

Hydraulic Fracturing Fluid Product Component Information Disclosure

Last Fracture Date	05/29/2012
State:	California
County:	Ventura
API Number:	04-111-22026
Operator Name:	Aera Energy Llc
Well Name and Number:	Mcgonigle 55
Longitude:	-119.2630969
Latitude:	34.3211253
Long/Lat Projection:	NAD83
Production Type:	Oil
True Vertical Depth (TVD):	4,960
Total Water Volume (gal)*:	32,004

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00%	68.41760%	
Superset-W, 55 gal drum	Baker Hughes	Activator	Methanol	67-56-1	50.00%	0.18969%	
			Poly (Oxyethylene) Nonylphenol Ether	9016-45-9	50.00%	0.18969%	
X-Cide 207	Baker Hughes	Biocide	2-Methyl-4-Isothiazolin-3-One	2682-20-4	5.00%	0.00015%	
			5-Chloro-2-Methyl-4-Isothiazolin-3-One	26172-55-4	10.00%	0.00031%	
			Crystalline Silica: Cristobalite	14464-46-1	1.00%	0.00003%	
			Crystalline Silica: Quartz (SiO2)	14808-60-7	1.00%	0.00003%	
			Diatomaceous Earth, Calcined	91053-39-3	60.00%	0.00185%	
			Magnesium Chloride	7786-30-3	5.00%	0.00015%	
			Magnesium Nitrate	10377-60-3	10.00%	0.00031%	
GBW-5	Baker Hughes	Breaker	Ammonium Persulfate	7727-54-0	100.00%	0.00385%	SmartCare Product
Enzyme G-I	Baker Hughes	Breaker	Hemicellulase Enzyme Concentrate	9025-56-3	3.00%	0.00366%	SmartCare Product
			Water	7732-18-5	97.00%	0.11820%	
High Perm CRB-LT	Baker Hughes	Breaker	Ammonium Persulphate	7727-54-0	80.00%	0.00615%	SmartCare Product
			Crystalline Silica	7631-86-9	20.00%	0.00154%	
BF-7L	Baker Hughes	Buffer	Potassium Carbonate	584-08-7	60.00%	0.12843%	SmartCare Product
			Potassium Hydroxide	1310-58-3	1.00%	0.00214%	

			Water	7732-18-5	60.00%	0.12843%	
XLW-32, 260 gal tote	Baker Hughes	Crosslinker	Boric Acid (H3BO3)	10043-35-3	30.00%	0.01626%	
			Methanol	67-56-1	60.00%	0.03252%	
			Methyl Borate	121-43-7	30.00%	0.01626%	
GW-3LDF	Baker Hughes	Gelling Agent	1-Butoxy-2-Propanol	5131-66-8	5.00%	0.02478%	SmartCare Product
			Cyrstalline Silica, Quartz (SiO2)	14808-60-7	5.00%	0.02478%	
			Guar Gum	9000-30-0	60.00%	0.29739%	
			Isotridecanol, ethoxylated	9043-30-5	5.00%	0.02478%	
			Paraffinic Petroleum Distillate	64742-55-8	30.00%	0.14870%	
			Petroleum Distillates	64742-47-8	30.00%	0.14870%	
Super DC, 20/40	Baker Hughes	Proppant	Hexamethylenetetramine	1009-7-0	0.01%	0.00294%	
			P/F Resin	9003-35-4	5.00%	1.46813%	
			Silicon Dioxide (Silica Sand)	14808-60-7	97.00%	28.48165%	
FSA-1	Baker Hughes	StimPlus	Ethanol	64-17-5	5.00%	0.00343%	
GasFlo G, 330 gal tote	Baker Hughes	Surfactant	Methanol	67-56-1	30.00%	0.02476%	SmartCare Product
			Mixture of Surfactants	Trade Secret	60.00%	0.04952%	
			Water	7732-18-5	50.00%	0.04127%	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
			2-Butoxy-1-Propanol	15821-83-7		0.0003965203%	
			Cured Acrylic Resin	Trade Secret		0.0015383790%	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)