	------	0.746
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Piston ID: 116
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 65 psig & 63 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010 Job Number: 04538.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.001	
Nitrogen	3.504	
Carbon Dioxide	5.820	
Methane	82.673	
Ethane	3.286	0.879
Propane	1.058	0.291
Isobutane	0.206	0.067
n-Butane	0.340	0.107
2-2 Dimethylpropane	0.004	0.002
Isopentane	0.157	0.057
n-Pentane	0.148	0.054
Hexanes	0.402	0.166
Heptanes Plus	2.401	0.961
Totals	100.000	2.584

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.440	(Air=1)
Molecular Weight	99.28	
Gross Heating Value	5076	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.746	(Air=1)
Compressibility (Z)	0.9965	
Molecular Weight	21.52	
Gross Heating Value		
Dry Basis	1097	BTU/CF
Saturated Basis	1079	BTU/CF

*Hydrogen Sulfide tested on location by Stained Tube Method (GPA 2377)
Results: 0.314 Gr/100 CF, 5.0 PPMV or 0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-5

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.001		0.002
Nitrogen	3.504		4.560
Carbon Dioxide	5.820		11.900
Methane	82.673		61.623
Ethane	3.286	0.879	4.591
Propane	1.058	0.291	2.168
Isobutane	0.206	0.067	0.556
n-Butane	0.340	0.107	0.918
2,2 Dimethylpropane	0.004	0.002	0.013
Isopentane	0.157	0.057	0.526
n-Pentane	0.148	0.054	0.496
2,2 Dimethylbutane	0.008	0.003	0.032
Cyclopentane	0.048	0.020	0.156
2,3 Dimethylbutane	0.013	0.005	0.052
2 Methylpentane	0.083	0.034	0.332
3 Methylpentane	0.074	0.030	0.296
n-Hexane	0.176	0.072	0.705
Methylcyclopentane	0.197	0.068	0.770
Benzene	0.234	0.065	0.849
Cyclohexane	0.219	0.075	0.856
2-Methylhexane	0.031	0.014	0.144
3-Methylhexane	0.034	0.015	0.158
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.160	0.070	0.737
n-Heptane	0.077	0.036	0.358
Methylcyclohexane	0.339	0.136	1.546
Toluene	0.355	0.119	1.520
Other C8's	0.275	0.128	1.408
n-Octane	0.052	0.027	0.276
Ethylbenzene	0.023	0.009	0.113
M & P Xylenes	0.106	0.041	0.523
O-Xylene	0.022	0.008	0.109
Other C9's	0.151	0.077	0.886
n-Nonane	0.025	0.014	0.149
Other C10's	0.079	0.046	0.519
n-Decane	0.006	0.004	0.040
Undecanes (11)	0.016	0.010	0.113
Totals	100.000	2.584	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.746 (Air=1)
Compressibility (Z) ---------- 0.9965
Molecular Weight ---------- 21.52

Gross Heating Value
Dry Basis ---------- 1097 BTU/CF
Saturated Basis ---------- 1079 BTU/CF

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/10/10

Date Analyzed: 08/24/2010

Job Number: J04538.101

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	60	0
Temperature, °F	63	70
Gas Water Ratio (1)	------	0.99
Gas Specific Gravity (2)	------	0.732
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Piston ID: 111
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 60 psig & 63 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010

Job Number: 04538.101

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.231	
Carbon Dioxide	6.430	
Methane	85.470	
Ethane	3.568	0.954
Propane	0.975	0.269
Isobutane	0.163	0.053
n-Butane	0.290	0.091
2-2 Dimethylpropane	0.033	0.013
Isopentane	0.118	0.043
n-Pentane	0.110	0.040
Hexanes	0.226	0.093
Heptanes Plus	2.386	0.951
Totals	100.000	2.507

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.472	(Air=1)
Molecular Weight	100.21	
Gross Heating Value	5097	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.732	(Air=1)
Compressibility (Z)	0.9964	
Molecular Weight	21.14	
Gross Heating Value		
Dry Basis	1115	BTU/CF
Saturated Basis	1096	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-4

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.231		0.306
Carbon Dioxide	6.430		13.386
Methane	85.470		64.863
Ethane	3.568	0.954	5.075
Propane	0.975	0.269	2.034
Isobutane	0.163	0.053	0.448
n-Butane	0.290	0.091	0.797
2,2 Dimethylpropane	0.033	0.013	0.113
Isopentane	0.118	0.043	0.403
n-Pentane	0.110	0.040	0.375
2,2 Dimethylbutane	0.005	0.002	0.020
Cyclopentane	0.041	0.017	0.136
2,3 Dimethylbutane	0.007	0.003	0.029
2 Methylpentane	0.043	0.018	0.175
3 Methylpentane	0.037	0.015	0.151
n-Hexane	0.093	0.038	0.379
Methylcyclopentane	0.144	0.050	0.573
Benzene	0.285	0.080	1.053
Cyclohexane	0.186	0.063	0.740
2-Methylhexane	0.021	0.010	0.100
3-Methylhexane	0.024	0.011	0.114
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.119	0.052	0.558
n-Heptane	0.054	0.025	0.256
Methylcyclohexane	0.284	0.114	1.319
Toluene	0.433	0.145	1.887
Other C8's	0.244	0.113	1.272
n-Octane	0.047	0.024	0.254
Ethylbenzene	0.031	0.012	0.156
M & P Xylenes	0.146	0.056	0.733
O-Xylene	0.031	0.012	0.156
Other C9's	0.169	0.086	1.009
n-Nonane	0.027	0.015	0.164
Other C10's	0.098	0.057	0.655
n-Decane	0.009	0.006	0.061
Undecanes (11)	0.034	0.021	0.250
Totals	100.000	2.507	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.732 (Air=1)
Compressibility (Z) ---------- 0.9964
Molecular Weight ---------- 21.14

Gross Heating Value
Dry Basis ---------- 1115 BTU/CF
Saturated Basis ---------- 1096 BTU/CF

September 28, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/10/10

Date Analyzed: 08/24/2010

Job Number: J04538.301

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	780	0
Temperature, °F	90	70
Gas Water Ratio (1)	------	16.41
Gas Specific Gravity (2)	------	1.746
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Piston ID: 106
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 780 psig & 90 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010 Job Number: 04538.301

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.036	
Carbon Dioxide	1.458	
Methane	45.423	
Ethane	4.589	1.227
Propane	5.242	1.444
Isobutane	2.061	0.674
n-Butane	4.383	1.381
2-2 Dimethylpropane	0.050	0.019
Isopentane	2.640	0.965
n-Pentane	2.556	0.926
Hexanes	4.929	2.034
Heptanes Plus	26.633	10.414
Totals	100.000	19.085

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.437	(Air=1)
Molecular Weight	96.34	
Gross Heating Value	4928	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.746	(Air=1)
Compressibility (Z)	0.9678	
Molecular Weight	48.95	
Gross Heating Value		
Dry Basis	2730	BTU/CF
Saturated Basis	2683	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-6

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.036		0.021
Carbon Dioxide	1.458		1.311
Methane	45.423		14.887
Ethane	4.589	1.227	2.819
Propane	5.242	1.444	4.722
Isobutane	2.061	0.674	2.447
n-Butane	4.383	1.381	5.204
2,2 Dimethylpropane	0.050	0.019	0.074
Isopentane	2.640	0.965	3.891
n-Pentane	2.556	0.926	3.767
2,2 Dimethylbutane	0.140	0.058	0.246
Cyclopentane	0.732	0.306	1.049
2,3 Dimethylbutane	0.204	0.084	0.359
2 Methylpentane	1.192	0.495	2.099
3 Methylpentane	0.812	0.331	1.430
n-Hexane	1.849	0.760	3.255
Methylcyclopentane	3.121	1.076	5.366
Benzene	2.371	0.663	3.784
Cyclohexane	3.437	1.170	5.907
2-Methylhexane	0.430	0.200	0.880
3-Methylhexane	0.443	0.202	0.907
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	2.176	0.947	4.410
n-Heptane	1.017	0.469	2.082
Methylcyclohexane	4.455	1.790	8.937
Toluene	3.289	1.101	6.191
Other C8's	2.619	1.218	5.897
n-Octane	0.445	0.228	1.038
Ethylbenzene	0.159	0.061	0.345
M & P Xylenes	0.786	0.302	1.705
O-Xylene	0.155	0.060	0.336
Other C9's	1.063	0.539	2.742
n-Nonane	0.158	0.089	0.414
Other C10's	0.416	0.242	1.201
n-Decane	0.042	0.026	0.122
Undecanes (11)	0.051	0.031	0.155
Totals	100.000	19.085	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 1.746 (Air=1)
Compressibility (Z) ---------- 0.9678
Molecular Weight ---------- 48.95

Gross Heating Value
Dry Basis ---------- 2730 BTU/CF
Saturated Basis ---------- 2683 BTU/CF

September 28, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/10/10

Date Analyzed: 08/24/2010

Job Number: J04538.501

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	780	0
Temperature, °F	90	70
Gas Water Ratio (1)	------	8.46
Gas Specific Gravity (2)	------	0.802
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Piston ID: 114
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

September 4, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 780 psig & 90 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010 Job Number: 04538.501

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.555	
Carbon Dioxide	2.362	
Methane	78.158	
Ethane	6.775	1.811
Propane	5.012	1.380
Isobutane	1.313	0.430
n-Butane	2.034	0.641
2-2 Dimethylpropane	0.037	0.014
Isopentane	0.732	0.268
n-Pentane	0.586	0.212
Hexanes	0.555	0.228
Heptanes Plus	1.881	0.712
Totals	100.000	5.698

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.235	(Air=1)
Molecular Weight	93.28	
Gross Heating Value	4762	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.802	(Air=1)
Compressibility (Z)	0.9954	
Molecular Weight	23.14	
Gross Heating Value		
Dry Basis	1323	BTU/CF
Saturated Basis	1301	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-7

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.555		0.672
Carbon Dioxide	2.362		4.493
Methane	78.158		54.194
Ethane	6.775	1.811	8.805
Propane	5.012	1.380	9.552
Isobutane	1.313	0.430	3.298
n-Butane	2.034	0.641	5.110
2,2 Dimethylpropane	0.037	0.014	0.115
Isopentane	0.732	0.268	2.283
n-Pentane	0.586	0.212	1.827
2,2 Dimethylbutane	0.023	0.010	0.086
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.111	0.045	0.413
2 Methylpentane	0.149	0.062	0.555
3 Methylpentane	0.092	0.038	0.343
n-Hexane	0.180	0.074	0.670
Methylcyclopentane	0.305	0.105	1.109
Benzene	0.220	0.062	0.743
Cyclohexane	0.296	0.101	1.076
2-Methylhexane	0.034	0.016	0.147
3-Methylhexane	0.034	0.015	0.147
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.168	0.073	0.720
n-Heptane	0.069	0.032	0.299
Methylcyclohexane	0.295	0.119	1.252
Toluene	0.194	0.065	0.773
Other C8's	0.143	0.066	0.681
n-Octane	0.020	0.010	0.099
Ethylbenzene	0.006	0.002	0.028
M & P Xylenes	0.030	0.012	0.138
O-Xylene	0.006	0.002	0.028
Other C9's	0.042	0.021	0.229
n-Nonane	0.004	0.002	0.022
Other C10's	0.011	0.006	0.067
n-Decane	0.001	0.001	0.006
Undecanes (11)	0.003	0.002	0.020
Totals	100.000	5.698	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.802 (Air=1)
Compressibility (Z) ---------- 0.9954
Molecular Weight ---------- 23.14

