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USNRC



Pamela Blockey-O'Brien
D23 Golden Valley
Douglasville, GA 30134

'95 AUG 22 A11:34

To: The Executive Director of the NRC and
Commissioners for the NRC
Atomic Safety and Licensing Board Justices
Bachmefer, Kline and Lam,
and the entire Service List on the response to my 2.206 Petition dated July 21st, 1995 concerning
the Georgia Tech Reactor, Docket 50-160 and other issues I raised.
U.S. NRC,
Washington, D.C. 20555

OFFICE OF SECRETARY
PUBLIC SERVICE

Aug 18th, 1995

* SERVED AUG 22 1995

To All the above cited persons : Greetings,

By now you will have all recieved the NRC response to my petition. I find this response a DISGRACE, in particular since the NRC appears to have either not read, misread and/or ignored many issues I raised and also did not bother to address some of them. Before I list them, I wish to make a statement:

I was, I believe, meant to have been put on the "Service list" by NRC (see Feb. 24th letter from the NRC of this year to Ms. Glenn Carroll of GWNE) . I even asked NRC twice at least to be sent any responses to my petition that came in, as I understood that was my right under the law. The only time I got a copy of what was going on from NRC was an attachment to the above letter to Ms. Carroll. Other than a couple of petition acknowledgements people had sent in and a few general letters from NRC, I got NOTHING. The only reason I could argue a few points back, was because I got copies of some documents via another route weeks later. The points I argued back werer then ignored by NRC by the look of it. Indeed, a member of NRC's own staff agreed they knew there were items or issues I had (under the 2.206) which were not addressed. If one actually reads my 2.206, one can see that.

Now to the NRC's response to my 2.206 Petition : FIRST, PLEASE READ MY ENTIRE 2.206 PETITION, WHICH INCLUDES MY LETTERS ALSO OF NOVEMBER 12, Dec. 4th 1994 and Feb. 21st, Feb. 23rd, March 6th, March 28th, April 19th, May 18th, June 27th, and July 18th, 1995.

NRC Points Numbers 1, 4, 6, 7.

Please read my Feb. 22nd/23rd letter detailing my conversation with the engineer Mr. Chambers from the DPW (Division of Public Works, city of Atlanta) the "natural drainage area" was a creek. (Even if it was seasonal, water still would come through it.) A person who lived in the area before the reactor was there told me this week that water DID drain and collect in that area due to the terrain (which has not changed basically.) Further that there was a creek about 500 yards from where the reactor now is and that a large culvert was put under State St. which helped take the big dip there was out of State St.. The culvert usually had about 2 to 2 inches of water in it . (Unless it rained heavily of course). The drawings in the license renewal application for this reactor show how the drainage (creek/seasonal creek the water for crying out loud) was channeled UNDER the reactor building complex. The surface drainage path NRC speaks of is a concrete lined channel as they say, but neglect to mention how the water rushes down this in heavy rains and also overflows it and how the area next to it is usually soggy frequently with standing water . Had NRC payed attention, NRC would have seen that I quoted a REPORT DONE FOR GEORGIA TECH, A STUDY , in my Oct. 23rd. 1994 letter beginning the 2.206 process, where their OWN STUDY WARNED OF CAVE-INS THEIR OWN STUDY OF THE GEORGIA TECH CAMPUS ON WHICH THIS REACTOR IS LOCATED SAID SEWER LINES ON CAMPUS WERE INVITING COLLAPSE, THAT THERE HAD BEEN PUFF-UPS AND SMALL SINKHOLES , FLOODING, MANHOLE COVERS BLOWN EIGHT FEET ETC.ETC. many times on the campus, in particular in areas not far from the reactor and the report went into details (as did the huge article in the Atlanta Paper I referenoad) as to how the powerful leaks in that huge sewer (the Ome St. trunk built in 1892) erode soil from around the sewer (read it yourselves please) iviting the cave -in of the earth overburden and in some cases the sewer itself. I called the authors of the study for Tech, because the former radiological Safety Office had told me that he had seen the reactor basement flood and the parking lot fill on more than one occaission with about three feet of water when all the lines/storm drains (feeding to the trunk line etc) back up and had seen it (parking lot) under water) . The author of the study for Tech had not only not been told there was a reactor on the campus, he had not checked the lines under it. As I told NRC in my 2.206 Petition , Dr. Karam himself agreed with me (by phone, July 30th, 1993) that the area FLOODS. and that the concrete slab the reactor sits on had never been X-Rayed (to see if there were cracks) all that

