

Lodi Gas Storage, LLC
a Rockpoint Gas Storage Company

May 15, 2017

California Public Utilities Commission
Energy Division

Attention:

Dear Sir:

Re: Composition of gas after withdrawal from natural gas storage facility

In response to the data request in the subject line dated May 1, 2017, Lodi Gas Storage, LLC (Lodi) provides the attached gas composition analyses performed on samples taken downstream from the wellhead of its storage wells during withdrawal operations.

Should you have any questions about the attached, do not hesitate to contact the undersigned.

Sincerely,

LODI GAS STORAGE, LLC

Lodi Gas Storage, LLC

Lodi Domengine gas storage reservoir

**Compositional analysis on gas sampled from storage wells gathering system
during withdrawal operations**

Gas & Oilfield Measurement and Control Specialist

Design - Installation - Service

Company: LODI GAS
Location: Domengine
Meter ID:
 Analysis Time: 05/04/2017 15:11 Sample Type: Spot
 Flowing Temp.: 80 Deg. F Flowing Pressure: 15 psig

Comp	UnNorm %	Normal %	Liquids (USgal/MCF)	Ideal (Btu/SCF)	Rel. Density
Propane	0.14245	0.14253	0.03933	3.58633	0.00217
Hydrogen Sulfide	0.00000	0.00000	0.00000	0.00000	0.00000
IsoButane	0.01812	0.01813	0.00594	0.58956	0.00036
Butane	0.01766	0.01767	0.00558	0.57654	0.00035
NeoPentane	0.00000	0.00000	0.00000	0.00000	0.00000
IsoPentane	0.00488	0.00488	0.00179	0.19531	0.00012
Pentane	0.00346	0.00347	0.00126	0.13895	0.00009
Hexane+	0.02577	0.02580	0.00000	0.00000	0.00000
Nitrogen	1.81463	1.81566	0.00000	0.00000	0.01756
Methane	92.17240	92.21834	0.00000	931.40521	0.51086
CarbonDioxide	0.94907	0.94958	0.00000	0.00000	0.01443
Ethane	4.80145	4.80395	1.28774	85.01547	0.04988
Hexane	0.00000	0.02580	0.01063	1.22686	0.00077
Heptane+	0.00000	0.00000	0.00000	0.00000	0.00000
Heptane	0.00000	0.00000	0.00000	0.00000	0.00000
Octane	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane+	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane	0.00000	0.00000	0.00000	0.00000	0.00000
Decane	0.00000	0.00000	0.00000	0.00000	0.00000
Undecane	0.00000	0.00000	0.00000	0.00000	0.00000
Dodecane	0.00000	0.00000	0.00000	0.00000	0.00000
Ethane-	0.00000	0.00000	0.00000	0.00000	0.00000
Propane +	0.00000	0.00000	0.00000	0.00000	0.00000
Total	99.94988	100.00000	1.35227	1022.73425	0.59767

Inferior Wobbe	1305.4867 (Btu/SCF)	Superior Wobbe	1328.8900 (Btu/SCF)
Compressibility	0.9978	Density	0.0457 (lbm/ft3)
Real Rel. Density	0.5977	Ideal CV	1022.7343 (Btu/SCF)
Wet CV	1009.7975 (Btu/SCF)	Dry CV	1027.3518 (Btu/SCF)
Contract Temp.	60.0000 (deg F)	Contract Press.	14.7300 (psia)
Number of Cycles	3	Connected Stream	1
Atmospheric Pressure	14.73		

Lodi Gas Storage, LLC

Lodi Midland gas storage reservoir

**Compositional analysis on gas sampled from storage wells gathering system
during withdrawal operations**

Gas & Oilfield Measurement and Control Specialist

Design - Installation - Service

Company: Lodi Gas
Location: Midland
Meter ID:
 Analysis Time: 05/04/2017 15:34
 Flowing Temp.: 80 Deg. F

