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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges

Thomas S. Moore, Chairman

Dr. Peter S. Lam

Dr. Thomas S. Elleman

In the Matter of	)	Docket Nos. 50-327-OLA
TENNESSEE VALLEY AUTHORITY:	)	50-328-OLA, 50-380- OLA
Sequoyah Nuclear Plant, Units 1 & 2	)	ASLBP No. 02-798-01-OLA
Watts Bar Nuclear Plant Unit 1	)	March 7, 2002

CONTENTIONS OF JEANNINE HONICKER

INTRODUCTION

On December 17, 2001, the Commission published a notice of opportunity for hearing on the license amendment request of the Tennessee Valley Authority (TVA) to change the technical specification (TS) for its Sequoyah Nuclear Plant, (66 Fed. Reg. 65,000, Dec. 17, 2001.) and its Watts Bar Nuclear Plant (66 Fed. Reg. 65,005, Dec. 17, 2001)

On Jan 14, 2002, I filed a petition to intervene the Watts Bar and Sequoyah amendment proceedings. On February 7, 2002 the Licensing Board filed a

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Memorandum and Order allowing petitioners to amend their petitions by Feb. 21, 2002. On Feb. 14, 2002, I submitted an amended petition. In the Memorandum and Order, March 7 was set as the deadline to enter contentions. I do hereby submit the following:

CONTENTIONS

CONTENTION #1, Statement of fact.

TVA has not adequately considered the adverse health effects of the large releases of tritium that would occur if this license amendment is granted.

TVA only used computer models to calculate the risks of tritium releases to individuals and the public, ignoring actual studies that show extremely adverse health effects. Studies of unexpectedly large adverse effects of tritium exposures in humans and animals include the following:

(1) Farley, I. The Overlooked Nuclear Hazard, The Ecologist, Vol. 22, No. 5, September/October 1992,.This is a review article discussing a series of studies linking tritium emissions with birth defects, infant mortality and cancer.

(2) Atomic Energy Control Board Report INFO-0401, Tritium Releases from Pickering Nuclear Generating Station and Birth Defects and Infant Mortality in Nearby Communities 1971 - 88, Ottawa, Canada 1991. The study found an 80% increased prevalence of Down's Syndrome in the nearby town of Pickering and a 46% increase in Ajax, a town further away.

(3) Atomic Energy Control Board, Childhood Leukemia Around Canadian Nuclear Facilities, Phases 1 and 2 Reports prepared by the Ontario Cancer Treatment and Research Foundation, Ottawa, Canada 1989 and 1991. The report

found a 40% increase in childhood leukemia near the Bruce and Pickering reactors.

(4) Gardner, M et al. Results of a Case Control Study of Leukemia and Lymphoma among Young People near the Sellafield Nuclear Plant in West Cumbria, British Medical Journal Vol. 300, 423-429, 1990. The report mentions tritium as one of two possible internally deposited radionuclides in workers at Sellafield.

(5) Committee on Medical Aspects of Radiation in the Environment, Investigation of the Possible Increased Incidence of Leukemia in Young People near the Dounray Nuclear Establishment, Caithness, Scotland. London 1989.

(6) Sever et al., A Case-Control Study of Congenital Malformations and Occupational Exposure to Low-Level Ionizing Radiation, American Journal of Epidemiology Vol. 127, 226-254, 198--.The paper reports a statistically significant association between the paternal pre-conception radiation dose to Hanford workers and neural tube defects in their children, as well as a statistically elevated rate of the same birth defects among the general population near the Hanford site, where large discharges of tritium took place.

(7) J. A. Strand et al. Permanent Suppression of the Primary Immune Response in Rainbow Trout, Salmo gairdneri, Sub-lethally Exposed to Tritiated Water during Embryogenesis, Radiation Research Vol. 91, 333-341 (1982). The paper describes an irreversible suppression of immune capacity that shows no threshold and an exponential dose response curve that suggests extrapolation of effects to even lower exposures than in the range of the presently permitted concentration of tritium for drinking water used in the study.

(8) R. Edwards, Hot Seafood: Fish are more Radioactive than Anyone Suspected, New Scientist, October 31, 1998. Scientist at the British Ministry of Agriculture, Fisheries and Food (MAFF) discovered that fish in the Severn River Estuary had hundreds of times greater concentrations of tritium than that measured in the water, calling into question the previous assumptions regarding the hazard presented by tritium to both fish and humans consuming them.

According to 10CFR 50.59, this represents an unresolved safety question. The license amendment must be denied.

Dr. Ernest Sternglass will be the expert witness on this contention His curriculum vita is attached, as attachment #1.

CONTENTION #2 Statement of fact

TVA has not adequately calculated the amount of tritium that will be released into the Tennessee river, should this license be granted. Using information provided at the October 2, 2001 public meeting concerning producing Tritium at Watts Bar and Sequoyah, 176,032 curies of tritium can be calculated to be released should this license amendment be granted, and TVA is allowed to irradiate 2304 tritium burnable absorber rods for 18 months.