* REACTOR OFFICE BUILDING BASEMENT

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happens is that he checks it daily by looking at it. I told NRC that was not enough. I repeatedly asked the NRC to have the lines (sewer lines, drains) tested, checked out. One note goes back to Jan. 21st 1994 to NRC from me on this. NRC repeatedly told me that this would be done (I had asked for a one mile radius, not just under and around the reactor) NRC told me they had asked for all the testing on 300 feet of line (from under the reactor on). I repeatedly had stated it must be for radioactive contamination in the lines, the mortar, joints etc and of the soil around the lines and the reactor because of the radioactive crud they had repeatedly dumped or spilled down the lines and due to problems raised in Techs own reports on campuswide problems, in particular from the trunk line which caused backups to the reactor area, there had to be contamination. NRC told me they had asked for it and it would be done. An NRC staff person also told me NRC staff would not put it in writing for me that the place/situation was safe. I repeatedly asked the place be X-rayed **NONE OF THIS HAS BEEN DONE.** NRC finally got its act together enough to verify that what I had told them about a sinkhole occurring. I told NRC NEXT TO THE REACTOR. NRC says the sinkhole was near the waste storage tank (p.12) what NRC leaves out, is that THE WASTE STORAGE TANK IS NEXT TO THE BLOODY REACTOR BY A FEW FEET AND NEXT TO THE REACTOR CONTAINMENT BUILDING IS WHERE I WAS TOLD IT WAS. THANK GOD NRC DID NOT DISCOVER A SINKHOLE AS THEY EXAMINED THE AREA WHILE WALKING THE AREA ON FOOT. NRC appears to be being purposefully dense on the whole issue. The issue is obviously that, due to the fact, according to NRC and Techs own documents groundwater was hit at 11 feet before they put the reactor there over a "drainage path" (creek) on top of fill material, with all the flooding and backflooding in the area there are probably large washouts and voids underneath the site and round the lines and NRC should do all the tests I asked for, including X-Rays of that 31 year old dump of a reactor which your own documents say had cement in the bottom to "act as ballast against the buoyancy of the groundwater". The vast information I provided NRC on everything from area well depth going back to 1949, (and information by phone) to the fact that nearby Olympic housing built on the same WAHDO Creek formation but not down in a draw, has sunk 9 1/2 inches (and an engineer with that Olympic Housing project told me they had removed large amounts of unstable soil before building it) to articles noted that have run in the Atlanta papers (Atlanta Business Chronicle) and the TV almost weekly on the constant problems and breaks in sewer lines and pipes across ATLANTA, all over the area point to probable problems which, as reactor safety officer Jerry Taylor told me on July 30th 1993 could lead to a big fear of mine, namely he agreed that **QUOTE: "IF IT WENT DOWN A SINKHOLE IT WOULD BREAK APART"** Any sensible person knows this. The entire trunk line cannot be repaired before the Olympics. Furthermore, a scientist colleague of mine who works on issues concerning the entire sewer mess in Atlanta, can testify to the fact that when they repaired the **huge sinkhole that killed the people a few blocks down from the reactor at Wolff camera and the Marriott hotel,** 8 million gallons of sewage that daily used to go through there has 'gone missing'. This means in all probability eight million gallons is leaking somewhere. Below the ground.

The State Geologist, Dr. McFarore, told me he was faxed some of my letters (but not the entire 2.206 petition) by NRC. That he did not know, nor had seen, that Georgia Tech had done (had had) its own study on the state of the problems regarding the sewers, puff-ups etc. on campus, did not know that the reactor was put on fill material was not given nor saw all the hundreds of pages of information on the reactor, did not know the area floods, and a lot more besides. He was rather astonished. NRC provided materials out of context, therefore got an answer out of context. As I wrote back to the NRC the only things that were examined, were a going over of the old plans and looking at the place. I can send my dog to look at it for what that's worth from a safety perspective.

Another geologist with the State told me that if the fill material under the reactor had for example limestone in it, it could have washed out. **FOR THE NRC TO SAY (PAGE 14) THAT THE DEVELOPMENT OF SINKHOLES NEAR OR UNDER THE REACTOR IS NOT A CREDIBLE EVENT" is a LIE. ONE HAS ALREADY HAPPENED NEAR IT, AS NRC KNOWS, AND ANOTHER A FEW BLOCKS DOWN THE ROAD.** I told you all once weathered rock is SOIL, dirt. I NEVER raised the question of the manhole covers being thrown to the reactor, I raised it in connection with the fact that when they welded them closed on the camp to prevent them being pushed off by the force of water backing up the sewer lines and causing them to be blown off, it made the problem worse and they were blasted off anyway even though welded and thrown up to eight feet. I was illustrating the power of the water below ground, the context of which I will tell the Atomic Energy Commission Justices if need be as it was a security issue, in a discussion with law enforcement and the NRC, not for widespread public consumption. However,

considering NRC's response on this part of my 2.206, the thought does cross ones mind, that if a manhole cover blew off and hit the NRC officials responsible for the response to my 2.206 petition square between the eyes, all one might hear would be an echo. (I couldn't resist that one !)

The "physical examinations" (p.4) of the reactor facility and site was ridiculous as NRC never examined either below ground, never sank probes, never dug test wells, never did X-Rays, never even ran remote TV equipment down the lines, the sewers, examined the fill etc. etc. The substantial health and safety issues still remain. The containment foundation has not been X-rayed, the pool holding the hundreds of thousands of curies of cobalt-60 has not been X-rayed or checked to see if it is sinking, the reactor and what it stands on has not been checked to see if it has sunk or is sinking. (And its weight is staggering, for one thing, there is a 20 ton crane in there). Page 20, concerning the ability of the containment building steel structure to control radiation releases : Tech/NRC's OWN data (which I think you should read) agrees with me that what is over the top, i.e. the bit of steel containment dome, is basically useless. SEE p.208, C 2 "Shielding by Reactor Containment Building" QUOTE : "The roof of the building, which consists primarily of a 5/8-inch thick steel plate would provide very little shielding." I told NRC that over and over. NRC ignored it.

The June 21st 1995 NRC Inspection Report (which I did not receive until a few days before I got the response to my 2.206 - the inspection report was mailed to me July 27th, the answer by NRC to my 2.206 is dated 4 days later on July 31st) Lists Violations by the Ga. Tech Neely Nuclear Research Reactor, (NRC Inspection Report No 50-160/95-01.) which NRC's response conveniently ignored.

