

REF: EDO 10598

ACTION: DRPM:CRUTCHFIELD



PAMELA BLOCKEY-OBRIEN  
D23 Golden Valley, Douglasville, Georgia 30134 U.S.A.

The Executive Director,  
US NRC,  
Judges Bechoefer, Kline and Lam,  
US NRC,  
Washington, DC 20555

*Weiss*

March 14th, 1996

Ref. EDO 10598

Russell

Dear Director,  
Honorable Judges,

50-160

*Received*

3/19/96

cys:Taylor  
Milhoan  
Thompson  
Blaha  
Cyr

This is with regard to my 2.206 Petition and new information on earthquake risk, possible unsafe conditions having developed due to the site of the Georgia Tech Neely Reactor, and other problems. The NRC responded to former (now) Mayor Massell of Atlanta when he questioned allowing the reactor to go to ~~SMW~~ and the fact that it was in an earthquake zone, on May 2nd 1973., signed by a Donald Skovholt assuring Mr. Massell that "the seismic resistance of the GTRR containment building has been evaluated using analytical methods similar to those described in AEC Technical Information Document TID 7024, Nuclear Reactors and Earthquakes". The analysis indicates that the containment structure will withstand maximum accelerations in the range of 0.07g to 0.15 g associated with the occurrence of an earthquake rated at intensity 7 on the Modified Mercalli Intensity Scale. The Seismic Risk Map of the United States Building Code places Atlanta at the outer edge of Zone 2 and recommends that structures built within this zone be capable of withstanding an earthquake of intensity 7. The Georgia Tech Research Reactor containment building meets this recommendation. The analysis also shows that the seismic resistance of this structure is equivalent to the value used by the Corps of Engineers in the construction of dams within Seismic Risk Zone 2."

First of all please note the use of the words "evaluated using analytical methods similar" and "indicates". The mentioned Bulletin is probably so out of date by now it's useless and even then using methods "similar" is not "the same as" the Bulletin.

Second, the Mercalli Scale is different to the Richter scale, it is a word description, historical word description, of an earthquake with ratings continuing up the scale of this description. It was developed in 1931. It is not a scientific method, although it obviously has its place ALONG WITH scientific methods. According to the US Army Corps of Engineers, Chief of Structural Engineering, a "6" on the Modified Mercalli would be "felt by all" it would frighten people and cause them to run out of doors and weak masonry would crack a 6 would be from 0.03 g to 0.09 g. Under Mercalli, a "7" would make it "difficult to stand, some masonry would be broken, ponds become turbid (the surface would ripple)" and it would be between 0.7 to .2g. Mercalli goes up higher than Richter, so a 7 on Mercalli is not the same. The Zones the Corps uses are five zones (01234) based on history and known faults, however THEY DON'T USE A "VALUE" THEY DO A PROPER SEISMIC RISK EVALUATION and would use a MAXIMUM CREDIBLE EARTHQUAKE SCENARIO IN ALL PROBABILITY AND THEY DON'T "PICK SOMETHING OUT OF A BOOK", and they would look at every angle possible and it would of course be a proper in-depth study, not like the non-event surrounding our unfriendly neighborhood nuclear nightmare, the Tech reactor.

With regard to what else was in the letter to Massell from NRC, there was a bit of truth-stretching going on back then as to how well it was operating....

With regard to NRC's position that because of expansion joints (between the reactor and the lab building next door and offices) that if a sinkhole happened under one, that would help, according to structural building engineer if the buildings were joined on exterior walls (which they appear to be on the outside, ) there would be some effect on the other building and an expansion joint wouldn't help much. Another construction company head ( who was amazed that it was not on granite but on weathered rock - which as he said is partially decomposed rock - turning to soil, as I said) ~~said~~

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the dirt beneath it would wash away <sup>OVER TIME</sup> (for example round footings) and the great weight of the structure will have an effect on the partially decomposed /weathered rock, not just the water would be a problem. (Of course putting it in that stupid location on fill didn't help either.)

So, the situation could actually be worse than I thought, and the NRC should have the type of below ground examination done I have asked for repeatedly (and the checks done for the contamination below it etc. etc.) as our nuclear dinosaur may be undergoing China Syndrome, only in this case it's not melting down through to China, it could be sinking through to China. At least that IS one way to get rid of the awful thing - who knows, on NRC's next visit maybe it will have disappeared, dragging the lab and office building next door containing all those hundreds of thousands of curies of cobalt-60 with it by the expansion joints, and I could finally get some sleep.

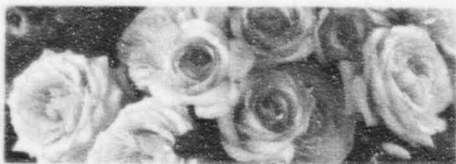
By the way, , the 50 curie antimony-beryllium sealed source -neutron source- inside there could be the main reason for all that radioactive beryllium outside in the environment , NRC needs to look at that. And when they considered the emergency cooling water scenario years ago, they were going to have a cute little gasoline driven pump and fire hose to pump the water out of the FUEL storage pool and what is really incredible is that NRC didn't jump up and down back then and yell "what do you mean FUELSTORAGE POOL you nit-wits." NRC needs to check to see if all the other on-campus research reactors have the same emergency cooling system as Techie the nuclear dinosaur has. If so, you all better do something about it.

Last, but not least, back in 1967 , does NRC have any idea which group of people made the decision to allow private ownership of special nuclear material ? I would like their names, they should be remembered in the annals of history with the same disdain the boys who built the Bomb are. Or rather the scientists who thought it up are.

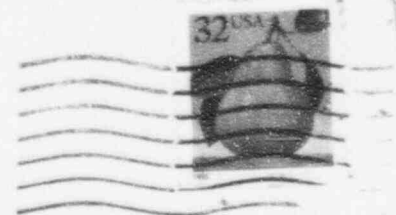
We've had terrific flooded areas over on Techwood Drive recently ( not too far from the reactor) it made the news, - reactors should not be in areas prone to flooding. The heavy water is still at Tech (and the co-60 which no one will move before the Olympics) it should be removed as I said before. The place has no proper license by all accounts as I said, . You need to grant my 2.206 - that way you could also save yourselves all the relicensing hearings and Tech could stop wasting taxpayers money ~~way~~ using the state attorney generals office lawyers to fight something that is contrary to the public good. The place is a disaster absent the Olympics, and will be one after the Olympics , it should be shutdown and the whole thing cleaned up and removed from the area forever.

*Pamela Blockey-O'Brien*

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PAMELA BLOCKEY-O'BRIEN  
D23 Golden Valley, Douglasville, Georgia 30134 U.S.A.



THE EXECUTIVE DIRECTOR  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555.