Gross Heating Value
Dry Basis ---------- 1323 BTU/CF
Saturated Basis ---------- 1301 BTU/CF

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 08/10/10

Date Analyzed: 08/24/2010

Job Number: J04538.201

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	39	0
Temperature, °F	79	70
Gas Water Ratio (1)	------	0.53
Gas Specific Gravity (2)	------	0.872
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Piston ID: 101
Analyst: J. E.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

August 26, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 39 psig & 79 °F to 0 psig & 70 °F

Date Sampled: 08/10/2010 Job Number: 04538.201

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.162	
Carbon Dioxide	16.218	
Methane	72.096	
Ethane	4.940	1.321
Propane	1.718	0.473
Isobutane	0.299	0.098
n-Butane	0.543	0.171
2-2 Dimethylpropane	0.028	0.011
Isopentane	0.216	0.079
n-Pentane	0.135	0.049
Hexanes	0.454	0.187
Heptanes Plus	3.191	1.149
Totals	100.000	3.538

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.256	(Air=1)
Molecular Weight	93.88	
Gross Heating Value	4679	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.872	(Air=1)
Compressibility (Z)	0.9954	
Molecular Weight	25.13	
Gross Heating Value		
Dry Basis	1079	BTU/CF
Saturated Basis	1061	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

Analyst: JF
Processor: MRF
Cylinder ID: W-1

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.162		0.181
Carbon Dioxide	16.218		28.400
Methane	72.096		46.024
Ethane	4.940	1.321	5.910
Propane	1.718	0.473	3.014
Isobutane	0.299	0.098	0.691
n-Butane	0.543	0.171	1.256
2,2 Dimethylpropane	0.028	0.011	0.080
Isopentane	0.216	0.079	0.620
n-Pentane	0.135	0.049	0.388
2,2 Dimethylbutane	0.007	0.003	0.024
Cyclopentane	0.061	0.025	0.170
2,3 Dimethylbutane	0.010	0.004	0.034
2 Methylpentane	0.086	0.036	0.295
3 Methylpentane	0.078	0.032	0.267
n-Hexane	0.212	0.087	0.727
Methylcyclopentane	0.169	0.058	0.566
Benzene	0.733	0.205	2.278
Cyclohexane	0.225	0.077	0.753
2-Methylhexane	0.027	0.013	0.108
3-Methylhexane	0.028	0.013	0.112
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.088	0.038	0.347
n-Heptane	0.058	0.027	0.231
Methylcyclohexane	0.210	0.084	0.820
Toluene	0.959	0.321	3.516
Other C8's	0.144	0.067	0.632
n-Octane	0.027	0.014	0.123
Ethylbenzene	0.042	0.016	0.177
M & P Xylenes	0.246	0.095	1.039
O-Xylene	0.056	0.022	0.237
Other C9's	0.062	0.031	0.311
n-Nonane	0.015	0.008	0.077
Other C10's	0.065	0.038	0.365
n-Decane	0.005	0.003	0.028
Undecanes (11)	0.032	0.020	0.199
Totals	100.000	3.538	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.872 (Air=1)
Compressibility (Z) ---------- 0.9954
Molecular Weight ---------- 25.13

Gross Heating Value
Dry Basis ---------- 1079 BTU/CF
Saturated Basis ---------- 1061 BTU/CF

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
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HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
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ODESSA.....(432) 332-3211
OZONA.....(325) 392-3773
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SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

January 11, 2011

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Original -
Extended Gas Analyses
Flash Liberations Of Separator Water

The invoice was mailed separately.

Thank you.

Yours very truly,

FESCO, Ltd.

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/dg

December 10, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06153

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	800	0
Temperature, °F	62	70
Gas Water Ratio (1)	------	3.6
Gas Specific Gravity (2)	------	0.606
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No: 129

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

December 10, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 800 psig & 62 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010

Job Number: 06153.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	5.399	
Carbon Dioxide	1.712	
Methane	91.965	
Ethane	0.472	0.126
Propane	0.087	0.024
Isobutane	0.021	0.007
n-Butane	0.032	0.010
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.030	0.011
n-Pentane	0.019	0.007
Hexanes	0.039	0.016
Heptanes Plus	0.224	0.093
Totals	100.000	0.294

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.486	(Air=1)
Molecular Weight	100.78	
Gross Heating Value	5251	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.606	(Air=1)
Compressibility (Z)	0.9980	
Molecular Weight	17.52	
Gross Heating Value		
Dry Basis	961	BTU/CF
Saturated Basis	945	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: 0.031 Gr/100 CF, 0.5 PPMV or 0.000 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: MRF
Cylinder ID: WF-4

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	5.399		8.631
Carbon Dioxide	1.712		4.299
Methane	91.965		84.193
Ethane	0.472	0.126	0.810
Propane	0.087	0.024	0.219
Isobutane	0.021	0.007	0.070
n-Butane	0.032	0.010	0.106
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.030	0.011	0.124
n-Pentane	0.019	0.007	0.078
2,2 Dimethylbutane	0.001	0.000	0.005
Cyclopentane	0.009	0.004	0.036
2,3 Dimethylbutane	0.002	0.001	0.010
2 Methylpentane	0.011	0.005	0.054
3 Methylpentane	0.005	0.002	0.025
n-Hexane	0.011	0.005	0.054
Methylcyclopentane	0.033	0.011	0.158
Benzene	0.022	0.006	0.098
Cyclohexane	0.007	0.002	0.034
2-Methylhexane	0.002	0.001	0.011
3-Methylhexane	0.003	0.001	0.017
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.040	0.017	0.226
n-Heptane	0.007	0.003	0.040
Methylcyclohexane	0.021	0.008	0.118
Toluene	0.008	0.003	0.042
Other C8's	0.041	0.019	0.258
n-Octane	0.003	0.002	0.020
Ethylbenzene	0.003	0.001	0.018
M & P Xylenes	0.003	0.001	0.018
O-Xylene	0.001	0.000	0.006
Other C9's	0.021	0.011	0.151
n-Nonane	0.001	0.001	0.007
Other C10's	0.007	0.004	0.056
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.001	0.001	0.008
Totals	100.000	0.294	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.606 (Air=1)
Compressibility (Z) ---------- 0.9980
Molecular Weight ---------- 17.52

Gross Heating Value
Dry Basis ---------- 961 BTU/CF
Saturated Basis ---------- 945 BTU/CF

December 10, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06156

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	820	0
Temperature, °F	62	70
Gas Water Ratio (1)	------	5.4
Gas Specific Gravity (2)	------	0.608
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No. : 136

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

December 10, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 820 psig & 62 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010 Job Number: 06156.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	4.420	
Carbon Dioxide	2.652	
Methane	92.309	
Ethane	0.348	0.093
Propane	0.018	0.005
Isobutane	0.008	0.003
n-Butane	0.008	0.003
2-2 Dimethylpropane	0.002	0.001
Isopentane	0.005	0.002
n-Pentane	0.007	0.003
Hexanes	0.027	0.011
Heptanes Plus	0.196	0.085
Totals	100.000	0.205

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.710	(Air=1)
Molecular Weight	107.25	
Gross Heating Value	5585	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.608	(Air=1)
Compressibility (Z)	0.9980	
Molecular Weight	17.58	
Gross Heating Value		
Dry Basis	956	BTU/CF
Saturated Basis	941	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: MRF
Cylinder ID: WF-8

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	4.420		7.044
Carbon Dioxide	2.652		6.639
Methane	92.309		84.242
Ethane	0.348	0.093	0.595
Propane	0.018	0.005	0.045
Isobutane	0.008	0.003	0.026
n-Butane	0.008	0.003	0.026
2,2 Dimethylpropane	0.002	0.001	0.008
Isopentane	0.005	0.002	0.021
n-Pentane	0.007	0.003	0.029
2,2 Dimethylbutane	0.001	0.000	0.005
Cyclopentane	0.004	0.002	0.016
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.006	0.002	0.029
3 Methylpentane	0.004	0.002	0.020
n-Hexane	0.011	0.005	0.054
Methylcyclopentane	0.015	0.005	0.072
Benzene	0.011	0.003	0.049
Cyclohexane	0.003	0.001	0.014
2-Methylhexane	0.002	0.001	0.011
3-Methylhexane	0.003	0.001	0.017
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.023	0.010	0.130
n-Heptane	0.007	0.003	0.040
Methylcyclohexane	0.020	0.008	0.112
Toluene	0.022	0.007	0.115
Other C8's	0.028	0.013	0.176
n-Octane	0.004	0.002	0.026
Ethylbenzene	0.003	0.001	0.018
M & P Xylenes	0.010	0.004	0.060
O-Xylene	0.003	0.001	0.018
Other C9's	0.014	0.007	0.101
n-Nonane	0.002	0.001	0.015
Other C10's	0.009	0.005	0.072
n-Decane	0.001	0.001	0.008
Undecanes (11)	0.016	0.010	0.142
Totals	100.000	0.205	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.608 (Air=1)
Compressibility (Z) ---------- 0.9980
Molecular Weight ---------- 17.58

Gross Heating Value
Dry Basis ---------- 956 BTU/CF
Saturated Basis ---------- 941 BTU/CF

December 10, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06155

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	810	0
Temperature, °F	20	70
Gas Water Ratio (1)	------	6.4
Gas Specific Gravity (2)	------	0.593
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No. : 121

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

December 10, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 810 psig & 20 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010 Job Number: 06155.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	3.759	
Carbon Dioxide	1.633	
Methane	94.048	
Ethane	0.365	0.098
Propane	0.020	0.006
Isobutane	0.004	0.001
n-Butane	0.009	0.003
2-2 Dimethylpropane	0.005	0.002
Isopentane	0.007	0.003
n-Pentane	0.009	0.003
Hexanes	0.037	0.015
Heptanes Plus	0.104	0.048
Totals	100.000	0.179

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.901	(Air=1)
Molecular Weight	112.76	
Gross Heating Value	5890	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.593	(Air=1)
Compressibility (Z)	0.9980	
Molecular Weight	17.15	
Gross Heating Value		
Dry Basis	970	BTU/CF
Saturated Basis	954	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: MRF
Cylinder ID: BU-2