Repeatedly, over a period of years inaccurate data or no data on certain concentrations of radioactive releases were noted by NRC. For example, for 1988,1989, 1990, 1991, 1992, 1993 there was NO listing of the maximum concentration of gross radioactivity released to the unrestricted area. For approx. eleven years identical windrose diagrams had been used, apparently based on historical data but neither data collection period nor location could be determined, furthermore even though the April 1994 SAR indicated that special, continuous, automatic measurement and recording equipment for wind speed and direction (vital in case of accident, and releases) had been installed, IT DIDN'T EXIST.. It also appears that there were a host of other problems concerning limits and isolation set point for H-3, (tritium) NO routine sampling for particulate radioactive material released through the exhaust gas system, the licensee (Tech Reactor etc.) had reported releases of particulate radioactive material as not detectable in Annual Operating Reports, however even though the licensee has the capability to routinely sample and analyze for potential particulate radioactive material, the particulate filter was **NOT** being analyzed. **SO ON THAT ISSUE WE DON'T KNOW WHAT THE HELL WENT OUT THE EXHAUST STACK.**

Under "Provisions for Insuring Leak Tightness" 4.3.2. SAR p. 49 (page 20 NRC Response) it says the building was tested annually since it was accepted by Georgia Tech (back in the 60's presumably). But under Summary of Containment Building Test Results p.174 of the SAR, it shows only nine tests, which include those done prior to acceptance. The first test showed 0.6% of the building volume leaking from the containment vessel and the test was conducted by CHICAGO BRIDGE AND IRON. who also ran a second test, after that, it was done by Georgia Tech Research Reactor personnel four times listing some names and then from 1967 to 1991 no tests are listed, and the three which follow just says GTRR Staff. What qualifications do these staff have to run such complicated tests? The last test showed a leakage rate of 0.63% of building volume. Is all this credible?

My arguments with NRC on the famous shielding in case of accident etc. speak for themselves, the stupidity of pretending that a darn piece of wall is going to shield the public if the damned reactor blows (or anything else happens e.g. with the cobalt-60) spewing radioactive crud over the area is beyond belief. I kept telling NRC the data is OLD, let alone stupid, let alone based on idiotic stuff like how tall someone is or rubbish like if someone was STANDING CLOSE TO IT THE RADIATION FROM THE TOP COULD NOT BE SEEN so someone would not have much to worry about in essence. See pages 210, 211, 212, It is positively Orwellian. If this sort of rubbish worked, why didn't Tech call up the people trying to manage the CHERNOBYL disaster and tell them they'd be fine if they were short people and just hunkered down next to the exploding reactor wall. NRC would have to be completely asleep at the wheel, so to speak, to not understand what I was getting at. The "runaway chain reaction"(p.21 of NRC response to my 2,206) referred to the spent fuel rods on site (see my letter of Nov. 12th 1994, p. 2. and my maintaining that quote " IF THE WHOLE BUILDING/REACTOR WERE DESPHERIALIZED (E.G. EARTHQUAKE, FLOODING, TERRORISTS BLASTING A MISSILE THROUGH THE ROOF) AND DEBRIS SQUISHED ALL THE SPENT FUEL RODS IN THERE TOGETHER, YOU'D HAVE

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FUEL MELTING FROM THE RUNAWAY CHAIN REACTION. NEED I SAY MORE...."
NRC ignored that TRUE STATEMENT. NRC then goes into raptures about the HEU/LEU. HOW MANY MORE TIMES
DO I HAVE TO REPEAT THAT TECH/NRC'S OWN DOCUMENT SAR p. 134) STATE : "DATA FROM ANALYSES OF THE
HEU CORE BY GEORGIA TECH WERE NOT AVAILABLE,..... SO YOU'ALL BASICALLY MADE IT ALL UP BASED ON
ENGINEERING UNCERTAINTY FACTORS ETC.

The emergency cooling in case of a disaster stinks, as I inferred. but NRC wouldn't listen.
There are 300 gallons (in a tank) of D₂O which, at 8 gallons per minute would cool the reactor for
30 minutes. In the reactor vessel there are 1,100 gallons which presumably would be draining, have
drained or whatever. The long term supplies NRC refers to are
1) the hook up to city water would take place by going and getting down in the LABORATORY BUILDING
PIPE TUNNEL WHICH IS BELOW THE REACTOR (p.67) and doing a manual hook-up

HOWEVER

THE PIPE TUNNEL HAS NO SHIELDING AND, QUOTE: " ACCESS TO THE PIPE TUNNEL , THEREFORE, IS NOT
PERMITTED DURING REACTOR OPERATION. ENTRY TO THE PIPE TUNNEL IS THROUGH THE PROCESS EQUIPMENT ROOM
ONLY; THE DOORS TO THIS ROOM ARE LOCKED DURING REACTOR OPERATION...." p.67

So, while all hell is breaking loose, some poor sucker is sent down to go into the pipe tunnel to
hook up the water - either he/she gets irradiated and dies AFTER searching the neighborhood for a sleek
hammer to bash the door in (it's locked, remember) if no one can find the key, OR, if they have the key,
they'll get irradiated and die while trying to hook up manually to city water with the famous "quick
connect spool piece". PROVIDED it all works , which I very much doubt considering the chaos that
would be going on and the questions of it not appearing to have ever been tested (is it even possible ?
coupled with the problems one can have of trying to run water through lines long in disuse, one person
would probably die. If the system fails (and considering the sorry state of Atlanta water lines it might
we get to back-up system number two, using the radioactive water in the pool that shields the cobalt-60
and (if there at the time) spent fuel rods :

