



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM

DEP USE ONLY	
Site ID	Primary Fac ID
Client	Subfacility Id

Completion Report

Well Information					
If you are submitting this Completion Report attached to the Well Record, you only need to enter the well API # in this section.					
Well Operator Range Resources-Appalachia, LLC	DEP ID# 141142	Well API # (Permit / Reg) 37-125-24188-00	Project Number	Acres 752.9316	
Address 380 Southpointe Blvd, Suite 300		Well Farm Name McAdoo Unit	Well # #2H	Serial #	
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Independence	
Phone 724-743-6700	Fax 724-743-6490	Email	USGS 7.5 min. quadrangle map West Middletown		
Check the appropriate submission: <input checked="" type="checkbox"/> Original Completion Report <input type="checkbox"/> Amended Completion Report					

STIMULATION BASE FLUID		
List Water Management Plan Approved Water Source(s) that were used	Water Management Plan ID No.	Volume (Gallons)
1. PA American Water Company PGH/Rt. 844 Near Breezy Heights	Source 6	126,000
2. Ohio River/Beech Bottom Brooke Co, WV	Source 19	7,101,108
3.		
4.		
5.		
6.		
Recycled Water Used		
Other Base Fluid(s)Components Used		
1.		
2.		
Total Base Fluid(s)/Components Used		7,227,108 gal

PERFORATION RECORD					
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation
1	5/20/11	10380'MD	10246'MD	Horizontal	Marcellus Shale
2	6/2/11	10179'MD	10045'MD	Horizontal	Marcellus Shale
3	6/3/11	9978'MD	9844'MD	Horizontal	Marcellus Shale
4	6/3/11	9777'MD	9643'MD	Horizontal	Marcellus Shale
5	6/4/11	9576'MD	9442'MD	Horizontal	Marcellus Shale
6	6/6/11	9375'MD	9241'MD	Horizontal	Marcellus Shale
7	6/6/11	9107'MD	8950'MD	Horizontal	Marcellus Shale
8	6/7/11	8885'MD	8755'MD	Horizontal	Marcellus Shale
9	6/8/11	8690'MD	8560'MD	Horizontal	Marcellus Shale
10	6/8/11	8495'MD	8365'MD	Horizontal	Marcellus Shale
11	6/9/11	8300'MD	8080'MD	Horizontal	Marcellus Shale
12	6/10/11	8017'MD	7944'MD	Horizontal	Marcellus Shale
13	6/10/11	7828'MD	7612'MD	Horizontal	Marcellus Shale

5500-FM-OG0004b 2/2011

14	6/13/11	7545'MD	7411'MD	Horizontal	Marcellus Shale
15	6/13/11	7344'MD	7210'MD	Horizontal	Marcellus Shale
16	6/14/11	7143'MD	6919'MD	Horizontal	Marcellus Shale
17	6/14/11	6856'MD	6640'MD	Horizontal	Marcellus Shale
18	6/14/11	6590'MD	6490'MD	Horizontal	Marcellus Shale
19	6/14/11	6440'MD	6340'MD	Horizontal	Marcellus Shale

STIMULATION FLUID ADDITIVES-Continued

Descriptive Additive Type	Chemical Component(s) listed on Material Safety Sheet of the Additive	CAS No. of Chemical Component	Chemical Component % By Volume in Additive	Chemical Component % By Volume used in Each Stage											
				Stage No. 7	Stage No. 8	Stage No. 9	Stage No. 10	Stage No. 11	Stage No. 12						
FR-200W	N/A	N/A	N/A	0.0423%	0.0303%	0.0293%	0.0342%	0.0254%	0.0340%						
MX 588-2	N/A	N/A	N/A	0.0068%	0.0070%	0.0072%	0.0068%	0.0070%	0.0071%						
NE100	N/A	N/A	N/A	0.0002%	0.0002%	0.0003%	0.0003%	0.0004%	0.0003%						
FE100L	N/A	N/A	N/A	0.0006%	0.0007%	0.0008%	0.0010%	0.0013%	0.0008%						
37% HCL	HCL	7647-01-0	37%	0.0368%	0.0427%	0.0472%	0.0578%	0.0756%	0.0482%						
CI-100	Methanol	67-56-1	93%	0.0004%	0.0004%	0.0005%	0.0006%	0.0008%	0.0005%						
CI-100	Propargyl Alcohol	107-19-7	4%	0.00002%	0.00002%	0.00002%	0.00003%	0.00004%	0.00002%						
MC B-8650	Glutaraldehyde	111-30-8	49%	0.0036%	0.0036%	0.0036%	0.0037%	0.0037%	0.0037%						
MC B-8650	Methanol	67-56-1	1%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%						
MC B-8520	4,4-Dimethyloxazolidine	51200-87-4	77%	0.0143%	0.0147%	0.0147%	0.0145%	0.0150%	0.0146%						
MC B-8520	3,4,4-Trimethyloxazolidine	75673-43-7	5%	0.0009%	0.0010%	0.0010%	0.0009%	0.0010%	0.0010%						
MC B-8520	2-Amino-2-methyl-1-propanol	124-68-5	1%	0.0002%	0.0002%	0.0002%	0.0002%	0.0002%	0.0002%						
MC B-8520	Formaldehyde Amine	56652-26-7	0.5%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%						