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	3.759		6.140
Carbon Dioxide	1.633		4.191
Methane	94.048		87.981
Ethane	0.365	0.098	0.640
Propane	0.020	0.006	0.051
Isobutane	0.004	0.001	0.014
n-Butane	0.009	0.003	0.031
2,2 Dimethylpropane	0.005	0.002	0.021
Isopentane	0.007	0.003	0.029
n-Pentane	0.009	0.003	0.038
2,2 Dimethylbutane	0.004	0.002	0.020
Cyclopentane	0.001	0.000	0.004
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.006	0.002	0.030
3 Methylpentane	0.005	0.002	0.025
n-Hexane	0.020	0.008	0.100
Methylcyclopentane	0.007	0.002	0.034
Benzene	0.002	0.001	0.009
Cyclohexane	0.006	0.002	0.029
2-Methylhexane	0.002	0.001	0.012
3-Methylhexane	0.001	0.000	0.006
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.008	0.003	0.046
n-Heptane	0.004	0.002	0.023
Methylcyclohexane	0.004	0.002	0.023
Toluene	0.004	0.001	0.021
Other C8's	0.019	0.009	0.122
n-Octane	0.002	0.001	0.013
Ethylbenzene	0.002	0.001	0.012
M & P Xylenes	0.002	0.001	0.012
O-Xylene	0.001	0.000	0.006
Other C9's	0.020	0.010	0.147
n-Nonane	0.001	0.001	0.007
Other C10's	0.013	0.008	0.107
n-Decane	0.001	0.001	0.008
Undecanes (11)	0.005	0.003	0.043
Totals	100.000	0.179	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.593 (Air=1)
Compressibility (Z) ---------- 0.9980
Molecular Weight ---------- 17.15

Gross Heating Value
Dry Basis ---------- 970 BTU/CF
Saturated Basis ---------- 954 BTU/CF

December 10, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06157

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	820	0
Temperature, °F	90	70
Gas Water Ratio (1)	------	6.5
Gas Specific Gravity (2)	------	0.575
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No: 120

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

December 10, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 820 psig & 90 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010

Job Number: 06157.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.210	
Carbon Dioxide	0.859	
Methane	98.489	
Ethane	0.169	0.045
Propane	0.003	0.001
Isobutane	0.001	0.000
n-Butane	0.008	0.003
2-2 Dimethylpropane	0.005	0.002
Isopentane	0.003	0.001
n-Pentane	0.001	0.000
Hexanes	0.041	0.017
Heptanes Plus	0.211	0.119
Totals	100.000	0.188

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	4.676	(Air=1)
Molecular Weight	135.16	
Gross Heating Value	7429	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.575	(Air=1)
Compressibility (Z)	0.9979	
Molecular Weight	16.62	
Gross Heating Value		
Dry Basis	1021	BTU/CF
Saturated Basis	1004	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: 0.031 Gr/100 CF, 0.5 PPMV or 0.000 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: CV
Processor: MRF
Cylinder ID: WF-2

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.210		0.354
Carbon Dioxide	0.859		2.274
Methane	98.489		95.061
Ethane	0.169	0.045	0.306
Propane	0.003	0.001	0.008
Isobutane	0.001	0.000	0.003
n-Butane	0.008	0.003	0.028
2,2 Dimethylpropane	0.005	0.002	0.022
Isopentane	0.003	0.001	0.013
n-Pentane	0.001	0.000	0.004
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.006	0.002	0.031
3 Methylpentane	0.008	0.003	0.041
n-Hexane	0.026	0.011	0.135
Methylcyclopentane	0.006	0.002	0.030
Benzene	0.003	0.001	0.014
Cyclohexane	0.001	0.000	0.005
2-Methylhexane	0.000	0.000	0.000
3-Methylhexane	0.000	0.000	0.000
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.008	0.003	0.048
n-Heptane	0.001	0.000	0.006
Methylcyclohexane	0.002	0.001	0.012
Toluene	0.005	0.002	0.028
Other C8's	0.003	0.001	0.020
n-Octane	0.002	0.001	0.014
Ethylbenzene	0.001	0.000	0.006
M & P Xylenes	0.005	0.002	0.032
O-Xylene	0.002	0.001	0.013
Other C9's	0.007	0.004	0.053
n-Nonane	0.006	0.003	0.046
Other C10's	0.035	0.020	0.297
n-Decane	0.034	0.021	0.291
Undecanes (11)	0.090	0.055	0.800
Totals	100.000	0.188	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.575 (Air=1)
Compressibility (Z) ---------- 0.9979
Molecular Weight ---------- 16.62

Gross Heating Value
Dry Basis ---------- 1021 BTU/CF
Saturated Basis ---------- 1004 BTU/CF

December 10, 2010

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06154

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	822	0
Temperature, °F	75	70
Gas Water Ratio (1)	------	5.2
Gas Specific Gravity (2)	------	0.585
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No. : 137

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 822 psig & 75 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010 Job Number: 06154.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.606	
Carbon Dioxide	1.815	
Methane	97.065	
Ethane	0.212	0.057
Propane	0.009	0.002
Isobutane	0.003	0.001
n-Butane	0.016	0.005
2-2 Dimethylpropane	0.020	0.008
Isopentane	0.007	0.003
n-Pentane	0.009	0.003
Hexanes	0.048	0.020
Heptanes Plus	0.190	0.089
Totals	100.000	0.188

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.979	(Air=1)
Molecular Weight	115.01	
Gross Heating Value	5986	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.585	(Air=1)
Compressibility (Z)	0.9979	
Molecular Weight	16.90	
Gross Heating Value		
Dry Basis	1004	BTU/CF
Saturated Basis	988	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. Alice, Texas

Analyst: CV
Processor: MRF
Cylinder ID: BU-1

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.606		1.004
Carbon Dioxide	1.815		4.725
Methane	97.065		92.116
Ethane	0.212	0.057	0.377
Propane	0.009	0.002	0.023
Isobutane	0.003	0.001	0.010
n-Butane	0.016	0.005	0.055
2,2 Dimethylpropane	0.020	0.008	0.085
Isopentane	0.007	0.003	0.030
n-Pentane	0.009	0.003	0.038
2,2 Dimethylbutane	0.001	0.000	0.005
Cyclopentane	0.001	0.000	0.004
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.008	0.003	0.041
3 Methylpentane	0.009	0.004	0.046
n-Hexane	0.028	0.012	0.143
Methylcyclopentane	0.015	0.005	0.075
Benzene	0.004	0.001	0.018
Cyclohexane	0.010	0.003	0.050
2-Methylhexane	0.002	0.001	0.012
3-Methylhexane	0.002	0.001	0.012
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.017	0.007	0.100
n-Heptane	0.007	0.003	0.041
Methylcyclohexane	0.003	0.001	0.017
Toluene	0.008	0.003	0.044
Other C8's	0.038	0.018	0.248
n-Octane	0.005	0.003	0.034
Ethylbenzene	0.003	0.001	0.019
M & P Xylenes	0.005	0.002	0.031
O-Xylene	0.002	0.001	0.013
Other C9's	0.023	0.012	0.172
n-Nonane	0.004	0.002	0.030
Other C10's	0.014	0.008	0.117
n-Decane	0.002	0.001	0.017
Undecanes (11)	0.026	0.016	0.243
Totals	100.000	0.188	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.585 (Air=1)
Compressibility (Z) ---------- 0.9979
Molecular Weight ---------- 16.90

Gross Heating Value
Dry Basis ---------- 1004 BTU/CF
Saturated Basis ---------- 988 BTU/CF

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 11/11/2010

Date Analyzed: 11/22/2010

Job Number: J06152

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	805	0
Temperature, °F	66	70
Gas Water Ratio (1)	------	6.5
Gas Specific Gravity (2)	------	0.579
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. E.

Piston No. : 130

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

December 9, 2010

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 805 psig & 66 °F to 0 psig & 70 °F

Date Sampled: 11/11/2010 Job Number: 06152.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	1.216	
Carbon Dioxide	1.266	
Methane	97.064	
Ethane	0.265	0.071
Propane	0.013	0.004
Isobutane	0.004	0.001
n-Butane	0.003	0.001
2-2 Dimethylpropane	0.000	0.000
Isopentane	0.011	0.004
n-Pentane	0.003	0.001
Hexanes	0.020	0.008
Heptanes Plus	0.135	0.058
Totals	100.000	0.148

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.621	(Air=1)
Molecular Weight	104.65	
Gross Heating Value	5435	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.579	(Air=1)
Compressibility (Z)	0.9979	
Molecular Weight	16.73	
Gross Heating Value		
Dry Basis	999	BTU/CF
Saturated Basis	982	BTU/CF

*Hydrogen Sulfide tested in laboratory b Stained Tube Method (GPA 2377)
Results: 0.044 Gr/100 CF, 0.7 PPMV or 0.000 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: CV
Processor: MRF
Cylinder ID: WF-7

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	1.216		2.036
Carbon Dioxide	1.266		3.331
Methane	97.064		93.093
Ethane	0.265	0.071	0.476
Propane	0.013	0.004	0.034
Isobutane	0.004	0.001	0.014
n-Butane	0.003	0.001	0.010
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	0.011	0.004	0.047
n-Pentane	0.003	0.001	0.013
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.002	0.001	0.008
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.004	0.002	0.021
3 Methylpentane	0.004	0.002	0.021
n-Hexane	0.009	0.004	0.046
Methylcyclopentane	0.012	0.004	0.060
Benzene	0.012	0.003	0.056
Cyclohexane	0.001	0.000	0.005
2-Methylhexane	0.001	0.000	0.006
3-Methylhexane	0.001	0.000	0.006
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.019	0.008	0.113
n-Heptane	0.004	0.002	0.024
Methylcyclohexane	0.012	0.005	0.070
Toluene	0.010	0.003	0.055
Other C8's	0.026	0.012	0.171
n-Octane	0.002	0.001	0.014
Ethylbenzene	0.003	0.001	0.019
M & P Xylenes	0.004	0.002	0.025
O-Xylene	0.001	0.000	0.006
Other C9's	0.016	0.008	0.121
n-Nonane	0.001	0.001	0.008
Other C10's	0.008	0.005	0.068
n-Decane	0.001	0.001	0.009
Undecanes (11)	0.001	0.001	0.009
Totals	100.000	0.148	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.579 (Air=1)
Compressibility (Z) ---------- 0.9979
Molecular Weight ---------- 16.73

Gross Heating Value
Dry Basis ---------- 999 BTU/CF
Saturated Basis ---------- 982 BTU/CF

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
ALICE HYDRAULICS DIVISION: (361) 661-1538 • (361) 664-0736

ALICE.....(361) 664-3479
BEAUMONT.....(409) 842-3000
BRYAN.....(979) 775-1825
CANADIAN.....(806) 323-5050
CORPUS CHRISTI...(361) 882-4124
EDINBURG.....(956) 383-8378
EL CAMPO.....(979) 543-9451
HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
LAREDO.....(956) 724-7501
ODESSA.....(432) 332-3211
OZONA.....(325) 392-3773
REFUGIO.....(361) 526-4644
VICTORIA.....(361) 575-7533
LAFAYETTE, LA..(337) 896-3838
LIBERAL, KS.....(580) 778-3384
SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

May 6, 2011

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Attention: Mr. Jeff Kuo

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy –
Extended Liquid Analyses

The invoice was mailed separately.