2) after talking to the State of Georgia's Radiation Surveillance staff (who license the cobalt-60)
they have to keep the cobalt shielded of course, therefore, one could only use about 12,000 gallons
which would last about 20 hours coming in at 8 gallons a minute - if the water was draining out
of the reactor shielding system simultaneously , that is how long you'd have to try and figure out
back-up system three, which doesn't exist. NRC is wrong in stating there would be no radiation exposure
making the above connections, and there is NO long term water supply from the pool available at all.
To make up water being used from the pool, (if that could be done at the time) they have to use a
garden hose I believe. I mean, this is like a bad cartoon. NRC saying (p.24) the "connections are
made outside the containment structure" are deceiving in that NRC implies everything is OK and does
not say HOW it all happens. There could be major safety problems
p.26 of NRC's response and p. 24 concerning how the cooling etc. would all work are really a joke
as the Atomic Energy Commission's own staff were aware from back in the 1960's and later, the
massive reports by George Brockett ("Brockett Report") and Phillip Rittenhouse's work were in essence
shoved under the rug. Loss-of-coolant accidents, even in this type of research reactor , are almost
impossible to figure out in advance, and the problems ghastly, ranging from flow blockage to China
syndrome. However, what is truly disgraceful, is NRC's trying to maintain that in the event of
core burnout plutonium etc. would not be released, nor cesium, when this would be the case as NRC
well knows and admits a couple of lines further down. IF THE NRC DOESN'T KNOW BY NOW WHAT HAPPENS
GOD HELP US ALL.

I told NRC that the references and data used in the SAR were almost 40 years out
of date and for those reasons alone should be junked. To ignore what I said and to disregard it puts t
puts the public at continued high risk from that facility. The SAR should be thrown in the trash
where it belongs. On. p. 28, again NRC is ignoring its own inspectors reports of violations.
p. 29. I provided a lot of new earthquake information and told NRC of new studies by phone. To say I
not present any new seismic information for the region is a lie. Just because NRC has stupidly de-
cided that if an earthquake fault hasn't moved in 30,000 years it is not "capable" does not invalidate
my concerns. , the potential for a damaging earthquake is NOT remote. I told NRC an active earthquake
zone has been identified in east Tennessee in particular in an area called the Ocoee block, and who
to contact about the new studies by phone. The Atlanta Newspaper story on it had a headline : "Lo year
Study, Tennessee Quake risk greater than believed, North Georgia called vulnerable" April 29, 1994

The fact is, one of the main concerns of my 2.206 - namely that everything almost about that dump of a reactor such as the SAR is old, outdated and would never be allowed nowadays - has been ignored by NRC and NRC just parroted back SAR information which I was questioning to begin with.

Furthermore, I asked for all additional letters I sent in under my 2.206 Petition to be placed in the Federal Register too, as they were part of it. To my knowledge this was not done and I hereby request again that this be done, **plus that this entire response be placed in the Federal Register so people can see what NRC has done, as well as sent to the entire Service List that the NRC response to my 2.206 was sent to.**

p. 27 I gave NRC a great deal of data on the geological problems and referenced the attached article (1992 Study Warned of Cave Ins , sewer under Tech campus inadequate city was told") in my first letter to NRC under the Petition. I also maintained that in the SAR, the actual geology is not site specific, plus it shows it was put in an unstable location over an old drainage path on fill (SAR pages 17,22,23.)

p.28 NRC response. I don't care HOW the NRC comes up with its fancy footwork for restricted areas, exclusion areas and population zones **THE FACT REMAINS THAT THIS REACTOR IS IN THE MIDDLE OF A CITY OF TWO MILLION, ON A UNIVERSITY CAMPUS, SURROUNDED BY OLYMPIC HOUSING ETC. AND NOT IN A LOW POPULATION ZONE.**

The radiation exposure calculational technique and data used to figure out exposure are still a joke and totally unacceptable (re-read what I have written in this letter at the bottom of page three, last paragraph) as the SAR stuff is junk to begin with . If the reactor had not been used for a great length of time, then perhaps one would be talking about 5,000 curies , (bad enough) but if it had been in use, each fuel element would be about 1, 000,000 curies per element. and that would be a bloody catastrophe, apart from the fact that you have the cobalt-60 in the nearby pool etc. etc. With regard to the wind rose situation and Dr. Karams famous letter, you better all read the "Meteorological Monitoring Program bit on page 7 of the July 27th 1995 NRC inspection Report, and the violation of 10 CFR 50.9 (VIO 50-160/95-01-01) . there were no actual measurements, the equipment no longer existed, seems someone may have lied.

p. 29 NRC says it finds no reason to conclude that the radioactive contaminants would be spread by any credible event or condition at the Georgia Tech Research Reactor and that I provided no facts to conclude otherwise. Lets see, I raised everything from the sinkhole next to the reactor, the fact that if one opened u p beneath it all hell would break loose, loss of coolant, steam explosions, the complex being hit by everything from Depleted Uranium tipped projectiles to hand held rocket launchers and the NRC has the gall to say that.... Let me tell you something up there in Washington in your ivory tower, NRC does not have a great track record (if NRC wants me to cite examples, I'll be glad to, just set aside a few days) to say the least, nor did the AEC. I hope to goodness that this dump of a reactor does not wind up ever being yet another of NRC's major embarrassments, but, if anything I have ever raised happens, resulting in any type of catastrophe , **IT'LL BE ON THE NRC'S HEAD, NOT ON MINE. I AT LEAST TRIED TO PREVENT ANY CATASTROPHE.** The NRC is sticking it's collective head in a sinkhole.

p.31 I NEVER referred to a study of seismic hazards performed by Tech in my Petition. I didn't I did not know it even existed. When I read what NRC wrote, I called up Law Engineering. . I was told it was overall study for the campus and that they DID NOT STUDY THE REACTOR OR AS IT APPLIED TO THE REACTOR. So NRC has that wrong too.