Sample Type: Spot
 Flowing Pressure: 15 psig

Comp	UnNorm %	Normal %	Liquids (USgal/MCF)	Ideal (Btu/SCF)	Rel. Density
Propane	0.12783	0.12824	0.03538	3.22665	0.00195
Hydrogen Sulfide	0.00000	0.00000	0.00000	0.00000	0.00000
IsoButane	0.01483	0.01488	0.00488	0.48374	0.00030
Butane	0.01377	0.01381	0.00436	0.45064	0.00028
NeoPentane	0.00000	0.00000	0.00000	0.00000	0.00000
IsoPentane	0.00392	0.00394	0.00144	0.15753	0.00010
Pentane	0.00284	0.00285	0.00103	0.11414	0.00007
Hexane+	0.02762	0.02772	0.00000	0.00000	0.00000
Nitrogen	2.87998	2.88883	0.00000	0.00000	0.02794
Methane	91.63431	91.91626	0.00000	928.35425	0.50919
CarbonDioxide	0.89087	0.89367	0.00000	0.00000	0.01358
Ethane	4.09711	4.10981	1.10160	72.73129	0.04267
Hexane	0.00000	0.02772	0.01142	1.31835	0.00082
Heptane+	0.00000	0.00000	0.00000	0.00000	0.00000
Heptane	0.00000	0.00000	0.00000	0.00000	0.00000
Octane	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane+	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane	0.00000	0.00000	0.00000	0.00000	0.00000
Decane	0.00000	0.00000	0.00000	0.00000	0.00000
Undecane	0.00000	0.00000	0.00000	0.00000	0.00000
Dodecane	0.00000	0.00000	0.00000	0.00000	0.00000
Ethane-	0.00000	0.00000	0.00000	0.00000	0.00000
Propane +	0.00000	0.00000	0.00000	0.00000	0.00000
Total	99.69307	100.00000	1.16012	1006.83661	0.59794

Inferior Wobbe	1284.8245 (Btu/SCF)	Superior Wobbe	1307.8533 (Btu/SCF)
Compressibility	0.9979	Density	0.0458 (lbm/ft3)
Real Rel. Density	0.5979	Ideal CV	1006.8366 (Btu/SCF)
Wet CV	994.0368 (Btu/SCF)	Dry CV	1011.3204 (Btu/SCF)
Contract Temp.	60.0000 (deg F)	Contract Press.	14.7300 (psia)
Number of Cycles	3	Connected Stream	1
Atmospheric Pressure	14.73		

Lodi Gas Storage, LLC

Kirby Hill Domengine gas storage reservoir

**Compositional analysis on gas sampled from storage wells gathering system
during withdrawal operations**

Gas & Oilfield Measurement and Control Specialist

Design - Installation - Service

Company: Kirby Hills
Location: DOMEGINE
Meter ID:
Analysis Time: 05/08/2017 14:23
Flowing Temp.: 80 Deg. F

Sample Type: Spot
Flowing Pressure: 15 psig

Comp	UnNorm %	Normal %	Liquids (USgal/MCF)	Ideal (Btu/SCF)	Rel. Density
Propane	0.10423	0.10513	0.02901	2.64540	0.00160
Hydrogen Sulfide	0.00000	0.00000	0.00000	0.00000	0.00000
IsoButane	0.01397	0.01410	0.00462	0.45848	0.00028
Butane	0.01395	0.01408	0.00445	0.45947	0.00028
NeoPentane	0.00000	0.00000	0.00000	0.00000	0.00000
IsoPentane	0.00406	0.00409	0.00150	0.16380	0.00010
Pentane	0.00290	0.00293	0.00106	0.11740	0.00007
Hexane+	0.03628	0.03662	0.00000	0.00000	0.00000
Nitrogen	4.09357	4.13914	0.00000	0.00000	0.04004
Methane	89.67371	90.39032	0.00000	912.94226	0.50074
CarbonDioxide	0.88375	0.89110	0.00000	0.00000	0.01354
Ethane	4.36678	4.40248	1.18003	77.91069	0.04571
Hexane	0.00000	0.03662	0.01509	1.74176	0.00109
Heptane+	0.00000	0.00000	0.00000	0.00000	0.00000
Heptane	0.00000	0.00000	0.00000	0.00000	0.00000
Octane	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane+	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane	0.00000	0.00000	0.00000	0.00000	0.00000
Decane	0.00000	0.00000	0.00000	0.00000	0.00000
Undecane	0.00000	0.00000	0.00000	0.00000	0.00000
Dodecane	0.00000	0.00000	0.00000	0.00000	0.00000
Ethane-	0.00000	0.00000	0.00000	0.00000	0.00000
Propane +	0.00000	0.00000	0.00000	0.00000	0.00000
Total	99.19323	100.00000	1.23576	996.43933	0.60449