Thank you,

Yours very truly,

FESCO, Ltd.

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/eam

April 5, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Spot Sample @ 28 psig & 120 °F

Date Sampled: 01/06/2011

Job Number: 10721.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.000	0.000	0.000
Carbon Dioxide	0.420	0.051	0.043
Methane	0.804	0.097	0.030
Ethane	0.158	0.030	0.011
Propane	0.291	0.057	0.030
Isobutane	0.197	0.046	0.027
n-Butane	0.432	0.097	0.058
2,2 Dimethylpropane	0.044	0.012	0.007
Isopentane	0.307	0.080	0.051
n-Pentane	0.291	0.075	0.049
2,2 Dimethylbutane	0.005	0.001	0.001
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.000	0.000	0.000
2 Methylpentane	0.002	0.001	0.000
3 Methylpentane	0.001	0.000	0.000
n-Hexane	0.014	0.004	0.003
Heptanes Plus	97.035	99.449	99.690
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9757	(Water=1)
°API Gravity	13.52	@ 60°F
Molecular Weight	443.3	
Vapor Volume	6.99	CF/Gal
Weight	8.13	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9733	(Water=1)
°API Gravity	13.88	@ 60°F
Molecular Weight	431.5	
Vapor Volume	7.16	CF/Gal
Weight	8.11	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-1085

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.420	0.051	0.043
Nitrogen	0.000	0.000	0.000
Methane	0.804	0.097	0.030
Ethane	0.158	0.030	0.011
Propane	0.291	0.057	0.030
Isobutane	0.197	0.046	0.027
n-Butane	0.476	0.109	0.066
Isopentane	0.307	0.080	0.051
n-Pentane	0.291	0.075	0.049
Other C-6's	0.008	0.002	0.002
Heptanes	0.432	0.134	0.098
Octanes	1.494	0.496	0.379
Nonanes	1.746	0.653	0.511
Decanes Plus	92.721	97.996	98.551
Benzene	0.013	0.002	0.002
Toluene	0.224	0.053	0.048
E-Benzene	0.209	0.057	0.051
Xylenes	0.165	0.045	0.041
n-Hexane	0.014	0.004	0.003
2,2,4 Trimethylpentane	0.030	0.011	0.008
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.9733	(Water=1)
°API Gravity	13.88	@ 60°F
Molecular Weight	431.5	
Vapor Volume	7.16	CF/Gal
Weight	8.11	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9789	(Water=1)
Molecular Weight	458.6	

Characteristics of Stock Tank:

°API Gravity	13.52	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	0.83	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-1085*	------
Pressure, PSIG	28	37	------
Temperature, °F	120	69	------

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.000	0.000	0.000
Carbon Dioxide	0.420	0.051	0.043
Methane	0.804	0.097	0.030
Ethane	0.158	0.030	0.011
Propane	0.291	0.057	0.030
Isobutane	0.197	0.046	0.027
n-Butane	0.432	0.097	0.058
2,2 Dimethylpropane	0.044	0.012	0.007
Isopentane	0.307	0.080	0.051
n-Pentane	0.291	0.075	0.049
2,2 Dimethylbutane	0.005	0.001	0.001
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.000	0.000	0.000
2 Methylpentane	0.002	0.001	0.000
3 Methylpentane	0.001	0.000	0.000
n-Hexane	0.014	0.004	0.003
Methylcyclopentane	0.025	0.006	0.005
Benzene	0.013	0.002	0.002
Cyclohexane	0.033	0.008	0.006
2-Methylhexane	0.028	0.009	0.007
3-Methylhexane	0.028	0.009	0.007
2,2,4 Trimethylpentane	0.030	0.011	0.008
Other C-7's	0.189	0.059	0.043
n-Heptane	0.129	0.042	0.030
Methylcyclohexane	0.121	0.035	0.027
Toluene	0.224	0.053	0.048
Other C-8's	1.243	0.414	0.317
n-Octane	0.130	0.048	0.035
E-Benzene	0.209	0.057	0.051
M & P Xylenes	0.059	0.016	0.015
O-Xylene	0.106	0.029	0.026
Other C-9's	1.650	0.614	0.483
n-Nonane	0.096	0.038	0.028
Other C-10's	3.006	1.230	0.984
n-decane	0.173	0.075	0.057
Undecanes(11)	4.045	1.698	1.378
Dodecanes(12)	4.305	1.952	1.606
Tridecanes(13)	5.564	2.705	2.256
Tetradecanes(14)	5.329	2.776	2.347
Pentadecanes(15)	5.019	2.800	2.396
Hexadecanes(16)	4.205	2.507	2.163
Heptadecanes(17)	4.141	2.611	2.274
Octadecanes(18)	4.019	2.668	2.338
Nonadecanes(19)	4.104	2.838	2.501
Eicosanes(20)	3.488	2.507	2.223
Heneicosanes(21)	3.242	2.452	2.186
Docosanes(22)	3.126	2.464	2.209
Tricosanes(23)	2.587	2.114	1.907
Tetracosanes(24)	2.663	2.255	2.043
Pentacosanes(25)	2.239	1.967	1.790
Hexacosanes(26)	2.283	2.077	1.899
Heptacosanes(27)	2.160	2.038	1.872
Octacosanes(28)	2.257	2.202	2.029
Nonacosanes(29)	2.394	2.413	2.231
Triacontanes(30)	2.397	2.492	2.311
Hentriacontanes Plus(31+)	19.976	49.154	55.550
Total	100.000	100.000	100.000

April 5, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Spot Sample @ 28 psig & 82 °F

Date Sampled: 01/06/2011

Job Number: 10724.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.027	0.003	0.003
Carbon Dioxide	0.243	0.042	0.037
Methane	0.723	0.124	0.040
Ethane	0.148	0.040	0.015
Propane	0.488	0.136	0.075
Isobutane	0.378	0.125	0.076
n-Butane	0.906	0.289	0.183
2,2 Dimethylpropane	0.021	0.008	0.005
Isopentane	0.824	0.305	0.206
n-Pentane	0.698	0.256	0.175
2,2 Dimethylbutane	0.013	0.005	0.004
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.341	0.141	0.102
2 Methylpentane	0.255	0.107	0.076
3 Methylpentane	0.280	0.116	0.084
n-Hexane	0.208	0.087	0.062
Heptanes Plus	94.447	98.216	98.856
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9297	(Water=1)
°API Gravity	20.69	@ 60°F
Molecular Weight	301.6	
Vapor Volume	9.79	CF/Gal
Weight	7.75	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9237	(Water=1)
°API Gravity	21.69	@ 60°F
Molecular Weight	288.1	
Vapor Volume	10.18	CF/Gal
Weight	7.70	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-831

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.243	0.042	0.037
Nitrogen	0.027	0.003	0.003
Methane	0.723	0.124	0.040
Ethane	0.148	0.040	0.015
Propane	0.488	0.136	0.075
Isobutane	0.378	0.125	0.076
n-Butane	0.927	0.297	0.188
Isopentane	0.824	0.305	0.206
n-Pentane	0.698	0.256	0.175
Other C-6's	0.889	0.370	0.266
Heptanes	7.231	2.982	2.362
Octanes	8.687	4.038	3.265
Nonanes	6.432	3.423	2.822
Decanes Plus	71.102	87.397	90.051
Benzene	0.020	0.006	0.005
Toluene	0.181	0.061	0.058
E-Benzene	0.118	0.046	0.043
Xylenes	0.675	0.262	0.249
n-Hexane	0.208	0.087	0.062
2,2,4 Trimethylpentane	0.001	0.001	0.000
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.9237	(Water=1)
°API Gravity	21.69	@ 60°F
Molecular Weight	288.1	
Vapor Volume	10.18	CF/Gal
Weight	7.70	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9518	(Water=1)
Molecular Weight	364.9	

Characteristics of Stock Tank:

°API Gravity	21.31	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	1.58	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-831*	------
Pressure, PSIG	28	15	------
Temperature, °F	82	69	------

* Sample used for analysis

FESCO, Ltd.

Job Number: 10724.002

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.027	0.003	0.003
Carbon Dioxide	0.243	0.042	0.037
Methane	0.723	0.124	0.040
Ethane	0.148	0.040	0.015
Propane	0.488	0.136	0.075
Isobutane	0.378	0.125	0.076
n-Butane	0.906	0.289	0.183
2,2 Dimethylpropane	0.021	0.008	0.005
Isopentane	0.824	0.305	0.206
n-Pentane	0.698	0.256	0.175
2,2 Dimethylbutane	0.013	0.005	0.004
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.341	0.141	0.102
2 Methylpentane	0.255	0.107	0.076
3 Methylpentane	0.280	0.116	0.084
n-Hexane	0.208	0.087	0.062
Methylcyclopentane	1.938	0.694	0.566
Benzene	0.020	0.006	0.005
Cyclohexane	0.526	0.181	0.154
2-Methylhexane	0.061	0.029	0.021
3-Methylhexane	0.157	0.073	0.055
2,2,4 Trimethylpentane	0.001	0.001	0.000
Other C-7's	4.411	1.941	1.519
n-Heptane	0.139	0.065	0.048
Methylcyclohexane	1.632	0.664	0.556
Toluene	0.181	0.061	0.058
Other C-8's	6.350	3.009	2.429
n-Octane	0.706	0.366	0.280
E-Benzene	0.118	0.046	0.043
M & P Xylenes	0.320	0.126	0.118
O-Xylene	0.355	0.137	0.131
Other C-9's	5.972	3.161	2.617
n-Nonane	0.460	0.262	0.205
Other C-10's	5.208	3.029	2.554
n-decane	0.316	0.196	0.156
Undecanes(11)	4.497	2.683	2.294
Dodecanes(12)	3.955	2.549	2.210
Tridecanes(13)	4.629	3.199	2.812
Tetradecanes(14)	3.696	2.736	2.437
Pentadecanes(15)	3.495	2.771	2.499
Hexadecanes(16)	2.894	2.453	2.230
Heptadecanes(17)	2.842	2.547	2.338
Octadecanes(18)	2.914	2.749	2.538
Nonadecanes(19)	2.947	2.897	2.690
Eicosanes(20)	2.020	2.064	1.928
Heneicosanes(21)	1.901	2.044	1.920
Docosanes(22)	1.808	2.026	1.914
Tricosanes(23)	1.633	1.897	1.803
Tetracosanes(24)	1.450	1.745	1.666
Pentacosanes(25)	1.349	1.685	1.616
Hexacosanes(26)	1.331	1.722	1.659
Heptacosanes(27)	1.251	1.678	1.624
Octacosanes(28)	1.276	1.769	1.718
Nonacosanes(29)	1.451	2.079	2.025
Triacontanes(30)	1.317	1.945	1.901
Hentriacontanes Plus(31+)	16.921	38.931	45.518
Total	100.000	100.000	100.000