Section 2. of the NRC response. First, radioactive material is not tagged with little color coded labels indicating this particular cesium-137 came from Chernobyl and that over there, from Tech. EPD monitors around radioactive sites in Georgia because it can be safely assumed that much of what they find comes from the facility they monitor, they do not set up monitors around ice cream stalls. NRC says some of the isotopes are naturally occurring , however all listed could also have come from the reactor. The BE-7 could also be an activation product, it could also have come from the irradiation procedures in the past. EPD may "indicate" that the radioisotopes listed on p.6. came from other sources, but they all could have equally come from the reactor and most likely did. The RA 226 is also the U-238.

Let's do a little comparing:

In 1986 there was a massive release of contaminated water from Georgia Powers Plant Hatch of approx. 141,000 gallons contaminated with "byproduct materials" including Cesium-137 and "concentrations of radioactive materials in these samples were greatly elevated as compared to routine environmental samples" according to Ga. EPD, p. age on Special Monitoring, p.15, Environmental Radiation Surveillance report 1985-1987 (Epd does go on to say all this massive contamination "did not pose an immediate threat to the public health" - that is because it is a long term threat - the good old "no immediate danger" rubbish nuclear agencies worldwide put out - as all exposure bio-accumulates, besides, you won't get the cancer or other illness the day it happens, you get it later, not immediately.)

From 1978 to 1994, twenty seven measurements of cesium-137 in soil around the Tech reactor offsite had higher levels of cesium-137 than the LOWEST level from the spill from the spent fuel pool at Plant Hatch as measured by GPC of 470 pCi/dry kg. At Hatch the lowest EPD measurement for cesium-137 in vegetation after the spill was 73 pCi/dry kg, at Tech cesium-137 in vegetation has ranged up to 390 pCi/dry kg. Measurements at Hatch by GPC i.e. Georgia Power Co. At Tech by EPD.

H-3 in surface water from the Hatch spent fuel pool release had a highest measurement of 208,000 pCi/liter. Waste water released from Tech - which goes ultimately to the Chattahoochee River after going through the sewer treatment plant from which it can't be removed - which ultimately becomes surface water had an H-3 amount of 2,800,000 pCi/l on 11/05/79 and an H-3 amount of 1,100,000 pCi/l on 1/15/91. (EPA's lousy drinking water standards are 20,000pCi/l)

Why are Plant Hatch measurements considered "greatly elevated" and the cesium-137 at Hatch considered "byproduct materials" by EPD, but when it comes to the Tech Reactor measurements all of a sudden its from fallout from weapons tests and everything is fine? What a joke!

Lockheed left a massive radioactively contaminated site up in Dawson County, now known as the "Dawson Wildlife Management Area" (The latest fashion is to call contaminated sites by some environmental name - they've done it at the Savannah River Nuclear Site and want to do it out in Nevada at the weapons test site on Native American Indian land) Anyway, the Dawson site is so contaminated that even EPD has restricted access to the public to areas of the site.

Dawson Forest's overall AVERAGE Direct Radiation Measurement in M/Year for measurements taken in 1985 and 1986 was 98 +/- 12 M/Yr. with the highest measurement of 302 +/- 32 M/Yr. The hot cell area's had direct radiation measurements of from 83 +/- 9 to 102 +/- 11 M/Year 1985/86 The cooling off areas had direct radiation measurements from 69 +/- 8 to 302 +/- 32 M/Year

HOWEVER
Tech Reactor Measurements in 1985 for direct radiation range from 78 +/- 7 to 997 +/- 36 M/Year in 1986 from 78 +/- 10 to 376 +/- 39 M/Year, in 1990 from 68 +/- 6 to 424 +/- 45 M/Year and in 1993 to 1994 from a low measurement at one location of 57 +/- 7 to 133 +/- 21 M/Year. **WHY ISN'T THE AREA AROUND THE TECH REACTOR CLOSED TO THE PUBLIC?** (Can't worry all those Olympic visitors can we now? Or those students whose parents are paying through the nose to send them to Tech. - And I don't want to hear from NRC or EPD that some of the high measurements at Tech are from a location at the reactor where radioactive waste is stored and therefore not from the reactor. The damned waste is also partly from the reactor and is part of the complex and the remaining waste comes from sites on campus which are handled via the Broad/General License the Nuclear Center has.)

With regard to what else is written on p.6 and 7 of the NRC response to my Petition: due to the mass spills from the reactor into the sewers (and don't give me that rubbish about it all coming from the pool which holds the Cobalt-60 and as the cobalt is licensed by the State the reactor has nothing to do with it, when in fact the pool can be used for storage of spent fuel and Dr. Karam says he needs all that cobalt and the reactor depends on the water in the pool as cited for back-up cooling - God forbid I asked for everything under the reactor/lines etc. to be tested as stated, which was never done. In the mentioned inspection reports it says after a spill EPD did a survey of the sewer. Well, EPD told me recently that the famous survey was done in a blinding rainstorm, they had no sewerline maps and probably went down the wrong hole to take a grab sample. So much for that. The tests NRC ran at the

