

NATURE'S CORNER

BY

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Alarming Evidence

Recently I have been writing about the water problems in our area. It now seems with great justification. The recent results on water quality testing done by the DEP that was requested by the Harry Enstrom Chapter of the Izaak Walton League of America (IWLA) has proven there is a reason for great concern. In the following I will give you the results of the DEP testing and the consequences of the results.

When the gas drilling began in our area we were assured that it was safe and it would be patriotic to lease our lands for drilling. The state through open its doors and welcomed the industry with little or no thought to the long range ramifications due to the drilling process. A lot of the local residence bought into the safety of drilling and the money was good. As it turns out many people were lied to about royalties and up front money and the value of the gas beneath their property. Many people leased all their gas rights for a minimal of what they are really worth.

Next the amount of water needed and the condition of the water once used. The disposal of this water was to be monitored and tracked from ingress to egress. Well, something went wrong in a big way. There are seven signature aspects to the drilling operations. These seven are the chemicals found in the Marcellus Shale Gas. These signature aspects are sodium, strontium, bromide, radium 226 and 228, High Electronic Conductivity (EC) and high Total Dissolved Solids (TDS). All of these have been found in increasing amounts in our surface water. The latest of these is the radiation aspect. The IWLA through its water testing program has been finding high levels of six of the seven signature components, but the final one (radiation) has been hard to pin down. On November 4, 2013 the IWLA requested such test on the Clyde Mine Discharge, Emerald Mine Discharge 001, Cumberland Mine Discharge 029 and 014 along with testing above and below the discharge points. These tests were conducted on April 10, 2014, but the results were not made known to the public. The IWLA discovered these results were done in a file review of the Clyde Mine in October of 2014. The IWLA requested that all the radiation testing results be made public in January of 2015. Thanks to an efficient employee at the DEP, the IWLA was given these results on April 17, 2015. I would like to publicly thank that person for his/her help. The results are alarming. Preliminary results are shocking and indicate a potential major problem in water quality. These results have placed on hold any trout stocking into Ten Mile Creek by the IWLA. When the Fish and Boat Commission was given the results and ask for an evaluation, the statement from the PAFBC was that if they were stocking the stream, they would not stock fish until further testing is done. Therefore, the IWLA has placed on hold a five year program of stocking trout until the regulatory agencies give the ok to continue stocking Ten Mile Creek.

Here are the results of the testing which led to the postponement of the trout stocking. The safe level for Radium 226 and Radium 228 combined in drinking water is 5PCl/L. At the Clyde Mine Discharge into Ten Mile Creek, the Radium 226 is 301 PCl/L, and uranium 238 at 380 PCl/L Ten Mile Creek above the discharge had the following

readings: Radium 226 at 175 PCI/L, Radium 228 at 152 PCI/L Thorium 232 at 151 PCI/L. All of these are much higher than the 5 PCI/L needed for safe drinking water. Remember our water treatment plants can not remove radiation from our drinking water. Below the Clyde Mine Discharge the radium 226 level was 93 PCI/L

Looking at Smith Creek in Waynesburg PA, the Radium level down stream of the Emerald 001 discharge was 74 PCI/L Radium 228 was 4 PCI/L Thorium was 4 PCI/L Uranium 238 was 54 PCI/L. At the 001 discharge from Emerald Mine the Radium 226 level was 102 PCI/L and Radium 228 was 8 PCI/L and Thorium of 8 PCI/L. Up stream of the 001 discharge the Radium 226 level was 60 PCI/L radium 228 was 3 PCI/L Thorium 232 was 3 PCI/L and Uranium 238 71 PCI/L. This indicates to me at some time these chemicals were dumped into the headwaters of Smith Creek.

Looking at Whiteley Creek , the Radium 226 level at the ingress to 014 was 122 PCI/L, radium 228 10 PCI/L Thorium 232 was 10 PCI/L. The bromide was 5010 ppb if you divide by 3 this will give you the Trihalomethane that possibility could be produce which would be 1670 ppb which the safe limit in drinking water is 80 ppb. The TDS was 4810 MG/L which the safe limit is 500 MG/L. To get EC one must multiply this number by 2.5 which would give a result of 12,025 us. The safe limit for EC is 1000 us. All of this is going into Whiteley Creek a trout stocked stream. The discharge at 029 was not recorded but all indications are that it would be the same as 014 or higher.

These levels of the chemicals are well over the safe limits for drinking water standards. Consequently, they pose a potential for health risks for aquatic life, wildlife and humans.

I guess safe to some people is different than to others? If "Drilling is just the beginning" what will be the end results? Remember, five of these seven aspects of water quality are not normally found in coal but are found in Marcellus Drilling.

I honestly do not know where we go from here? I hope the good Lord gives us a plan and a solution?