May 1, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Spot Sample @ 25 psig & 120 °F

Date Sampled: 01/06/2011 Job Number: 10722.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.026	0.003	0.003
Carbon Dioxide	0.245	0.044	0.039
Methane	0.740	0.132	0.043
Ethane	0.174	0.049	0.019
Propane	0.872	0.253	0.140
Isobutane	0.525	0.181	0.111
n-Butane	1.443	0.479	0.305
2,2 Dimethylpropane	0.015	0.006	0.004
Isopentane	1.187	0.457	0.311
n-Pentane	1.218	0.465	0.319
2,2 Dimethylbutane	0.011	0.005	0.003
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.404	0.175	0.127
2 Methylpentane	0.369	0.161	0.115
3 Methylpentane	0.379	0.163	0.119
n-Hexane	0.318	0.138	0.100
Heptanes Plus	92.076	97.290	98.242
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9271	(Water=1)
°API Gravity	21.13	@ 60°F
Molecular Weight	293.5	
Vapor Volume	10.02	CF/Gal
Weight	7.72	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9181	(Water=1)
°API Gravity	22.63	@ 60°F
Molecular Weight	275.1	
Vapor Volume	10.59	CF/Gal
Weight	7.65	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-1184

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.245	0.044	0.039
Nitrogen	0.026	0.003	0.003
Methane	0.740	0.132	0.043
Ethane	0.174	0.049	0.019
Propane	0.872	0.253	0.140
Isobutane	0.525	0.181	0.111
n-Butane	1.458	0.485	0.309
Isopentane	1.187	0.457	0.311
n-Pentane	1.218	0.465	0.319
Other C-6's	1.162	0.503	0.364
Heptanes	7.901	3.395	2.702
Octanes	8.881	4.296	3.495
Nonanes	6.397	3.542	2.939
Decanes Plus	67.713	85.598	88.669
Benzene	0.032	0.009	0.009
Toluene	0.313	0.110	0.105
E-Benzene	0.111	0.045	0.043
Xylenes	0.726	0.294	0.280
n-Hexane	0.318	0.138	0.100
2,2,4 Trimethylpentane	0.001	0.001	0.001
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.9181	(Water=1)
°API Gravity	22.63	@ 60°F
Molecular Weight	275.1	
Vapor Volume	10.59	CF/Gal
Weight	7.65	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9510	(Water=1)
Molecular Weight	360.2	

Characteristics of Stock Tank:

°API Gravity	21.83	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	2.67	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-1184*	------
Pressure, PSIG	25	23	------
Temperature, °F	120	69	------

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.026	0.003	0.003
Carbon Dioxide	0.245	0.044	0.039
Methane	0.740	0.132	0.043
Ethane	0.174	0.049	0.019
Propane	0.872	0.253	0.140
Isobutane	0.525	0.181	0.111
n-Butane	1.443	0.479	0.305
2,2 Dimethylpropane	0.015	0.006	0.004
Isopentane	1.187	0.457	0.311
n-Pentane	1.218	0.465	0.319
2,2 Dimethylbutane	0.011	0.005	0.003
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.404	0.175	0.127
2 Methylpentane	0.369	0.161	0.115
3 Methylpentane	0.379	0.163	0.119
n-Hexane	0.318	0.138	0.100
Methylcyclopentane	2.136	0.796	0.654
Benzene	0.032	0.009	0.009
Cyclohexane	0.586	0.210	0.179
2-Methylhexane	0.093	0.046	0.034
3-Methylhexane	0.219	0.106	0.080
2,2,4 Trimethylpentane	0.001	0.001	0.001
Other C-7's	4.587	2.101	1.654
n-Heptane	0.280	0.136	0.102
Methylcyclohexane	1.697	0.719	0.606
Toluene	0.313	0.110	0.105
Other C-8's	6.451	3.182	2.584
n-Octane	0.733	0.395	0.304
E-Benzene	0.111	0.045	0.043
M & P Xylenes	0.349	0.143	0.135
O-Xylene	0.377	0.151	0.146
Other C-9's	5.973	3.291	2.741
n-Nonane	0.424	0.251	0.198
Other C-10's	5.245	3.176	2.694
n-decane	0.335	0.216	0.173
Undecanes(11)	4.614	2.866	2.466
Dodecanes(12)	4.159	2.791	2.434
Tridecanes(13)	4.651	3.346	2.959
Tetradecanes(14)	3.780	2.913	2.611
Pentadecanes(15)	3.591	2.965	2.689
Hexadecanes(16)	2.874	2.536	2.320
Heptadecanes(17)	2.752	2.568	2.371
Octadecanes(18)	2.946	2.893	2.688
Nonadecanes(19)	2.832	2.898	2.708
Eicosanes(20)	1.999	2.126	1.998
Heneicosanes(21)	1.827	2.045	1.933
Docosanes(22)	1.749	2.039	1.939
Tricosanes(23)	1.630	1.971	1.884
Tetracosanes(24)	1.501	1.880	1.806
Pentacosanes(25)	1.339	1.740	1.679
Hexacosanes(26)	1.307	1.759	1.705
Heptacosanes(27)	1.246	1.739	1.694
Octacosanes(28)	1.326	1.915	1.871
Nonacosanes(29)	1.500	2.236	2.191
Triacontanes(30)	1.374	2.112	2.077
Hentriacontanes Plus(31+)	13.136	34.870	41.780
Total	100.000	100.000	100.000

May 2, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Separator Hydrocarbon Liquid
Spot Sample @ N/A psig & 80 °F

Date Sampled: 01/20/2011 Job Number: 10728.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.061	0.007	0.006
Carbon Dioxide	0.068	0.012	0.011
Methane	0.255	0.045	0.015
Ethane	0.180	0.050	0.020
Propane	0.572	0.164	0.093
Isobutane	0.264	0.090	0.057
n-Butane	1.163	0.382	0.249
2,2 Dimethylpropane	0.008	0.003	0.002
Isopentane	1.171	0.446	0.311
n-Pentane	1.777	0.671	0.472
2,2 Dimethylbutane	0.007	0.003	0.002
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.143	0.061	0.045
2 Methylpentane	0.387	0.167	0.123
3 Methylpentane	0.328	0.139	0.104
n-Hexane	0.734	0.315	0.233
Heptanes Plus	92.883	97.445	98.256
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9033	(Water=1)
°API Gravity	25.16	@ 60°F
Molecular Weight	287.2	
Vapor Volume	9.98	CF/Gal
Weight	7.53	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.8958	(Water=1)
°API Gravity	26.46	@ 60°F
Molecular Weight	271.4	
Vapor Volume	10.47	CF/Gal
Weight	7.46	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-1245

TANKS DATA INPUT REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.068	0.012	0.011
Nitrogen	0.061	0.007	0.006
Methane	0.255	0.045	0.015
Ethane	0.180	0.050	0.020
Propane	0.572	0.164	0.093
Isobutane	0.264	0.090	0.057
n-Butane	1.171	0.385	0.251
Isopentane	1.171	0.446	0.311
n-Pentane	1.777	0.671	0.472
Other C-6's	0.865	0.371	0.274
Heptanes	5.759	2.516	2.034
Octanes	8.428	4.020	3.382
Nonanes	7.012	3.783	3.267
Decanes Plus	69.875	86.444	88.910
Benzene	0.133	0.039	0.038
Toluene	0.576	0.201	0.195
E-Benzene	0.189	0.076	0.074
Xylenes	0.912	0.366	0.357
n-Hexane	0.734	0.315	0.233
2,2,4 Trimethylpentane	0.000	0.000	0.000
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.8958	(Water=1)
°API Gravity	26.46	@ 60°F
Molecular Weight	271.4	
Vapor Volume	10.47	CF/Gal
Weight	7.46	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.9214	(Water=1)
Molecular Weight	345.4	

Characteristics of Stock Tank:

°API Gravity	25.54	@ 60°F
Reid Vapor Pressure (ASTM D-5191)	0.75	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-1245*	------
Pressure, PSIG	N/A	7	------
Temperature, °F	80	68	------

* Sample used for analysis

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.061	0.007	0.006
Carbon Dioxide	0.068	0.012	0.011
Methane	0.255	0.045	0.015
Ethane	0.180	0.050	0.020
Propane	0.572	0.164	0.093
Isobutane	0.264	0.090	0.057
n-Butane	1.163	0.382	0.249
2,2 Dimethylpropane	0.008	0.003	0.002
Isopentane	1.171	0.446	0.311
n-Pentane	1.777	0.671	0.472
2,2 Dimethylbutane	0.007	0.003	0.002
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.143	0.061	0.045
2 Methylpentane	0.387	0.167	0.123
3 Methylpentane	0.328	0.139	0.104
n-Hexane	0.734	0.315	0.233
Methylcyclopentane	0.805	0.297	0.249
Benzene	0.133	0.039	0.038
Cyclohexane	0.613	0.217	0.190
2-Methylhexane	0.347	0.168	0.128
3-Methylhexane	0.586	0.280	0.216
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C-7's	2.289	1.016	0.836
n-Heptane	1.119	0.538	0.413
Methylcyclohexane	1.331	0.557	0.482
Toluene	0.576	0.201	0.195
Other C-8's	5.848	2.796	2.375
n-Octane	1.249	0.666	0.526
E-Benzene	0.189	0.076	0.074
M & P Xylenes	0.562	0.227	0.220
O-Xylene	0.349	0.138	0.137
Other C-9's	6.273	3.350	2.917
n-Nonane	0.739	0.433	0.349
Other C-10's	5.792	3.400	3.015
n-decane	0.514	0.329	0.270
Undecanes(11)	5.244	3.158	2.840
Dodecanes(12)	4.521	2.941	2.682
Tridecanes(13)	4.706	3.282	3.034
Tetradecanes(14)	3.605	2.693	2.523
Pentadecanes(15)	3.236	2.589	2.456
Hexadecanes(16)	2.669	2.283	2.183
Heptadecanes(17)	2.376	2.149	2.074
Octadecanes(18)	2.261	2.153	2.090
Nonadecanes(19)	2.221	2.203	2.152
Eicosanes(20)	1.890	1.949	1.915
Heneicosanes(21)	1.672	1.813	1.792
Docosanes(22)	1.572	1.777	1.767
Tricosanes(23)	1.416	1.659	1.659
Tetracosanes(24)	1.335	1.621	1.628
Pentacosanes(25)	1.166	1.469	1.482
Hexacosanes(26)	1.129	1.474	1.493
Heptacosanes(27)	1.044	1.413	1.438
Octacosanes(28)	0.974	1.364	1.393
Nonacosanes(29)	1.103	1.594	1.634
Triacontanes(30)	0.963	1.435	1.475
Hentriacontanes Plus(31+)	18.465	41.695	45.917
Total	100.000	100.000	100.000

