

Ms Liv Garfield
Chief Executive
Severn Trent Water Ltd
2 St Johns Street
Coventry
CV1 2LZ

Without prejudice

Dear Ms Garfield

I am writing in relation to licences granted to the Petrochemical company INEOS allowing the exploration and possible Fracking for Shale Gas in Bolsover and surrounding areas.

My concern is that should Fracking go ahead each Fracking well, and there will be hundreds, will require between 2 and 5 MILLION gallons of locally sourced water.

As we are frequently informed in the media, and indeed in the envelopes from yourselves that contain our water invoices, we have a duty to conserve our water and not to waste a single drop. I therefore seek your assurance that water supplies to the population of Bolsover and the surrounding areas would be constant, uninterrupted and of the quality we have at present, should fracking go ahead. I would also like to ask where the supply of the extra millions of gallons of water would come from. When asked at a public meeting with INEOS, their reply was Severn Trent.

This further begs the question if there is such an unimaginably massive excess of available water in this area is it reasonable that we have been charged so highly for this water all these years.

I would further seek your assurances that the contaminated water taken from the Fracking process would be treated in a manner that would return it to its' original high-quality drinking water and could I have an explanation the process that would enable this. As you are aware the Fracking process involves water containing a minimum of 59 chemicals including arsenic, benzene, lead and radioactive materials which are not only carcinogenic to humans but also to farm animals, pets, wild birds and wild animals. I cannot imagine our local trees and plants would remain healthy for too long either. At the above mentioned public meeting with INEOS we were assured this would happen, although the spokesperson seemed rather vague on the process involved and mentioned (with a shrug) 'the sea' as an option for disposal of this contaminated water. I am however confident that any water authority in the United Kingdom would fight this option without a second thought.

I have enclosed a list of the chemicals used in the USA in the Fracking process for your perusal, as you can see there are 78 chemicals listed and is a compilation of Material Safety Data (MSDS) published in Marcellus Drilling News. I also note that Fracking Companies are not legally obliged to reveal which chemicals they are using in the Fracking process so how would Severn Trent Water Ltd possibly be aware of what precisely it was dealing with.

Could I finally ask what the Severn Trent Water Ltd position is in relation to spills on the land, which would render the land infertile, and underground seepage into the water table. A further concern would be if the drilling would go through aquifers to reach the shale and also the possibility of waste water escaping or migrating into these aquifers. It is recognised worldwide that concrete well casings have a nasty habit and rupturing and cracking, that 5% of wells fail in the first 12 months, 25% within five years and 50% within 15 years. I doubt that the remaining 20% will last to infinity, ergo ALL wells eventually fail, allowing contaminated water to escape into the water supply.

As a Human Being, a wife, a mother, a grandmother and a resident of this area I am, as I have no doubt you will fully understand, extremely worried.

May I thank you in advance for what I am sure will be a speedy response to all points raised.

Yours sincerely

Name

Address

Extract from Marcellus Drilling News (<http://marcellusdrilling.com>)

Using Material Safety Data Sheets (MSDS) from drillers, along with analysis of fracking fluid, the Pennsylvania Department of Environmental Protection (DEP) has released an updated list of 78 chemicals they say are found in fluids used by gas drillers in PA (called “fracking fluids”). MDN has obtained the list of 78 chemicals and reproduced it below.

There are many nasty chemicals in this list, no one disputes that. But here’s a few things to keep in mind:

- No one knows how much of these chemicals are being used by any given driller. We do know that fracking fluid is composed of less than one percent of the chemicals in this list, with water and sand making up the other 99 percent.
- When fracking fluid is pumped into the ground, the vertical hole down which it’s pumped is lined with concrete to protect surface water supplies from chemicals. The fracking fluid goes down some 5,000 feet to where it’s used to help break rock apart releasing the natural gas, and then most of the fluid is pumped back out again and carted away where it’s treated at a regulated and approved facility. For the fluid that stays behind, it’s down some 5,000 feet. That’s almost a mile of solid rock between where it sits and surface water supplies (which are located at about 300 feet). There’s no way any of that fluid will “seep up” into water supplies. And remember that most fluid is pumped back out again. So less than one percent of the fluid are chemicals from this list, and most of that comes out again, leaving behind a very very small amount of chemicals a mile below the surface and heavily diluted by water and sand.
- Compare the list below with the labels on the containers under your kitchen and bathroom sinks. You’ll find some of the same names on the labels.