Please insert additional copies of this page if additional rows/stages are needed.

STIMULATION INFORMATION (WELL)			
Open Flow Production: Omcf/d @ 24hrs pos treatment	24 Hr. Open Flow Production: Omcf/d @ 24hrs pos treatment	24 Hr. Shut-in Pressure: N/A @ 24hrs post treatment	Flow Back Date: 6/27/11
STIMULATION INFORMATION (STAGE)			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
Stage No.: 1	Stimulation Date: 6/2/11	Pump Rate: 70.6	
Pressure (psi): 5948	Shut-in Surface Pressure: 3662	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 501,775	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 2	Stimulation Date: 6/2/11	Pump Rate: 68.5	
Pressure (psi): 5889	Shut-in Surface Pressure: 1702	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 508,215	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 3	Stimulation Date: 6/3/11	Pump Rate: 70.2	
Pressure (psi): 6234	Shut-in Surface Pressure: 3773	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 504,710	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 4	Stimulation Date: 6/3/11	Pump Rate: 68.0	
Pressure (psi): 6393	Shut-in Surface Pressure: 3843	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 502,329	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 5	Stimulation Date: 6/6/11	Pump Rate: 68.5	
Pressure (psi): 6631	Shut-in Surface Pressure: 3832	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 502,353	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 6	Stimulation Date: 6/6/11	Pump Rate: 68.6	
Pressure (psi): 6684	Shut-in Surface Pressure: 4224	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 418,447	Propping Agent Size: 100 Mesh 30/50 Mesh	
Stage No.: 7	Stimulation Date: 6/6/11	Pump Rate: 68.8	
Pressure (psi): 6384	Shut-in Surface Pressure: 4903	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 518,089	Propping Agent Size: 100 Mesh 30/50 Mesh	

STIMULATION INFORMATION (STAGE- Continued)

Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).

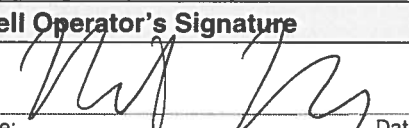
Stage No.: 8	Stimulation Date: 6/7/11	Pump Rate: 69.2
Pressure (psi): 6533	Shut-in Surface Pressure: 3739	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 503,440	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 9	Stimulation Date: 6/8/11	Pump Rate: 67.9
Pressure (psi): 6054	Shut-in Surface Pressure: 4060	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 503,862	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 10	Stimulation Date: 6/8/11	Pump Rate: 68.8
Pressure (psi): 6318	Shut-in Surface Pressure: 4244	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 321,015	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 11	Stimulation Date: 6/9/11	Pump Rate: 66.3
Pressure (psi): 6581	Shut-in Surface Pressure: 4045	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 506,280	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 12	Stimulation Date: 6/10/11	Pump Rate: 70.0
Pressure (psi): 6378	Shut-in Surface Pressure: 4397	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 480,797	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 13	Stimulation Date: 6/10/11	Pump Rate: 70.6
Pressure (psi): 5969	Shut-in Surface Pressure: 4347	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 662,576	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 14	Stimulation Date: 6/13/11	Pump Rate: 67.4
Pressure (psi): 6247	Shut-in Surface Pressure: 4347	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 503,295	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 15	Stimulation Date: 6/13/11	Pump Rate: 65.8
Pressure (psi): 6397	Shut-in Surface Pressure: 4230	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 502,565	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 16	Stimulation Date: 6/14/11	Pump Rate: 67.7
Pressure (psi): 5821	Shut-in Surface Pressure: 4306	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 509,287	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 17	Stimulation Date: 6/14/11	Pump Rate: 67.1
Pressure (psi): 5898	Shut-in Surface Pressure: 4050	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 505,710	Propping Agent Size: 100 Mesh 30/50 Mesh