RM Clayton sewage treatment plant, because I raised so much stink PROVE what I said, namely that there is contamination and some of it came from the reactor. Consider: Inspection report of June 21st 1995 50-160/95-01 shows U-238 and H-3 was found in liquid waste from the reactor (NRC somehow forgot to run tests for I-131) in tests run on the cooling tower TH-232 was detected and H-3 (again, NRC forgot I-131 - amazing, I wonder why....) furthermore, past tests in EPD documents show Strontium-90 was dumped which has a half-life of approx. 30 years. It is rubbish for NRC to say the Strontium-90 in the sewer release water which goes underground is all the result of prior weapons test fallout. You found in the sludges/feed cake/ash cesium-137 (which you did not test for out the cooling tower or in the water when those special samples were taken) U-238, Th-232 and a lot more besides including I-131. While some of the I-131 could have come from medical waste you all know damn well its at the reactor and would go out as a major contaminant in case of accident (read the SAR and relicensing application) NRC maintains its all tiny amounts, well, you found that in one gram, the sewage treatment plant processes thousands of pounds of sludges, when you multiply what is in one gram by what has been processed at that treatment plant over 30 years, you will find there is one helluva problem, in all probability. Besides, that was one test, one in 30 years of dumping, and, in one spill an unknown amount of cobalt-60 went to the sewers (see: "Rambolin' Reactor -Checking out the Hottest Spot on Campus" by Greg Land, Creative Loafing, Dec. 17th, 1994)

"The values and variations of all monitored locations around the Georgia Tech Research Reactor were typical of environmental monitoring results at other locations" says the NRC on p.7 The other locations are all around nuclear facilities which all contaminate the environment under ALARA just as Tech's Reactor does, which brings me to section B. of the NRC response (I'm going to move around a bit here and go back later)

To all of what was stated under "B", the NRC either never asked me for details, or it knows the answers anyway just as I do. However, I did provide information in general terms which you should have paid attention to. Here are a few specifics:

1)ALARA: I detailed in my 2.206 that "as Low As Reasonably Achievable" equals "planned deaths" according to Dr. John Gofran because it allows the continuous release of radiation at all stages of the nuclear cycle as long as releases are kept As Low As Reasonably Achievable /ALARA depending on how much money etc. is spent on containing releases. Dr. John Gofran, as the NRC well knows, holds patents on the discovery of the fissionability of U-233 and two processes for isolation of plutonium, he was the medical director of the Lawrence Livermore Lab and has credentials as long as my arm- but NRC knows all this, he is also a major critic of the nuclear situation and the medical effects, which NRC doesn't like. On September 11th 1978, the Nuclear Regulatory Commission, in the persons of Robert B. Minogue, Director, Office of Standards Development and Karl Goller, of the same office wrote to Dr. Gofran. They are discussing a newspaper article, including the genetic effects of radiation exposure and many things. Here is an excerpt: "The evidence mounts that, within the range of exposure levels encountered by radiation workers, there is no threshold, i.e. a level which can be assured as safe in an absolute sense. We have found in discussions with people in both the power industry and in the nuclear medicine field that many people in the fields honestly believe that the low levels of exposure permitted are without risk, which reflects that somehow the wrong message has been delivered.....we felt it should be made clear to workers there is some risk...." NRC can go and look up the letter. In fact, the NRC can, in this context, go and read a book I wish to have entered into this record in full, as it concerns a very famous case against the NRC, and it's time you all read and re-read it. It's called "SHUTDOWN __ NUCLEAR POWER ON TRIAL, EXPERTS TESTIFY IN FEDERAL COURT". It is available from THE BOOK PUBLISHING COMPANY, 156 Drakes Lane, Summertown, TN 38483, send them \$5.000. Or the NRC (and everyone else) can read the same 2.206 petition filed by Ms. Honicker way back in 1978 on which the book is based, also denied by NRC, just as mine is. Nothing has changed has it? NRC knows the ~~Q&A~~ issued a damning report on how NRC and EPA had dropped the ball with regard to effects of sewer dumping. NRC knows it all and doesn't act.

It's hot, I only have a small air conditioner in one room and its not the one I work in. I'm tired of the NRC playing games, I don't want to completely ruin my health over NRC's irresponsibility. I shall stop this response now. I raised the terrorism issue before I filed my petition with NRC. Tech is removing some of the stuff because of all this fuss, we all know it. I will argue the rest in front of the NRC Commissioners if need be, if I have to walk to Washington to do so., even though it is probably utterly useless. In the meantime, remember I filed a timely response against the LEU being brought in. I re-iterate: the place is a dump and should be shutdown forever and cleaned up. NRC is not protecting the public health and welfare.

* @ AD = general accounting office.

Perhaps if NRC and EPD did not receive money from those it regulates for the licensing it would be more responsive. Unfortunately NRC and the Atomic Energy Commission before it has compounded mistake upon mistake. I fear greatly that because of NRC's inaction on important health and safety issues over the years, and because of the absolute lack of a deep examination of the entire nuclear issue, from weapons to power reactors and total lack of understanding on these issues by the press, the general public and many within the NRC and the government as a whole, in this country and elsewhere, we have many more Chernobyls in our future and even the use of nuclear weapons by some criminal minds.

I hope that everyone who got NRC's response to my 2.206 Petition requests a copy of my Petition from NRC (and the letters I sent in to be added to it.)

In closing, a few quotes for the record:

"there is no known tolerance level for radiation" R.M. Sievert the famous radiologist after whom certain radioactive measurements are called. ("Tolerance Levels and Swedish Radiation-protection Work" Proceedings of the Health Physics Society, June 1956, p. 181) A tolerance level being a level below which there is no damage (sometimes called a threshold) A safety level is ordinarily a fraction of the tolerance level. Quoted in "No Immediate Danger - Prognosis for a Radioactive Earth" Dr. Rosalie Bertell.

