November 18, 1998

Gary O. Pittman
Rt. 1, Box 85-A
Jennings, FL 32053

RE: Fluoridating drinking water with fluorosilicic acid (H_2SiF_6)/ sodium fluorosilicate (Na_2SiF_6)

Dear Congressman or Senator:

I worked in the phosphate fertilizer industry for about twenty-one years. My last position was supervising one-third of the evaporation and purification processes at the Occidental Chemical Corporation, Swift Creek Chemical Complex. That position required a thorough knowledge of almost every facet of producing phosphoric acid for fertilizer and animal feed supplement.

Today, I am disabled and suffer from toxic brain syndrome, emphysema, heart arrhythmias and other health problems due to chemical exposure. Many of my co-workers also suffer from similar illnesses. Of the eight original people in my support group, two are dead from cancers. One man had lung and liver cancer, and the second man died from myeloma (bone cancer); neither man had ever smoked and seldom, if ever, consumed alcoholic beverages according to their wives and friends. Another man has leukemia which is presently in remission. Many of my co-workers have developed brain cancers/tumors and stomach cancers. Myopathy, arthritis, liver dysfunctions, lung problems, symptoms of toxic brain syndrome, etc. are also very common health problems among my co-workers and myself. Toxic brain syndrome and heart problems seem to be the most common problems among the workers. Hamilton County also has the highest rate of cancer in Florida due to pollution from phosphoric acid manufacturing.

The doctors at Shands Hospital, Gainesville, FL (specializing in cancer research and treatment) said that the type of lung and liver cancer one man died from were unidentifiable; they had never seen it before.

You might say that I should be contacting my own U.S. Representative and Senator because this is a regional problem, and it is not in your back yard. However, this is not the case. We were exposed to the same chemicals that the *USEPA and U.S. Centers for Disease Control and Prevention* recommend as fluoridation agents to fluoridate the drinking water for over 100,000,000 people. It is likely that your constituents are consuming the pollution, and you might be drinking it because Washington, D.C. is fluoridated.

Over 50% of the communities in the United States use fluorosilicic acid (H_2SiF_6) or sodium fluorosilicate (Na_2SiF_6) to fluoridate drinking water. Neither the *USEPA nor U.S. Centers for Disease Control and Prevention* can provide one safety study proving the product is safe for long-term, low-level consumption. Not one clinical study with animal models has ever been done with the products.

Both fluorosilicic acid (FSA) and sodium fluorosilicate (SFS) are derived from pollution scrubbing operations from phosphoric acid production. The pollution scrubber liquor is a unique product derived from a specific process with unique toxicological characteristics. The presence of chlorides, amines, diesel fuel, kerosene, sulfides, reagents, metals (including arsenic, lead, aluminum, uranium-238 and its decay rate products, etc.), phosphorus and other toxic reactants create a specific product in which FSA is the active ingredient. FSA only comprises about 23% of the total pollution concentrate. It is a highly corrosive acid which can react with most organic and inorganic substances to form many different complexes and possibly very toxic fluorides. I state again, not one safety study has been done with these particular products.

There are many factors involved in the creation of the FSA. Once an insight is gained about how the phosphoric acid is made, the FSA becomes even more frightening. Other chemicals are added such as oil based defoamers (possibly containing dioxins), polymers, petroleum products, naphthalene, chlorides, sulfides, Synspar and various reagents. During the phosphoric acid concentration processes, these added chemicals and inherent toxic contaminants common in phosphate rock are boiled off the acid in a partial vacuum at very high temperatures, about 500 degrees F. The vapors from all these chemicals are washed and captured in the pollution scrubbers along with the fluorine and fluorosilicate gases.

Although it is more convenient for scientists to believe the pollution scrubbing is discriminate, it is not. One scrubber catches all, including pollution from tank farms and other processes. Also, the more efficient the scrubbing operation, the more contaminants will be concentrated in the scrubber liquor.

Phosphoric acid reaction vessels are made of the alloy, Hastelloy G-30. The Hastelloy G-30 vessels only last for about three years before they are tossed or rebuilt. Each vessel costs about $1,000,000. The vessels are corroded beyond use by the presence of fluorides and chlorides in the phosphoric acid. The metals from Hastelloy G-30 (nickel, beryllium, etc.) are also present in the FSA as metal complexed fluorosilicates.