Inferior Wobbe	1265.2274 (Btu/SCF)	Superior Wobbe	1287.7909 (Btu/SCF)
Compressibility	0.9979	Density	0.0463 (lbm/ft3)
Real Rel. Density	0.6045	Ideal CV	996.4393 (Btu/SCF)
Wet CV	983.7539 (Btu/SCF)	Dry CV	1000.8596 (Btu/SCF)
Contract Temp.	60.0000 (deg F)	Contract Press.	14.7300 (psia)
Number of Cycles	3	Connected Stream	1
Atmospheric Pressure	14.73		

Lodi Gas Storage, LLC

Kirby Hill Wagenet gas storage reservoir

**Compositional analysis on gas sampled from storage wells gathering system
during withdrawal operations**

Gas & Oilfield Measurement and Control Specialist Design - Installation - Service

Company: Kirby Hills
Location: Wagenet
Meter ID:

Analysis Time: 05/08/2017 14:46
Flowing Temp.: 80 Deg. F

Sample Type: Spot
Flowing Pressure: 15 psig

Comp	UnNorm %	Normal %	Liquids (USgal/MCF)	Ideal (Btu/SCF)	Rel. Density
Propane	0.11440	0.11445	0.03158	2.87989	0.00174
Hydrogen Sulfide	0.00000	0.00000	0.00000	0.00000	0.00000
IsoButane	0.01398	0.01399	0.00458	0.45481	0.00028
Butane	0.01421	0.01422	0.00449	0.46398	0.00029
NeoPentane	0.00000	0.00000	0.00000	0.00000	0.00000
IsoPentane	0.00388	0.00388	0.00142	0.15522	0.00010
Pentane	0.00274	0.00275	0.00100	0.11008	0.00007
Hexane+	0.02194	0.02196	0.00000	0.00000	0.00000
Nitrogen	0.58508	0.58534	0.00000	0.00000	0.00566
Methane	93.81432	93.85168	0.00000	947.90198	0.51991
CarbonDioxide	0.89193	0.89230	0.00000	0.00000	0.01356
Ethane	4.49754	4.49944	1.20613	79.62654	0.04672
Hexane	0.00000	0.02196	0.00905	1.04419	0.00065
Heptane+	0.00000	0.00000	0.00000	0.00000	0.00000
Heptane	0.00000	0.00000	0.00000	0.00000	0.00000
Octane	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane+	0.00000	0.00000	0.00000	0.00000	0.00000
Nonane	0.00000	0.00000	0.00000	0.00000	0.00000
Decane	0.00000	0.00000	0.00000	0.00000	0.00000
Undecane	0.00000	0.00000	0.00000	0.00000	0.00000
Dodecane	0.00000	0.00000	0.00000	0.00000	0.00000
Ethane-	0.00000	0.00000	0.00000	0.00000	0.00000
Propane +	0.00000	0.00000	0.00000	0.00000	0.00000
Total	99.96003	100.00000	1.25826	1032.63672	0.59004

Inferior Wobbe 1326.4805 (Btu/SCF)
Compressibility 0.9978
Real Rel. Density 0.5900
Wet CV 1019.5880 (Btu/SCF)
Contract Temp. 60.0000 (deg F)
Number of Cycles 3
Atmospheric Pressure 14.73

Superior Wobbe 1350.4180 (Btu/SCF)
Density 0.0452 (lbm/ft3)
Ideal CV 1032.6367 (Btu/SCF)
Dry CV 1037.3119 (Btu/SCF)
Contract Press. 14.7300 (psia)
Connected Stream 1