May 2, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 02/01/2011

Date Analyzed: 03/03/2011

Job Number: J11220

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	N/A	0
Temperature, °F	N/A	70
Gas Water Ratio (1)	------	0.39
Gas Specific Gravity (2)	------	1.241
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

March 23, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From N/A psig & N/A °F to 0 psig & 70 °F

Date Sampled: 01/20/2011 Job Number: 11220.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	10.786	
Carbon Dioxide	38.139	
Methane	36.151	
Ethane	3.424	0.911
Propane	2.275	0.623
Isobutane	0.363	0.118
n-Butane	1.382	0.433
2-2 Dimethylpropane	0.233	0.088
Isopentane	0.449	0.163
n-Pentane	0.516	0.186
Hexanes	2.216	0.908
Heptanes Plus	4.066	1.822
Totals	100.000	5.253

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.673	(Air=1)
Molecular Weight	105.68	
Gross Heating Value	5553	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.241	(Air=1)
Compressibility (Z)	0.9933	
Molecular Weight	35.71	
Gross Heating Value		
Dry Basis	923	BTU/CF
Saturated Basis	908	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: 0.189 Gr/100 CF, 3.0 PPMV or 0.0003 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: JF
Processor: TJdjv
Cylinder ID: WF-6s

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	10.786		8.460
Carbon Dioxide	38.139		46.997
Methane	36.151		16.237
Ethane	3.424	0.911	2.883
Propane	2.275	0.623	2.809
Isobutane	0.363	0.118	0.591
n-Butane	1.382	0.433	2.249
2,2 Dimethylpropane	0.233	0.088	0.471
Isopentane	0.449	0.163	0.907
n-Pentane	0.516	0.186	1.042
2,2 Dimethylbutane	0.123	0.051	0.297
Cyclopentane	0.055	0.023	0.108
2,3 Dimethylbutane	0.188	0.077	0.454
2 Methylpentane	0.650	0.268	1.568
3 Methylpentane	0.536	0.218	1.293
n-Hexane	0.664	0.272	1.602
Methylcyclopentane	0.282	0.097	0.665
Benzene	0.024	0.007	0.052
Cyclohexane	0.187	0.063	0.440
2-Methylhexane	0.205	0.095	0.575
3-Methylhexane	0.228	0.103	0.640
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.648	0.280	1.800
n-Heptane	0.394	0.181	1.105
Methylcyclohexane	0.390	0.156	1.072
Toluene	0.038	0.013	0.098
Other C8's	0.760	0.351	2.345
n-Octane	0.159	0.081	0.509
Ethylbenzene	0.017	0.007	0.051
M & P Xylenes	0.034	0.013	0.101
O-Xylene	0.009	0.003	0.027
Other C9's	0.377	0.190	1.333
n-Nonane	0.074	0.041	0.266
Other C10's	0.179	0.104	0.708
n-Decane	0.054	0.033	0.215
Undecanes (11)	0.007	0.004	0.030
Totals	100.000	5.253	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 1.241 (Air=1)

Compressibility (Z) ---------- 0.9933

Molecular Weight ---------- 35.71

Gross Heating Value

Dry Basis ---------- 923 BTU/CF

Saturated Basis ---------- 908 BTU/CF

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
ALICE HYDRAULICS DIVISION: (361) 661-1538 • (361) 664-0736

ALICE.....(361) 664-3479
BEAUMONT.....(409) 842-3000
BRYAN.....(979) 775-1825
CANADIAN.....(806) 323-5050
CORPUS CHRISTI...(361) 882-4124
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EL CAMPO.....(979) 543-9451
HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
LAREDO.....(956) 724-7501
ODESSA.....(432) 332-3211
OZONA.....(325) 392-3773
REFUGIO.....(361) 526-4644
VICTORIA.....(361) 575-7533
LAFAYETTE, LA..(337) 896-3838
LIBERAL, KS.....(580) 778-3384
SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

May 6, 2011

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Attention: Mr. Jeff Kuo

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy –
Extended Liquid Analyses

The invoice was mailed separately.

Thank you,

Yours very truly,

FESCO, Ltd.

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/eam

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 02/01/2011

Date Analyzed: 03/03/2011

Job Number: J11217

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	17	0
Temperature, °F	100	70
Gas Water Ratio (1)	------	0.44
Gas Specific Gravity (2)	------	1.056
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

March 23, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 17 psig & 100 °F to 0 psig & 70 °F

Date Sampled: 02/10/2011 Job Number: 11217.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.180	
Nitrogen	2.536	
Carbon Dioxide	10.356	
Methane	50.810	
Ethane	11.988	3.188
Propane	12.779	3.501
Isobutane	2.270	0.739
n-Butane	4.475	1.403
2-2 Dimethylpropane	0.000	0.000
Isopentane	1.307	0.475
n-Pentane	1.059	0.382
Hexanes	0.791	0.325
Heptanes Plus	1.449	0.551
Totals	100.000	10.563

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.269	(Air=1)
Molecular Weight	94.02	
Gross Heating Value	4796	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.056	(Air=1)
Compressibility (Z)	0.9929	
Molecular Weight	30.37	
Gross Heating Value		
Dry Basis	1476	BTU/CF
Saturated Basis	1451	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: 113.2 Gr/100 CF, 1800 PPMV or 0.180 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: JF
Processor: TJdjv
Cylinder ID: WF-1s

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.180		0.202
Nitrogen	2.536		2.340
Carbon Dioxide	10.356		15.009
Methane	50.810		26.843
Ethane	11.988	3.188	11.871
Propane	12.779	3.501	18.557
Isobutane	2.270	0.739	4.345
n-Butane	4.475	1.403	8.565
2,2 Dimethylpropane	0.000	0.000	0.000
Isopentane	1.307	0.475	3.105
n-Pentane	1.059	0.382	2.516
2,2 Dimethylbutane	0.025	0.010	0.071
Cyclopentane	0.160	0.066	0.370
2,3 Dimethylbutane	0.028	0.011	0.079
2 Methylpentane	0.208	0.086	0.590
3 Methylpentane	0.132	0.054	0.375
n-Hexane	0.238	0.097	0.675
Methylcyclopentane	0.251	0.086	0.696
Benzene	0.207	0.058	0.532
Cyclohexane	0.172	0.058	0.476
2-Methylhexane	0.036	0.017	0.119
3-Methylhexane	0.039	0.018	0.129
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.156	0.067	0.510
n-Heptane	0.069	0.032	0.228
Methylcyclohexane	0.136	0.054	0.440
Toluene	0.140	0.047	0.425
Other C8's	0.125	0.058	0.454
n-Octane	0.016	0.008	0.060
Ethylbenzene	0.008	0.003	0.028
M & P Xylenes	0.025	0.010	0.087
O-Xylene	0.007	0.003	0.024
Other C9's	0.032	0.016	0.133
n-Nonane	0.004	0.002	0.017
Other C10's	0.012	0.007	0.056
n-Decane	0.002	0.001	0.009
Undecanes (11)	0.012	0.007	0.064
Totals	100.000	10.563	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 1.056 (Air=1)
Compressibility (Z) ---------- 0.9929
Molecular Weight ---------- 30.37

Gross Heating Value
Dry Basis ---------- 1476 BTU/CF
Saturated Basis ---------- 1451 BTU/CF

May 2, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 02/10/2011

Date Analyzed: 03/07/2011

Job Number: J11218

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	100	0
Temperature, °F	102	70
Gas Water Ratio (1)	------	1.18
Gas Specific Gravity (2)	------	0.841
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

March 23, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 100 psig & 102 °F to 0 psig & 70 °F

Date Sampled: 02/10/2011 Job Number: 11218.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.060	
Nitrogen	0.233	
Carbon Dioxide	13.571	
Methane	68.622	
Ethane	8.901	2.367
Propane	5.740	1.572
Isobutane	0.395	0.129
n-Butane	1.232	0.386
2-2 Dimethylpropane	0.033	0.013
Isopentane	0.163	0.059
n-Pentane	0.145	0.052
Hexanes	0.261	0.108
Heptanes Plus	0.644	0.229
Totals	100.000	4.915

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.154	(Air=1)
Molecular Weight	90.97	
Gross Heating Value	4575	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.841	(Air=1)
Compressibility (Z)	0.9960	
Molecular Weight	24.26	
Gross Heating Value		
Dry Basis	1105	BTU/CF
Saturated Basis	1087	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: 37.74 Gr/100 CF, 600.0 PPMV or 0.060 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: JF
Processor: TJdjv
Cylinder ID: WF-5s

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.060		0.084
Nitrogen	0.233		0.269
Carbon Dioxide	13.571		24.621
Methane	68.622		45.384
Ethane	8.901	2.367	11.033
Propane	5.740	1.572	10.434
Isobutane	0.395	0.129	0.946
n-Butane	1.232	0.386	2.952
2,2 Dimethylpropane	0.033	0.013	0.098
Isopentane	0.163	0.059	0.485
n-Pentane	0.145	0.052	0.431
2,2 Dimethylbutane	0.002	0.001	0.007
Cyclopentane	0.119	0.049	0.344
2,3 Dimethylbutane	0.004	0.002	0.014
2 Methylpentane	0.037	0.015	0.131
3 Methylpentane	0.035	0.014	0.124
n-Hexane	0.064	0.026	0.227
Methylcyclopentane	0.126	0.043	0.437
Benzene	0.166	0.046	0.535
Cyclohexane	0.060	0.020	0.208
2-Methylhexane	0.006	0.003	0.025
3-Methylhexane	0.007	0.003	0.029
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.048	0.021	0.196
n-Heptane	0.010	0.005	0.041
Methylcyclohexane	0.033	0.013	0.134
Toluene	0.097	0.032	0.368
Other C8's	0.027	0.012	0.123
n-Octane	0.003	0.002	0.014
Ethylbenzene	0.007	0.003	0.031
M & P Xylenes	0.019	0.007	0.083
O-Xylene	0.007	0.003	0.031
Other C9's	0.008	0.004	0.042
n-Nonane	0.002	0.001	0.011
Other C10's	0.010	0.006	0.058
n-Decane	0.002	0.001	0.012
Undecanes (11)	0.006	0.004	0.038
Totals	100.000	4.915	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.841 (Air=1)
Compressibility (Z) ---------- 0.9960
Molecular Weight ---------- 24.26

Gross Heating Value
Dry Basis ---------- 1105 BTU/CF
Saturated Basis ---------- 1087 BTU/CF

May 2, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 02/01/2011

Date Analyzed: 03/03/2011

Job Number: J11221

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	142	0
Temperature, °F	137	70
Gas Water Ratio (1)	------	1.32
Gas Specific Gravity (2)	------	0.894
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

March 23, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:
Gas Evolved from Water Flashed
From 142 psig & 137 °F to 0 psig & 70 °F