"The bomb survivor data now shows without doubt that there is no safe dose of radiation, and, furthermore, that the lowest doses have caused the greatest cancer increases per unit of radiation." From: "Hazardous Waste News" June 13th, 1990, by the Environmental Research Foundation, editor Dr. Peter Montague. (Ph.D.)

"...the measurements by EPD of other isotopes (i.e. cesium-137, cerium-141, cerium-144, ruthenium-103, zirconium-95, and niobium-95) were not from the Georgia Tech Research Reactor. Rather, EPD indicated that the radioisotopes were from other sources, such as fallout from nuclear weapons testing around the world." p. 6 NRC response. — Among contaminants released from the Chernobyl nuclear reactor were: Cesium-137, cerium-141, ruthenium-103, I-131, strontium-90, zirconium-95, niobium-95. I suppose next the story will be that Chernobyl caused the years of contamination found.

"We began to discover effluent reconcentration in the sewers 10 years ago.... Re-concentration is a known phenomenon, a known problem." NRC's Robert Bernero, quoted in Science News, p.218 Vol.146, Oct. 1, 1994. 'Senator Glenn still expresses concern that facility operators need to be notified about the possibility of radioactive contamination says an aide.' Source: same.

"The problem is breaks and leakage in Atlanta's antiquated sewer pipes, which annually dump unknown thousands of gallons of raw sewage into area creeks and streams.... little of the money in the city's 1994 bond package is earmarked to repair sewer lines such as the one that collapsed." (i.e. Orme St. trunk) Atlanta Business Chronicle, Feb. 10-16, 1995, "Questions remain about Atlanta's aging sewer lines." by Julie Hairston.

"In the event of a nuclear excursion, an observer downwind from a slow leak in the containment building would be exposed to radiation from an airborne fission cloud. Also, radioactivity could be inhaled." From the Tech Reactors documents, p.187 filed under the relicensing application.

Approximate reactor vessel weight: 2,000 lbs. Total (coolant) weight flow entering core 982,000 lbs/hour. Source: Same Tech reactor documents. (all this on top of fill material and water etc.)

Irradiated fuel assemblies are moved from the core to the storage area using a shielded transfer cask. There must be a 12 hour wait after reactor shutdown before this can be done. "This ensures that sufficient fission product decay heat has been removed from the assembly and that the surface temperature of the fuel plates will not reach 450 degrees Centigrade when the assembly is moved into the cask." Same source as above, p.144. If a mistake is made "some or all of the fuel plates within the assembly could then melt..."

Campus police have no radiation protection gear, nor do firemen, nor does Ga. EPD Radiation Surveillance Division.

My petition should be granted in full. Pamela Blockey-Of
(1 Enclosure.)

1992 study warned of cave-ins

Sewer under Tech campus inadequate, city was told

By Douglas A. Blackmon

STAFF WRITER
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A study prepared for Georgia Tech in 1992 — and shared with city officials seven months ago — warned that the sewer line that caused last week's deadly Midtown sinkhole was deteriorating and "inviting" collapse.

"The potential exists for an intense summer storm during the 1996 Olympics Games with serious consequences and embarrassing adverse worldwide publicity," said the study, a copy of which was reviewed by The Atlanta Journal-Constitution.

The report outlined extensive drainage and sewage contamination problems on the Georgia Tech campus, all of them caused by the age and inadequacy of the Orme Street trunk, the sewer line that failed in the June 14 cave-in. Two hotel workers died when they plunged into the pit formed by the collapse.

The engineer who co-authored the study wasn't surprised.

"It catches one off guard, but it was no surprise, because we had just looked at it," said Birde F. Jackson III, an engineer with B & E Jackson and Associates.

In recent years, the study found, the campus periodically experienced severe flooding in streets and a parking deck, small sinkholes in playing fields where Olympic athletes will practice and cave-ins smaller but similar to the one

Please see REPORT, B9 ▶

Report: Cave-in danger noted in '92

▶ Continued from B1

last week. Mr. Jackson said he shared his findings with former Public Works Commissioner Michael Pack before Christmas and was told Atlanta was about to address the problem.

"They indicated they were right on top of things," Mr. Jackson said.

Acting Public Works Commissioner Doug Hooker said this week that he is not familiar with the report. But Mr. Pack, now the acting aviation commissioner, said in an interview Friday that he recalled Mr. Jackson's findings. They only confirmed problems the city was already aware of, he said.

Since the cave-in 12 days ago, city officials have denied they moved too slowly to correct the problems, but the city has known for at least a decade that the Orme Street trunk was deteriorating. A 1981 study conducted for the city also detailed problems in the line, and the Public Works Department has requested funding the past two years to begin work on a new sewer line to relieve the pressure from the Orme Street trunk.

The portion of the sewer line under Georgia Tech, most of which was constructed in 1892, runs down the center of Grant Field, under Peter's Parking Deck and beneath the university's baseball and track fields.

The detailed examination of the Orme Street trunk found that the sewer is only half the size necessary to carry away all the sewage and storm water generated in the area it serves.

The report said a combination of measures aimed at preventing flooding — from the Georgia Department of Trans-

portation building oversized sewers under the Downtown Connector to welding down manholes on the Georgia Tech campus — were actually overwhelming the sewer line and exacerbating other problems.