On October 2, 2001, NRC, DOE and TVA held a joint public meeting entitled "Production of Tritium in Tennessee Valley Authority Reactors. A document containing the Questions and Comments Presented by Members of the Public, with replies by TVA staff. is herewith attached, (attachment #2). Pages 1 and 2 of the Questions and Comments section are the pages that I am using for this contention.

Page 1, comment #2 "An NRC inspection report (IR) stated that 3 times the

allowable tritium effluent was released from Watts Bar over a 3-year period".

Page 2, "Table 1, Watts Bar Radioactive Liquid Effluent Releases for 1996 through 1998" lists the tritium releases for the three year period as follows: 1996 - - 223 curies, 1997 -- 639 curies, and 1998 - 713 curies. Since Watts Bar obtained 100% power in March, 1996, one must conservatively consider the 223 curies as 9 months of tritium emissions. 32 rods, identified as tritium lead test assemblies(LTA's) in this report, were irradiated in the Watts Bar reactor from June, 1997 until March, 1998. The exact dates are not given, but for a conservative calculation, we will use 6 months in 1997 and 3 months in 1998. Dividing the 223 curies released in 1996 by 9 months, we arrive at an average emission of approximately 26 curries per month.

To arrive at the expected annual tritium release without the rods, we multiply 26 x 12 for an expected yearly release of 312 curries. Subtracting 312 from the 1997 total tritium emissions of 639 curries, the added amount of tritium emissions that can be attributed to tritium producing test rods would be 327 curies. Since the rods were only in the reactor for 6 months, that figure should be doubled to give the amount of tritium that would have been attributable to the 32 rods had they been in the reactor for an entire year -- 654 curries.

For the year 1998, when the test rods were in the reactor for only 3 months, the curies released rose to 713. By subtracting the yearly expected release of 312 curies from the 1998 monitored release, 713 minus 312, we arrive at 401 curies for a 3 month irradiation of the 32 tritium lead test rods. For a six month irradiation, the amount would have been 802.

The federal Register notice specified that 2304 lithium tritium producing burnable absorber rods would be installed at Watts Bar if this license amendment is granted. They are to be irradiated for 18 months, twice the time the test rods were irradiated. Since the rods seem to emit less tritium during the early part of the irradiation process than at the end, it is a conservative calculation to add the 654 number, for one year, and the 802 number for the last six months, to give a total of 1456 curries as the amount that would have been released had the 32 test rods been irradiated for 18 months

2304 is exactly 72 times 32, so we should multiply 1456 time 72 to arrive at the expected release of tritium over an 18 month period of irradiation of 2304 tritium producing burnable absorber rods for a total expected tritium emission of 176,032 curies, or a yearly average of 112,354 additional curies of tritium that will be released if this license amendment is granted and 2304 tritium producing burnable absorber rods are irradiated in the core of the Watts Bar Nuclear Plant.

There is one uncertainty in this calculation. The material used in the 32 rods is different from the lithium that is expected to be used in the 2304 rods specified in the federal register notice to be used if this amendment is granted. Changing the material from that used in the test rods to lithium is the equivalent to a drug company testing a drug containing one set of ingredients, then asking for a license to produce and distribute a drug by the same name, but composed of a different set of ingredients. Would a drug manufacturer be granted a license or permit to produce the altered untested drug? That is what the TVA is asking the NRC to do, to grant an operating license amendment for rods that are different from the test

rods. The NRC must deny the requested license. This is in violation of 10 CFR 50.59 and involves unresolved safety questions..

CONTENTION #3. Issue of law to be controverted

The tritium that will be added to the Tennessee River is not going into uncontaminated water, but will be an added insult to an already contaminated water supply, Steve Sanford, an environmental engineer, will present evidence to show consistent violations of the Clean Water Act in the region of interest and consistent violations of the Safe Drinking Water Act in the region of interest.

Basis for contention on which the petitioned intends to rely in proving the contention at the hearing :

Federal Facilities Agreement violation (FFA no. 89-04-FF)

Violation of TDEC Commissioner's Order (no. 94.0067)

Record of Decision non-compliance (ROD DOE/OR02-1373 & D3)

QA/QC Dispersion Modeling Plan deficiencies (HERMES & GENII computer model)

Misleading oversight statements at public meetings (ORR, Tetra-Tech, M. Blauer, "There have been no unmonitored releases", and EPA4 V. Weeks non-confirmation of technical understanding nor access to data).

Prior de-selection of Congressionally preferred alternative clean-up (DOE/OR/01-1282, et al)

Non-response to prior environmental issues (see letters below.)

References to specific sources and documents of which the petitioner is aware and on which the petitioned intends to reply to establish those facts or expert

opinion:

The following letters with respective attachments and references:

C. S. Sanford letter to TDEC Commissioner M. Hamilton, dated Oct. 19, 2000

C. S. Sanford letter to Rep. G. Odom, dated March 21, 1997

C. S. Sanford letter to TDEC M. Mobley, dated June 13, 1996

C. S. Sanford letter to TDEC J. O-Baah, dated June 19, 1996

C. S. Sanford letter to OROO C.Gist, dated July 7, 1995

C. S. Sanford letter to DOE A. Alms, dated Oct. 7, 1996

C. S. Sanford letter to TDEC W. Scharber, dated Dec. 11, 1996

C. S. Sanford letter to EPA V. Weeks, dated Oct. 7, 1996

C. S. Sanford letter to M. Bauer (OROO contractor) dated Apr. 21, 1997

The synergistic effects of the existing contamination and the increased tritium emissions have not been considered, and under 10CFR 50.59 this represents unresolved safety problems.