Date Sampled: 02/11/2011 Job Number: 11221.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.000	
Carbon Dioxide	27.765	
Methane	66.668	
Ethane	1.927	0.512
Propane	1.002	0.274
Isobutane	0.428	0.139
n-Butane	0.747	0.234
2-2 Dimethylpropane	0.045	0.017
Isopentane	0.398	0.145
n-Pentane	0.321	0.116
Hexanes	0.337	0.138
Heptanes Plus	0.362	0.141
Totals	100.000	1.717

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.280	(Air=1)
Molecular Weight	94.66	
Gross Heating Value	4840	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.894	(Air=1)
Compressibility (Z)	0.9964	
Molecular Weight	25.80	
Gross Heating Value		
Dry Basis	835	BTU/CF
Saturated Basis	822	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. Alice, Texas

Analyst: JF
Processor: TJdjv
Cylinder ID: WF-3s

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.000		0.000
Carbon Dioxide	27.765		47.363
Methane	66.668		41.456
Ethane	1.927	0.512	2.246
Propane	1.002	0.274	1.713
Isobutane	0.428	0.139	0.964
n-Butane	0.747	0.234	1.683
2,2 Dimethylpropane	0.045	0.017	0.126
Isopentane	0.398	0.145	1.113
n-Pentane	0.321	0.116	0.898
2,2 Dimethylbutane	0.018	0.007	0.060
Cyclopentane	0.022	0.009	0.060
2,3 Dimethylbutane	0.019	0.008	0.063
2 Methylpentane	0.099	0.041	0.331
3 Methylpentane	0.061	0.025	0.204
n-Hexane	0.118	0.048	0.394
Methylcyclopentane	0.054	0.019	0.176
Benzene	0.017	0.005	0.051
Cyclohexane	0.074	0.025	0.241
2-Methylhexane	0.017	0.008	0.066
3-Methylhexane	0.015	0.007	0.058
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.041	0.018	0.158
n-Heptane	0.022	0.010	0.085
Methylcyclohexane	0.051	0.020	0.194
Toluene	0.023	0.008	0.082
Other C8's	0.021	0.010	0.090
n-Octane	0.003	0.002	0.013
Ethylbenzene	0.004	0.002	0.016
M & P Xylenes	0.008	0.003	0.033
O-Xylene	0.002	0.001	0.008
Other C9's	0.003	0.002	0.015
n-Nonane	0.001	0.001	0.005
Other C10's	0.002	0.001	0.011
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.004	0.002	0.024
Totals	100.000	1.717	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.894 (Air=1)
Compressibility (Z) ---------- 0.9964
Molecular Weight ---------- 25.80

Gross Heating Value

Dry Basis ---------- 835 BTU/CF
Saturated Basis ---------- 822 BTU/CF

May 2, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 02/01/2011

Date Analyzed: 03/03/2011

Job Number: J11219

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	140	0
Temperature, °F	131	70
Gas Water Ratio (1)	------	1.20
Gas Specific Gravity (2)	------	0.814
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.65 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

March 23, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 140 psig & 131 °F to 0 psig & 70 °F

Date Sampled: 02/11/2011

Job Number: 11219.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.167	
Carbon Dioxide	22.867	
Methane	73.318	
Ethane	2.190	0.582
Propane	0.531	0.145
Isobutane	0.160	0.052
n-Butane	0.221	0.069
2-2 Dimethylpropane	0.022	0.008
Isopentane	0.066	0.024
n-Pentane	0.044	0.016
Hexanes	0.079	0.032
Heptanes Plus	0.335	0.143
Totals	100.000	1.072

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.564	(Air=1)
Molecular Weight	102.90	
Gross Heating Value	5368	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.814	(Air=1)
Compressibility (Z)	0.9970	
Molecular Weight	23.49	
Gross Heating Value		
Dry Basis	832	BTU/CF
Saturated Basis	818	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: 0.031 Gr/100 CF, 0.5 PPMV or 0.0001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Analyst: JF
Processor: TJdjv
Cylinder ID: WF-7s

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.167		0.199
Carbon Dioxide	22.867		42.839
Methane	73.318		50.069
Ethane	2.190	0.582	2.803
Propane	0.531	0.145	0.997
Isobutane	0.160	0.052	0.396
n-Butane	0.221	0.069	0.547
2,2 Dimethylpropane	0.022	0.008	0.068
Isopentane	0.066	0.024	0.203
n-Pentane	0.044	0.016	0.135
2,2 Dimethylbutane	0.003	0.001	0.011
Cyclopentane	0.019	0.008	0.057
2,3 Dimethylbutane	0.007	0.003	0.026
2 Methylpentane	0.016	0.007	0.059
3 Methylpentane	0.016	0.006	0.059
n-Hexane	0.018	0.007	0.066
Methylcyclopentane	0.038	0.013	0.136
Benzene	0.015	0.004	0.050
Cyclohexane	0.026	0.009	0.093
2-Methylhexane	0.005	0.002	0.021
3-Methylhexane	0.005	0.002	0.021
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.090	0.039	0.380
n-Heptane	0.007	0.003	0.030
Methylcyclohexane	0.018	0.007	0.075
Toluene	0.015	0.005	0.059
Other C8's	0.047	0.022	0.221
n-Octane	0.004	0.002	0.019
Ethylbenzene	0.006	0.002	0.027
M & P Xylenes	0.008	0.003	0.036
O-Xylene	0.002	0.001	0.009
Other C9's	0.017	0.009	0.091
n-Nonane	0.002	0.001	0.011
Other C10's	0.008	0.005	0.048
n-Decane	0.008	0.005	0.048
Undecanes (11)	0.014	0.009	0.091
Totals	100.000	1.072	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.814 (Air=1)
Compressibility (Z) ---------- 0.9970
Molecular Weight ---------- 23.49

Gross Heating Value
Dry Basis ---------- 832 BTU/CF
Saturated Basis ---------- 818 BTU/CF

April 5, 2011

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Hydrocarbon Liquid Sample
Sample @ 132 psig & 131 °F

Date Sampled: 02/11/2011

Job Number: 11221.002

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.023	0.002	0.002
Carbon Dioxide	0.346	0.047	0.041
Methane	3.615	0.488	0.156
Ethane	0.559	0.119	0.045
Propane	0.629	0.138	0.074
Isobutane	0.491	0.128	0.077
n-Butane	0.872	0.219	0.136
2,2 Dimethylpropane	0.075	0.023	0.015
Isopentane	0.765	0.223	0.148
n-Pentane	0.558	0.161	0.108
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.056	0.018	0.013
2 Methylpentane	0.078	0.026	0.018
3 Methylpentane	0.083	0.027	0.019
n-Hexane	0.059	0.019	0.014
Heptanes Plus	91.792	98.362	99.134
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.9469	(Water=1)
°API Gravity	17.93	@ 60°F
Molecular Weight	402.0	
Vapor Volume	7.48	CF/Gal
Weight	7.89	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.9395	(Water=1)
°API Gravity	19.11	@ 60°F
Molecular Weight	372.2	
Vapor Volume	8.01	CF/Gal
Weight	7.83	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

Analyst: LAW
Processor: TJdjv
Cylinder ID: W-953

FESCO, Ltd.

Job Number: 11221.002

TOTAL EXTENDED REPORT

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.023	0.002	0.002
Carbon Dioxide	0.346	0.047	0.041
Methane	3.615	0.488	0.156
Ethane	0.559	0.119	0.045
Propane	0.629	0.138	0.074
Isobutane	0.491	0.128	0.077
n-Butane	0.872	0.219	0.136
2,2 Dimethylpropane	0.075	0.023	0.015
Isopentane	0.765	0.223	0.148
n-Pentane	0.558	0.161	0.108
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.056	0.018	0.013
2 Methylpentane	0.078	0.026	0.018
3 Methylpentane	0.083	0.027	0.019
n-Hexane	0.059	0.019	0.014
Methylcyclopentane	0.140	0.040	0.032
Benzene	0.003	0.001	0.001
Cyclohexane	0.089	0.024	0.020
2-Methylhexane	0.023	0.009	0.006
3-Methylhexane	0.053	0.019	0.014
2,2,4 Trimethylpentane	0.005	0.002	0.002
Other C-7's	0.609	0.206	0.162
n-Heptane	1.780	0.654	0.479
Methylcyclohexane	0.239	0.077	0.063
Toluene	2.424	0.647	0.600
Other C-8's	1.850	0.673	0.548
n-Octane	0.215	0.088	0.066
E-Benzene	0.329	0.101	0.094
M & P Xylenes	0.125	0.038	0.036
O-Xylene	0.083	0.025	0.024
Other C-9's	1.621	0.659	0.550
n-Nonane	0.124	0.056	0.043
Other C-10's	2.331	1.041	0.885
n-decane	0.634	0.310	0.242
Undecanes(11)	2.992	1.371	1.182
Dodecanes(12)	3.238	1.603	1.401
Tridecanes(13)	4.085	2.169	1.921
Tetradecanes(14)	3.889	2.212	1.985
Pentadecanes(15)	3.625	2.208	2.006
Hexadecanes(16)	3.403	2.215	2.030
Heptadecanes(17)	3.104	2.137	1.976
Octadecanes(18)	3.119	2.261	2.104
Nonadecanes(19)	2.912	2.199	2.058
Eicosanes(20)	2.705	2.123	1.998
Heneicosanes(21)	2.512	2.074	1.964
Docosanes(22)	2.085	1.794	1.708
Tricosanes(23)	2.084	1.859	1.780
Tetracosanes(24)	1.904	1.760	1.693
Pentacosanes(25)	1.786	1.713	1.655
Hexacosanes(26)	1.782	1.771	1.719
Heptacosanes(27)	1.836	1.892	1.845
Octacosanes(28)	1.891	2.015	1.971
Nonacosanes(29)	2.076	2.284	2.243
Triacontanes(30)	2.023	2.296	2.262
Hentriacontanes Plus(31+)	26.062	53.737	57.768
Total	100.000	100.000	100.000

FESCO, Ltd.
Petroleum Engineers
CORPORATE HEADQUARTERS: 1000 FESCO AVE. • ALICE, TEXAS 78332-7318 • (361) 661-7000
ALICE LABORATORY: (361) 661-7015 • FAX (361) 661-7019
ALICE HYDRAULICS DIVISION: (361) 661-1538 • (361) 664-0736

ALICE.....(361) 664-3479
BEAUMONT.....(409) 842-3000
BRYAN.....(979) 775-1825
CANADIAN.....(806) 323-5050
CORPUS CHRISTI...(361) 882-4124
EDINBURG.....(956) 383-8378
EL CAMPO.....(979) 543-9451
HOUSTON SALES (281) 565-1115
KILGORE.....(903) 984-4814
LAREDO.....(956) 724-7501
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OZONA.....(325) 392-3773
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LIBERAL, KS.....(580) 778-3384
SHINNSTON, WV...(304) 592-3366
WOODWARD, OK..(580) 256-0848

May 6, 2011

CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Attention: Mr. Jeff Kuo

Re:

Gentlemen:

Enclosed are the following covering our tests on the subject samples:

1 Copy –
Extended Liquid Analyses

The invoice was mailed separately.