The result is high-pressure flows during heavy rain which create "jet-like leaks through the defective mortar joints and cracks," the study said.

The powerful leaks erode soil from around the sewer, and "over long periods of time a significant and continuous void is created around the sewer, inviting ultimate cave-in of the earth overburden, and in some cases, the sewer itself," said the report.

What triggered last week's cave-in, at the Courtyard by Marriott hotel on 14th Street, has not been determined, but most engineers agree it was probably due to erosion around a leak in the sewer line.

The Tech study said the overburdened sewer line sometimes causes the football field to bubble into "puff-ups," the largest of which was 5 feet high and 50 feet across.

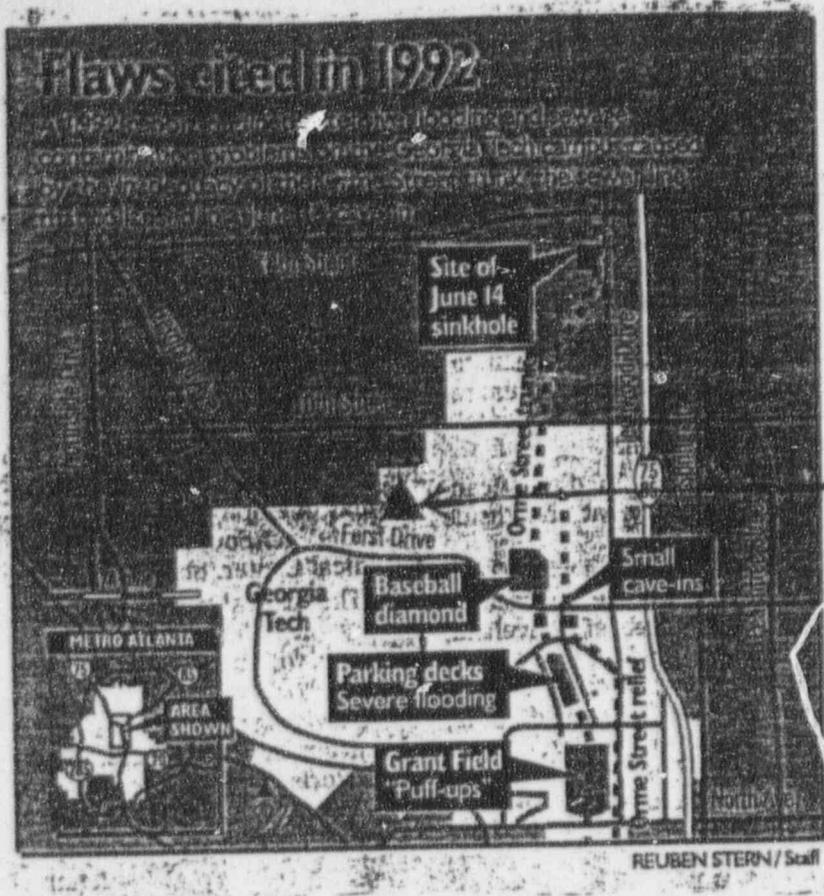
Surging storm water and raw sewage have repeatedly blown manhole covers as far as eight feet away, allowing open flooding into streets.

Earlier this year, the city requested proposals for designing the relief sewer project, and the Public Works Department will name a consultant soon to do the design work, Mr. Hooker said.

However, the city still has no money to pay \$500,000 for the design work, much less the estimated \$9.5 million in construction to follow, until it sells about \$200 million in water and sewer revenue bonds approved by the City Council last week.

OVER FOR MAP





▲ APPROX IMAGE,
REACTOR
LOCATION
(I ADDED THE
TRIANGLE)

OVER PLEASE
FOR ARTICLE



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA

Docket No.(s) 59-160-REN

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LTR FM PAMELA BLOCKEY-O'BRIEN have been served upon the following persons by U.S. mail, first class, except as otherwise noted and in accordance with the requirements of 10 CFR Sec. 2.712.

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Charles Bechhoefer, Chairman
Atomic Safety and Licensing Board
Mail Stop T-3 F 23
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Jerry R. Kline
Atomic Safety and Licensing Board
Mail Stop T-3 F 23
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Peter S. Lam
Atomic Safety and Licensing Board
Mail Stop T-3 F 23
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Sherwin E. Turk, Esq.
Office of the General Counsel
Mail Stop 0-15 B 18
U.S. Nuclear Regulatory Commission
Washington, DC 20555

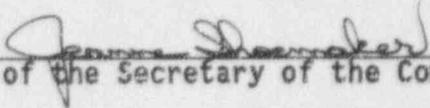
Randy A. Nordin Esq.
E. Gail Gunnells, Esq.
Georgia Institute of Technology
400 10th Street, N.W.
Atlanta, GA 30332

Patricia Guilday, Esq.
Assistant Attorney General
Georgia Department of Law
40 Capitol Square SW
Atlanta, GA 30334

Glenn Carroll
Georgians Against Nuclear Energy
P.O. Box 8574
Atlanta, GA 30306

Docket No. (s) 50-160-REN
LTR FM PAMELA BLOCKEY-O'BRIEN

Dated at Rockville, Md. this
22 day of August 1995


Office of the Secretary of the Commission

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

GEORGIA INSTITUTE OF TECHNOLOGY
ATLANTA, GEORGIA
(Georgia Tech Research Reactor
Facility Operating License No. R-97)

Docket No.(s) 50-160-0M

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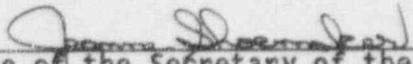
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