Chemicals Used in the Hydraulic Fracturing Process in Pennsylvania

Prepared by the Department of Environmental Protection

Bureau of Oil and Gas Management

Compiled from Material Safety Data Sheets (MSDS) obtained from Industry

Updated June 10, 2010

Chemical	Product Name
2,2-Dibromo-3-Nitrilopropionamide	Bio Clear 1000/Bio Clear 2000/ Bio-Clear 200/BioRid20L/ EC6116A
2-methyl-4-isothiazolin-3-one	X-Cide 207
5-chloro-2-methyl-4-isothiazolin-3-one	X-Cide 207
Acetic Acid	Fe-1A Acidizing Composition/ Packer Inhibitor
Acetic Anhydride	Fe-1A Acidizing Composition
Acetylene	GT&S Inc./ Airco
Alcohol Ethoxylated	C12-16 NE-200
Alkyl benzene sulfonic acid	Tetrolite AW0007/ FR-46
Ammonia (aqueous)	FAW-5
Ammonium Bifluoride	ABF 37%
Ammonium Persulfate	AP Break
Ammonium Bisulfite	Techni-Hib 604/ Fe OXCLEAR/ Packer Inhibitor
Ammonium chloride	Salt Inhibitor
Ammonium Salt (alkylpolyether sulfate)	Tetrolite AW0007
Amorphous silica	TerraProp Plus/ Bituminous Coal Fly Ash ASTM C618
Benzoic Acid	Benzoic Acid
Boric Acid	BC-140/ Unilink 8.5
Boric Oxide	XLW-32
Calcium Chloride	Dowflake
Calcium Oxide	Bituminous Coal Fly Ash ASTM C618
carboxymethylhydroxypropyl guar blend	Unigel CMPHG
Choline Chloride	Clay Treat-2C
Cinnamaldehyde	ENVIROHIB 2001
Citric Acid	Ferrotrol 300L/ IC-100L
Complex polyamine salt	Clay Master-5C
Crystalline Silica: Cristobalite	
Crystalline Silica: Quartz	Silica Sand/ / Atlas PRC/ Best Sand/ Bituminous Coal Fly Ash ASTM C618
Cupric chloride dihydrate	Ferrotrol 280L
Cured resin	LiteProp 125
Cyclohexanes	CS-2
Dazomet	ICI-3240
Diethylene Glycol	Scaletrol 720/ Scaletrol 7208
d-Limonene	MA-844W
Enzyme	GBL-8X
EO-C7-9-iso-, C8 rich-alcohols	NE-940/ NE-90
EO-C9-11-iso-, C10-rich alcohols	NE-940/ NE-90
Ethoxylated Alcohol	FRW-14/ SAS-2/ Flomax 50/ WFR-3B
Ethyl Acetate	Castle Thrust

Ethyl Alcohol	FAW-5/ Castle Shop Solv/ Dallas Morris
Ethylbenzene	NDL-100/ PARANOX/ Uniflo II
Ethylbenzene	NDL-100/ PARANOX/ Uniflo II
Ethylene Glycol	ENVIROHIB 2001/ ICA-2/ LEB 10X/ Scaletrol 720/ Scaletrol 7208/ CC 300/ Clachek A/ Clachek LP/ Ironsta II B/ NCL-100/ BC 140/ NCL-100/ Flomax 50/ NCL/ Scalehib 100/ Unihib O/ Unilink 8.5
Formic Acid	ENVIROHIB 2001
Gluconic Acid	Interstate ICA-2
Glutaraldehyde	Alpha 114/Alpha 125/ ICI-150
Glycerol	Bio Sealers
Glycol Ethers	ENVIROHIB 2001/AMPHOAM 75/ PARANOX/ Uniflo II/ Unifoam/ WNE-342LN
Guar Gum	PROGUM 19 GUAR PRODUCT/ Unigel 19XL/ Benchmark Polymer 3400/ WGA-15/ Unigel 5F
Hydrochloric Acid	Hydrochloric Acid (HCL)/ TETRAClean 542/ Muriatic Acid
Hydrochloric Acid 3% – 35%	Hydrochloric Acid 3% – 35%
Isopropanol	AFS 30 Blend/ FAC-1W/ FAC-3W/ MA-844W/ NE-23/ NE-940/ Flomax 50/ Tetrolite AW0007/ FMW25 Foamer/ CS-2
Isopropyl Alcohol	NFS-102/ WFT-9511/ LT-32/ AR-1/ Flomax 50/ NDL-100/ Unibac/ Uniflo II/ Uniflo/ Unihib O/ WNE-342LN
Methanol	AFS 30 Blend/ NE-200/ Activator Superset-W/ CI-14/ FAW-5/ GasFlo/ Inflo-250W/ LT-32/ NE-940/ XLW-32/ Tetrolite AW0007/ FMW25 Foamer/ 40 HTL Corrosion Inhibitor/ NE 100/ HAI-OS Acid Inhibitor/ Unibac/ NE-90/ Packer Inhibitor
Methyl Alcohol	Clearbreak 400/ Super Surf/ Castle Shop Solv
Methyl Salicylate	Bio Sealers
n-butanol	AirFoam 311
Nitrilotriacetamide	Salt Inhibitor
Phenolic Resin	Atlas PRC
Polyethylene Glycol	NE-940/ EC6116A/ NE-90
Polyethylene Glycol Mixture	Bio Clear 2000/ Bio-Clear 200
Polyoxylalkylene sulfate	FMW25 Foamer
Polysaccharide Blend	GW-3LDF
Potassium Carbonate	BF-7L
Potassium Chloride	Dowflake
Potassium Hydroxide	B-9, pH Increase Buffer/ BXL-2
Propargyl Alcohol	CI-14/ HAI-OS Acid Inhibitor
Propylene Glycol	SAS-2/ WFR-3B
Silica	S-8C, Sand, 100 mesh/ Montmorillonite clay

Sodium Bicarbonate	K-34
Sodium Bromide	BioRid 20L
Sodium Hydroxide	Caustic Soda/ ICI-3240/ BioRid B-71
Sodium Persulphate	High Perm SW-LB
Sodium Xylene Sulfonate	FAC-2/ FAC-3W
Sulfuric Acid	Sulfuric Acid
Surfactants	AFS-30/ GasFlo/ Inflo-250W
Talc	Adomite Aqua
Tetrakis(hydroxymethyl)phosphonium sulfate	Magnacide 575 Microbiocide
Tetramethyl ammonium Chloride	Clay Treat-3C
Trimethyloctadecylammonium chloride	FAC-1W/ FAC-3W