

From the Desk of  
Linda Grubbs Horton

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7-25-02



Dear Mr. Timothy Johnson,

I am enclosing some information to show you how adversely a large group of citizens oppose the location of the proposed ~~WRENCO~~ <sup>WRENCO</sup> facility here.

IT is a highly populated area that flooded last year.

If the county leaders have said that we want it here, they are wrong. They never asked and there may be pending litigation regarding the Sunshine Law - the Unseal Co. Commission. We will do everything we can to keep it away. We are organized and our hearts are in it. Please do everything you can to persuade them to look elsewhere, please. If you want to know the realist you can read The Envin Record, the issues of June - July.

Thanks for listening,

Sincerely,

cc. Melvin N. Leach Linda Horton

Handwritten note: 10/11/02

# THE VALLEY BEAUTIFUL?

## WE HAVE QUESTIONS.

**DID YOU KNOW** that a foreign-owned consortium will decide within a matter of weeks whether to locate a 100-acre nuclear facility in the middle of the Valley Beautiful? We've been told that all of our economic problems will be solved.

- Why were Unicoi County residents not informed?
- What is the process involved in uranium enrichment? What dangers does it present?
- Who are the companies involved and what are their track records?
- What about storage and transportation of radioactive material?
- What will be the TRUE economic impact? Will local residents *really* get the jobs? Especially the *high-paying* jobs? How will our property values be affected? Will we trade our children's future for a modest monetary gain?
- How long will this operation last and who will be the future stewards of this unusable land?
- Should we be worried about terrorism?
- What are the possible health concerns?
- What about environmental risks?

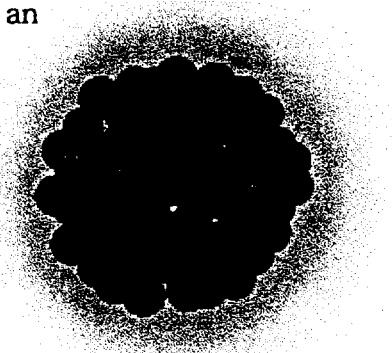
**WE ARE ENTITLED** to open and frank answers to these and any other questions that citizens may have. We need to let local authorities know where we stand and that we expect to be kept informed of any future plans concerning this proposed project.

*We need to learn more and decide for ourselves whether this is something we want.*

**LET YOUR VOICE BE HEARD.  
THE DECISION BELONGS TO THE PEOPLE OF VALLEY BEAUTIFUL!**

# U235 URANIUM

There are two major isotopes (forms) of uranium: U235, an alpha emitter with a 1/2 life of 700,000,000 years, is the material used in nuclear power plants and atomic bombs. U238, also an alpha emitter, has a 4,460,000,000 1/2 life, is the more abundant form of uranium.



Uranium can be mined with the ore is between 0.1 and 0.5% U235. Example: Suppose we have ore at 0.2%. For every 1000 tons we could extract 2 tons of U235. That would leave 998 tons of waste. Unfortunately 85% of the radioactivity is left with the waste material.

The waste material (depleted uranium) is 40% solid and 60% liquid. Bottom line, Enriching uranium produces waste. The DOE has produced about 320,000 tons of depleted uranium waste. It is currently stored in metal containers.

In Europe, URENCO has produced about 30,000 tons of depleted uranium. When low grade uranium ore is moved from one processing plant to another it is usually in the form of uranium oxide (called yellow cake). In preparation for enrichment, uranium is first converted from uranium oxide to uranium hexafluoride. Uranium hexafluoride then goes to a plant that produces enriched uranium hexafluoride. The enrichment process could produce uranium suitable for a nuclear power plant (about 4-5% U235) or it could be enriched to 93.5% for weapon, or to 97.5% for Naval reactors.

At the level used in a power plant, Uranium hexafluoride is not very radioactive. However it is a very dangerous material, If uranium hexafluoride comes in contact with water, even water vapor in the air, it forms two materials:

- 1) Hydrofluoric acid, which dissolves glass and is a dangerous irritant. It can cause pulmonary edema, respiratory damage, and severe burns."
- 2) Uranyl fluoride is a heavy metal toxin. It can cause kidney damage

One of the terms used in this work is SWU (pronounced swooze) which stands for Kilogram Separative Work Unit). It takes about 4.3 kilogram SWU's of separative work to produce 3% enriched uranium and 236 kilogram SWU's to produce 93% uranium, both starting with 0.2% ore.

Now then, a typical gas-centrifuge plant produces 1,700 cubic meters of low level radioactive waste. This can be compare with a gaseous diffusion plant which would produce 230 cubic meters of low level waste.

What do we do with this waste? It depends on the permits. Enrichment produces PCB's, chlorine, ammonia, nitrates, zinc, arsenic and hexavalent chromium. At the Portsmouth enrichment plant, fluorine gas and hexavalent chromium were routinely released into the air.

# TINKER ROAD PROJECT

## Proposed Uranium Enrichment Plant



Staff Photo by Robin Cleavenger  
Water surrounds a car and bales of hay  
near Tinker Road in Unicoi Monday.



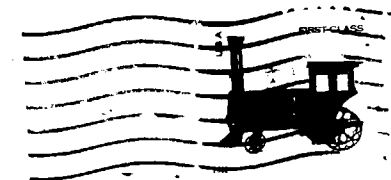
Tinker Road - Tomato Field - Just a  
good rain. Fall, 2000

↑  
Heavy rain of 2001 -  
(August 13). Tinker  
Road. Photos clipped  
from August 15, 2001  
Erwin Record



Staff Photo by Ron Campbell

WE HAVE LEARNED THAT WHEN URANIUM HEXIFLORIDE  
IN URANIUM WASTE COMES INTO CONTACT WITH WATER IT  
FORMS DANGEROUS TOXIC MATERIALS



**BA33**

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