Thank you,

Yours very truly,

FESCO, Ltd.

David Dannhaus
Corporate Laboratories Manager
(361) 661-7015 / (877) 593-7015
Visit FESCO @ www.fescoinc.com

DD/eam

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 03/30/2011

Date Analyzed: 04/06/2011

Job Number: J11869

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	34	0
Temperature, °F	180	70
Gas Water Ratio (1)	------	0.49
Gas Specific Gravity (2)	------	1.422
Separator Volume Factor (3)	1.000	1.000

*** Water Cut-0%**

*** Throughput - 1000 Bbl/day**

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample

Gas Evolved from Water Flashed
From 34 psig & 180 °F to 0 psig & 70 °F

Date Sampled: 03/30/2011

Job Number: 11869.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.020	
Nitrogen	0.000	
Carbon Dioxide	78.206	
Methane	17.150	
Ethane	0.480	0.128
Propane	0.132	0.036
Isobutane	0.039	0.013
n-Butane	0.134	0.042
2-2 Dimethylpropane	0.027	0.010
Isopentane	0.080	0.029
n-Pentane	0.130	0.047
Hexanes	2.048	0.842
Heptanes Plus	1.554	0.617
Totals	100.000	1.765

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.326	(Air=1)
Molecular Weight	95.72	
Gross Heating Value	4890	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.421	(Air=1)
Compressibility (Z)	0.9936	
Molecular Weight	40.90	
Gross Heating Value		
Dry Basis	377	BTU/CF
Saturated Basis	371	BTU/CF

*Hydrogen Sulfide tested in laboratory t Stained Tube Method (GPA 2377)
Results: 12.58 Gr/100 CF, 200.0 PPMV or 0.020 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. Alice, Texas

Analyst: TJ
Processor: MRF
Cylinder ID: WF-2

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.020		0.017
Nitrogen	0.000		0.000
Carbon Dioxide	78.206		84.152
Methane	17.150		6.725
Ethane	0.480	0.128	0.353
Propane	0.132	0.036	0.142
Isobutane	0.039	0.013	0.055
n-Butane	0.134	0.042	0.190
2,2 Dimethylpropane	0.027	0.010	0.048
Isopentane	0.080	0.029	0.141
n-Pentane	0.130	0.047	0.229
2,2 Dimethylbutane	0.004	0.002	0.008
Cyclopentane	0.015	0.006	0.026
2,3 Dimethylbutane	0.035	0.014	0.074
2 Methylpentane	0.282	0.117	0.594
3 Methylpentane	0.395	0.161	0.832
n-Hexane	1.317	0.541	2.775
Methylcyclopentane	0.321	0.111	0.661
Benzene	0.022	0.006	0.042
Cyclohexane	0.399	0.136	0.821
2-Methylhexane	0.027	0.013	0.066
3-Methylhexane	0.026	0.012	0.064
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.180	0.078	0.437
n-Heptane	0.057	0.026	0.140
Methylcyclohexane	0.136	0.055	0.326
Toluene	0.043	0.014	0.097
Other C8's	0.161	0.075	0.434
n-Octane	0.030	0.015	0.084
Ethylbenzene	0.010	0.004	0.026
M & P Xylenes	0.017	0.007	0.044
O-Xylene	0.006	0.002	0.016
Other C9's	0.081	0.041	0.250
n-Nonane	0.011	0.006	0.034
Other C10's	0.019	0.011	0.066
n-Decane	0.002	0.001	0.007
Undecanes (11)	0.006	0.004	0.024
Totals	100.000	1.765	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 1.421 (Air=1)
Compressibility (Z) ---------- 0.9936
Molecular Weight ---------- 40.90

Gross Heating Value

Dry Basis ---------- 377 BTU/CF
Saturated Basis ---------- 371 BTU/CF

April 12, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 03/30/2011

Date Analyzed: 04/08/2011

Job Number: J11871

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	1450	0
Temperature, °F	93	70
Gas Water Ratio (1)	------	5.93
Gas Specific Gravity (2)	------	0.703
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. Alice, Texas

David Dannhaus 361-661-7015

April 12, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 1450 psig & 93 °F to 0 psig & 70 °F

Date Sampled: 03/30/2011 Job Number: 11871.001

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.002	
Nitrogen	0.288	
Carbon Dioxide	12.185	
Methane	83.037	
Ethane	3.778	1.010
Propane	0.485	0.134
Isobutane	0.025	0.008
n-Butane	0.016	0.005
2-2 Dimethylpropane	0.002	0.001
Isopentane	0.004	0.001
n-Pentane	0.004	0.001
Hexanes	0.106	0.044
Heptanes Plus	0.068	0.025
Totals	100.000	1.229

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.113	(Air=1)
Molecular Weight	89.92	
Gross Heating Value	4559	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.703	(Air=1)
Compressibility (Z)	0.9974	
Molecular Weight	20.30	
Gross Heating Value		
Dry Basis	932	BTU/CF
Saturated Basis	917	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: 1.258 Gr/100 CF, 20.0 PPMV or 0.002 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. Alice, Texas

Analyst: TJ
Processor: MRF
Cylinder ID: WF-6

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.002		0.003
Nitrogen	0.288		0.397
Carbon Dioxide	12.185		26.420
Methane	83.037		65.628
Ethane	3.778	1.010	5.597
Propane	0.485	0.134	1.054
Isobutane	0.025	0.008	0.072
n-Butane	0.016	0.005	0.046
2,2 Dimethylpropane	0.002	0.001	0.007
Isopentane	0.004	0.001	0.014
n-Pentane	0.004	0.001	0.014
2,2 Dimethylbutane	0.000	0.000	0.000
Cyclopentane	0.004	0.002	0.014
2,3 Dimethylbutane	0.001	0.000	0.004
2 Methylpentane	0.012	0.005	0.051
3 Methylpentane	0.020	0.008	0.085
n-Hexane	0.069	0.028	0.293
Methylcyclopentane	0.017	0.006	0.070
Benzene	0.003	0.001	0.012
Cyclohexane	0.022	0.007	0.091
2-Methylhexane	0.001	0.000	0.005
3-Methylhexane	0.001	0.000	0.005
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.014	0.006	0.068
n-Heptane	0.001	0.000	0.005
Methylcyclohexane	0.002	0.001	0.010
Toluene	0.003	0.001	0.014
Other C8's	0.003	0.001	0.016
n-Octane	0.000	0.000	0.000
Ethylbenzene	0.000	0.000	0.000
M & P Xylenes	0.001	0.000	0.005
O-Xylene	0.000	0.000	0.000
Other C9's	0.000	0.000	0.000
n-Nonane	0.000	0.000	0.000
Other C10's	0.000	0.000	0.000
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	1.229	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.703 (Air=1)
Compressibility (Z) ---------- 0.9974
Molecular Weight ---------- 20.30

Gross Heating Value
Dry Basis ---------- 932 BTU/CF
Saturated Basis ---------- 917 BTU/CF

April 12, 2011

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Date Sampled: 03/30/2011

Date Analyzed: 04/08/2011

Job Number: J11871

Sample:

FLASH LIBERATION OF SEPARATOR WATER		
	Separator Water	**Stock Tank**
Pressure, psig	1450	0
Temperature, °F	93	70
Gas Water Ratio (1)	------	8.68
Gas Specific Gravity (2)	------	0.714
Separator Volume Factor (3)	1.000	1.000

(1) - Scf of water saturated vapor per barrel of stock tank water
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
Analyst: J. G.

Base Conditions: 14.73 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

April 12, 2011

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: CSU Fullerton Auxiliary Service Corporation
2600 Nutwood Avenue, Suite 275
Fullerton, California 92831-3137

Sample:

Gas Evolved from Water Flashed
From 1450 psig & 93 °F to 0 psig & 70 °F

Date Sampled: 03/30/2011 Job Number: 11871.011

CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	0.012	
Nitrogen	0.579	
Carbon Dioxide	14.147	
Methane	82.910	
Ethane	1.850	0.495
Propane	0.123	0.034
Isobutane	0.011	0.004
n-Butane	0.021	0.007
2-2 Dimethylpropane	0.007	0.003
Isopentane	0.010	0.004
n-Pentane	0.013	0.005
Hexanes	0.167	0.069
Heptanes Plus	0.150	0.060
Totals	100.000	0.678

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.247	(Air=1)
Molecular Weight	93.80	
Gross Heating Value	4932	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.714	(Air=1)
Compressibility (Z)	0.9974	
Molecular Weight	20.63	
Gross Heating Value		
Dry Basis	895	BTU/CF
Saturated Basis	880	BTU/CF

*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)
Results: 7.547 Gr/100 CF, 120.0 PPMV or 0.012 Mol %

Base Conditions: 14.730 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: TJ
Processor: MRF
Cylinder ID: WF-2

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.012		0.020
Nitrogen	0.579		0.786
Carbon Dioxide	14.147		30.182
Methane	82.910		64.480
Ethane	1.850	0.495	2.697
Propane	0.123	0.034	0.263
Isobutane	0.011	0.004	0.031
n-Butane	0.021	0.007	0.059
2,2 Dimethylpropane	0.007	0.003	0.024
Isopentane	0.010	0.004	0.035
n-Pentane	0.013	0.005	0.045
2,2 Dimethylbutane	0.001	0.000	0.004
Cyclopentane	0.001	0.000	0.003
2,3 Dimethylbutane	0.002	0.001	0.008
2 Methylpentane	0.022	0.009	0.092
3 Methylpentane	0.033	0.013	0.138
n-Hexane	0.108	0.044	0.451
Methylcyclopentane	0.026	0.009	0.106
Benzene	0.003	0.001	0.011
Cyclohexane	0.030	0.010	0.122
2-Methylhexane	0.002	0.001	0.010
3-Methylhexane	0.002	0.001	0.010
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.070	0.030	0.337
n-Heptane	0.002	0.001	0.010
Methylcyclohexane	0.003	0.001	0.014
Toluene	0.003	0.001	0.013
Other C8's	0.006	0.003	0.032
n-Octane	0.001	0.001	0.006
Ethylbenzene	0.000	0.000	0.000
M & P Xylenes	0.001	0.000	0.005
O-Xylene	0.000	0.000	0.000
Other C9's	0.001	0.001	0.006
n-Nonane	0.000	0.000	0.000
Other C10's	0.000	0.000	0.000
n-Decane	0.000	0.000	0.000
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	0.678	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity ---------- 0.714 (Air=1)

Compressibility (Z) ---------- 0.9974

Molecular Weight ---------- 20.63

Gross Heating Value

Dry Basis ---------- 895 BTU/CF

Saturated Basis ---------- 880 BTU/CF