Sulfuric acid is produced at these facilities, and the spent vanadium pentoxide catalyst, production sludge and waste water are dumped into the evaporation (settling) ponds. Evaporation ponds are the catch-all for almost all toxic wastes. Radioactive scale from reaction vessels and filters, phosphoric acid sludges, radioactive fluorosilicates chipped from scrubbing pads and chambers, and general toxic wastes are tossed into the mix.

To make matters worse, evaporation pond water is always used in the pollution scrubbers because there are strict regulations regarding fresh water usage in Florida. Most of the waste water, sludges and waste chemicals from the analytical labs are dumped into the evaporation ponds which is reused in production and/or to make the FSA for water fluoridation.

At this point, I believe it is evident that we are not dealing with a simple, pure, reagent grade SFA/SFS purchased from the chemical supply house as most researchers/chemists find it convenient to believe and predicate their hypotheses and research upon. If the captured pollution had no fluorides present, it would be dangerous to put in the water, but with the complex chemical reactions and possible reactions with both organic and inorganic compounds, FSA/SFS are very dangerous and carcinogenic/neurotoxic, as I well know.

This scenario is well beyond some laboratory chemist or researcher placing a few drops of reagent grade FSA or SFS into a flask of distilled water to make a "theoretical determination." It is not the same product.

The most frightening aspect is that no two batches are the same, and the toxic effects can vary from batch to batch. There would also be a variance from company to company supplying the product because of the type/grades of chemicals, quality of the phosphate rock, processes and what kind of solvent extraction method is used to produce phosphoric (solvent extraction is not commonly used anymore unless uranium is being extracted from 23-34% phosphoric acid; the Synspar flux method is preferred today).

About 6.8 mg/liter of 23% FSA is added to the water to achieve fluoridation at 1.0 ppm. The FSA is an ingredient in a complex product, and because of the nature of the chemical in the product, complex interactions have to occur during manufacture, e.g. heat, negative atmospheric pressure, catalyzing effects due to contact with metal vessels and additives. Of the 6.8 mg/liter, 5.8 is contaminant-laden water. If the fluoride ion could be isolated, per se (again, this is highly unlikely

with water fluoridation), the toxicological characteristics would in no way relate to present water fluoridation research which is done with a different, pharmaceutical grade product.

No one has any idea of what reactions will occur under heat and partial vacuum. All these chemicals including radionuclides and other heavy metals are in the FSA/SFS. Some of the chemicals used in the process are also known carcinogens and neurotoxic substances. FSA/SFS is a real "witches brew." The bottom line is: You cannot mix that many reactive chemicals together under conditions which inspire reactions and not create a product unique to any other fluoridation agent produced in another environment. Possibly many fluorides are created with unique toxicological characteristics that do not readily dissociate in water as stated by the EPA/CDC.

Interestingly, all the people who say this product is "safe" have no concept of how it is produced. They cannot produce one safety study using either FSA or SFS from the manufacture of phosphoric acid. However, all responsible Federal agencies say it is safe without any data to back up the statement (see EPA Fluoride: Regulatory Fact Sheet).

I know what I have shared with you goes against the grain of many dentists and doctors, and the Federal agencies promoting drinking water fluoridation. But I was employed in the production of phosphoric acid for twentyone years. I worked in about every position and in every aspect of production from the analytical laboratory to pilot experimental projects, and my last position was supervising one-third of the Occidental Swift Creek Chemical Complex. I can assure you the FSA and SFS used to fluoridate drinking water contains much more than "fluoride" as EPA/CDC would have you believe.

For every 6,800 gallons of FSA, 5,800 gallons is toxic pollution (cost effective means to dump pollution). If a study were to be done with the actual product, I am sure the results would be terrifying. I believe my co-workers and myself are examples of what clinical research will produce in animals.

I would ask you to look into this situation, not so much for myself, because I am aware of what has caused my health problems, but for the people and the unborn children who will be poisoned from these toxic products being "dumped" into the water.

I know the fluorosilicic acid and sodium fluorosilicate pollution from phosphoric acid production can't be good for anyone. My co-workers and myself are examples of the harmful, toxic effects of these products; we were exposed to the same pollution that is dumped into much of America's drinking water as a fluoridation agent.

I respectfully request, for the health and well-being of future generations of Americans, that the use of fluorosilicic acid and derivatives for drinking water fluoridation be banned and more stringent environmental legislation be enacted regarding phosphoric acid production. I feel that it is your moral obligation to address these issues.

Sincerely,

Gary O. Pittman