Stage No.: 18	Stimulation Date: 6/14/11	Pump Rate: 67.2
Pressure (psi): 6252	Shut-in Surface Pressure: 3992	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 500,657	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 19	Stimulation Date: 6/15/11	Pump Rate: 68.1
Pressure (psi): 5760	Shut-in Surface Pressure: 4544	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 481,518	Propping Agent Size: 100 Mesh 30/50 Mesh

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Name Frac Tech	Name Multi-Chem	Name CDK Perforating LLC
Address 16858 IH20	Address 200 Detroit Street	Address 427 Half Moon Way
City - State - Zip Cisco, TX 76437	City - State - Zip Washington, PA	City - State - Zip Runaway Bay, TX 76426
Phone 817-850-1008	Phone 325-486-7489	Phone (940)577-4300

I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

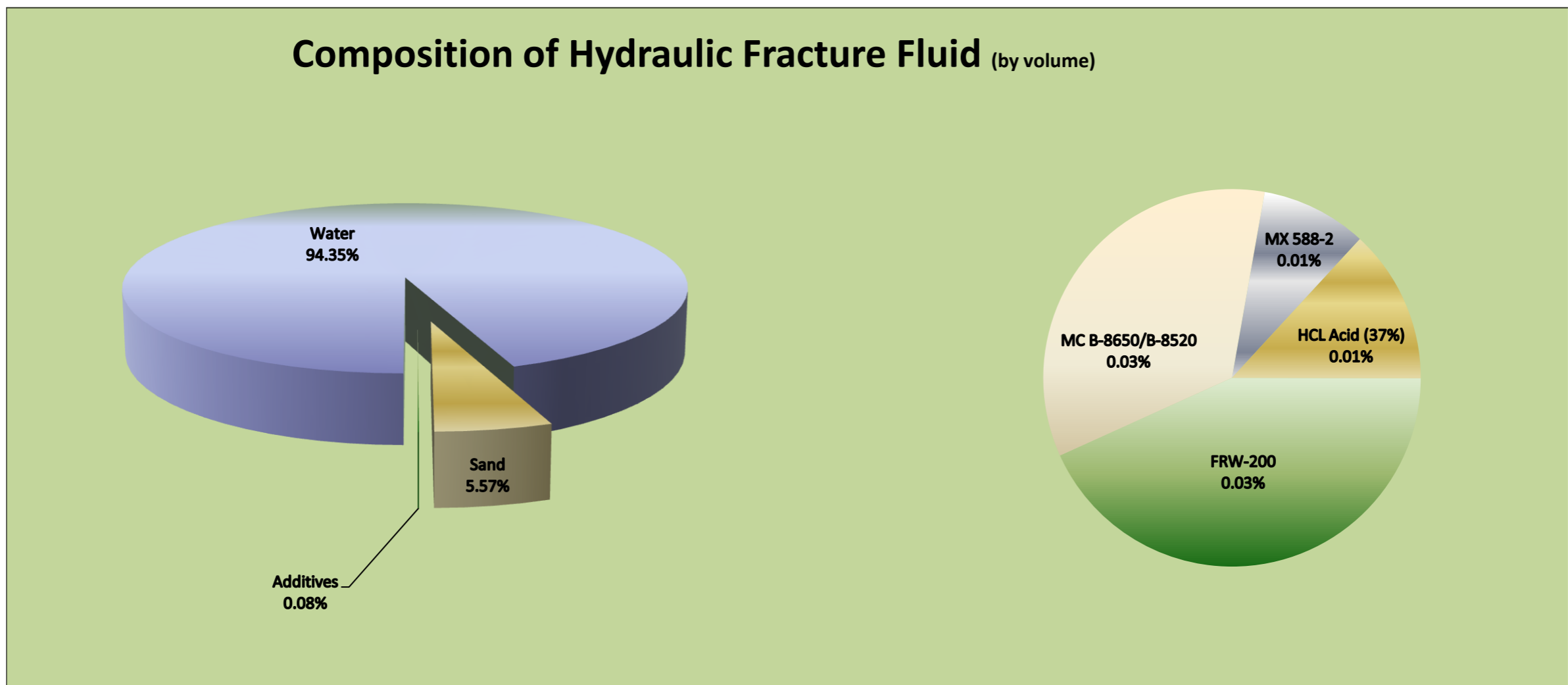
Well Operator's Signature	DEP USE ONLY
	Reviewed by: _____ Date: _____
Title: Completion Engineer: Mike Hurey	Comments:
Date: 6/26/11	



McAdoo Unit #2H
Well API: 37-125-24186

Completion Date: June 2 -15, 2011
Township: Independence

% Composition of Hydraulic Fracture Fluid (by volume)						
Product Name	Additive	Purpose	Use and Dillution	Volume	Overall %	Common Uses
Water	Carrier Fluid	Creates fracture network in shale and carry proppant to the formation	Primary constituent	7,223,172 gal	94.35%	Water is the most abundant molecule on the Earth's surface
Sand	Sand	Allows fractures to remain open so gas can escape	Second most common constituent, making up almost 6% of the fluid	426,549 gal	5.57%	Drinking water filtration, play sand
FRW-200	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	2,573 gal	0.03%	Water treatment; soil conditioner; some children's toys
MC B-8650/B-8520	Antimicrobial Agent	Eliminates bacteria in the water that produce corrosive byproducts	Diluted at one-half gallon per 1,000 gallons of water	2,056 gal	0.03%	Water treatment, disinfectant; sterilize medical and dental equipment and surfaces
MX 588-2	Scale Inhibitor	Prevents scaling in pipe	Diluted at one-tenth gallon per 1,000 gallons of water	0,540 gal	0.01%	Water treatment, household cleaners, de-icing agent
HCL Acid (37%)	Perf Clean-Up	Dissolves cement and minerals to help initiate fractures	177 gallons per stage if required (non-diluted chemicals)	0,785 gal	0.01%	Swimming pool and household cleaner





Composition of Components in Marcellus Shale Hydraulic Fracturing Fluid

RANGE RESOURCES

Common Name & Supplier	Supplier Chemical Name	Common Description	Hazardous Component listed on MSDS	Hazardous Component CAS No.	Purpose	MSDS Component Weight % of Chemical	Gallons MSDS Component in Well	Maximum Concentration of MSDS Component of Total Stage Fluid	
								% Vol	% Weight
7.5% HCl Mixture (FracTech)	37% HCL	concentrated HCl Acid	HCL	7647-01-0	Cleans perforation	37.0%	785.34	0.0103%	0.0041%
	CI-100	Corrosion Inhibitor	Methanol	67-56-1	Protects casing	95.0%	56.93	0.0007%	0.0005%
			Propargyl Alcohol	107-19-7	Protects casing	5.0%	2.45	0.00003%	0.00003%
	NE100	Non- Emulsifer	No hazardous ingredients	N/A	Prevents emulsions	0.0%	N/A	N/A	N/A
FE100L	Iron Chelator	No hazardous ingredients	N/A	Prevents precipitation	0.0%	N/A	N/A	N/A	
							TOTAL	0.0110%	0.0047%

Friction Reducer (FracTech)	FRW-200	Friction Reducer	No hazardous ingredients	N/A	Reduce friction down casing	0.0%	N/A	N/A	N/A
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Scale Inhibitor (Multichem)	MX 588-2	Scale Inhibitor	No hazardous ingredients	N/A	prevents scale deposits	0.0%	N/A	N/A	N/A
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Antibacterial Agent (Multichem)	MC B-8520	Antibacterial Agent	4,4-Dimethyloxazolidine	51200-87-4	eliminates bacteria in water	78.0%	1129.63	0.0148%	0.0136%
			3,4,4-Trimethyloxazolidine	75673-43-7		5.0%	73.94	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol	124-68-5		1.0%	15.50	0.0002%	0.0002%
			Formaldehyde Amine	56652-26-7		0.5%	6.74	0.0001%	0.0001%
	MC B-8650	Antibacterial Agent	Glutaraldehyde	111-30-8	eliminates bacteria in water	50.0%	212.10	0.0028%	0.0038%
			Methanol	67-56-1		0.5%	2.12	0.00003%	0.00004%
							TOTAL	0.0188%	0.0185%

SUMMARY	by vol %	by weight %
	0.030%	0.023%