Mr. C. S. Sanford will be the expert witness to present this contention. He is a former employee of the State of Tennessee as an Environmental Engineer under the authority of the federal Clean Water Act. His resume is attached. (attachment #3)

CONTENTION #4 Issue of law to be controverted:

The production of tritium at Watts Bar and/or Sequoyah is illegal.

The Atomic Energy Act of 1954 prohibits the production of material for nuclear weapons at Commercial nuclear power plants. The argument that this only refers to plutonium is ludicrous. The intention of the law was to create "Atoms for Peace" It was important to separate material for weapons from the production of electricity

to gain public support for nuclear power plants. Granting this license amendment will shatter that separation. Therefore, to grant this license will violate the 1954 Atomic Energy Act.

CONTENTION #5

The NRC is charged with protecting the National Defense. Production of tritium to replenish the hydrogen in the U S nuclear arsenal is a threat to National Defence because:

(1) It will increase the threat of proliferation

(2) Will undercut the Presidents negotiation with the Russians to reduce their nuclear stockpile.

(3) Is unneeded at this time.

(4) There are better alternatives.

On Nov. 28, Representative Edward Markey, D-Mass, sent a letter to Energy Secretary Spencer Abraham questioning both the "wisdom and need for this license.

Rep. Markey addressed the proliferation issue by noting that this would send the wrong message to the world. He proposed recycling of the tritium from the additional weapons that are being removed from the US stockpile as a result of President Bush's proposed reductions.

In addition to recycling, there are other options that the DOE could use that would not involve producing material at a commercial nuclear power plant. Up until 1988, DOE produced tritium at the Savannah River plant. DOE has enough time, now that President Bush has announced further reductions to the US

stockpile, to build production facilities on DOE reservations, thus eliminating the threat that other nations can point to this breach of historical precedent, and in effect say, "The US is producing material for nuclear weapons in their commercial nuclear reactors. If they can do it, we can too." They are not going to make any distinction between tritium and plutonium. This amendment application is specifically to allow the production of tritium to be used in U. S. nuclear weapons.

Rep. Markey saw the threat. I see the threat. In your wisdom, I pray that you will also see the threat. It can only be averted by your denial of this proposed license application.

CONTENTION #6

The March 7, 2002 deadline for contentions is untimely, unrealistic, and illegal.. This hearing must be postponed until the legally required documents are available to the general public.

The National Environmental Policy Act (NEPA) specifies that every significant federal action shall be preceded by an Environmental Impact Statement. Crossing the divide between weapons material production and electricity production is certainly a significant Federal Action. Where is the TVA Environmental Impact Statement concerning the production of Tritium at Watts Bar and/or Sequoyah?. It is TVA who will be producing it and it is their responsibility to produce an Environmental Impact Statement BEFORE these hearings. It was from reading the TVA Environmental Report, four volumes, before the hearings for the Hartsville Nuclear Plant that the public was able to discover items which they deemed contentionable. This hearing is untimely because there are no TVA or NRC

Environmental Impact Statements, as required by NEPA, upon which to base contentions..

In 1977, when I filed a petition to intervene against the operating permit for Watts Bar, the presiding Judge at the pre-hearing conference questioned TVA about their lack of a Final Safety Analysis Report. That was an untimely hearing, and set the precedent of TVA asking for hearings before they have prepared all the necessary documents upon which the public should be able to rely for pertinent information. It was not until Nov. 1994 that the information needed to prepare contentions site specific to Watts Bar were available in NRC's Draft Final Environmental Impact Statement, Supplement 1, NUREG-0498..By then, the time had long past for the public to intervene. Hearings were never held for the operating license of Watts Bar.

As a result of TVA's requesting a hearing for an operating license in 1977, 19 years before the plant eventually went on line, thwarted the publics ability to participate in a hearing. They are using the same tactic again with this license amendment hearing. The action that I request from this Licensing board is that you instruct TVA and NRC to make their Environmental Reports and/or Environmental Impact Statements, and Final Safety Analysis reports available to the public before these hearings commence. I further ask that you reschedule the time for public intervention, reopening the process to the entire population, not limit it to the few responses you received by January 16, 2002, , and lastly, that you grant a further extension of time for the submission of contentions. At the very least, allow the present interveners to add to their list of contentions as information in the form of

ERs, EISs, and FSARs becomes available from the TVA and NRC.

CONTENTION #7 Statement of fact to be controverted::

The possibility of accidents involving the production of tritium at the Watts Bar Nuclear Plant can not be known because of the questionable quality of construction of that plant. Therefore, the Nuclear Regulatory Commission's (NRC's) proposed finding of "No Significant Hazards" is in error, and the proposed license amendment must be denied.

Mansour Guity was a member of the Nuclear Safety Review Staff of the Tennessee Valley Authority. On Sept. 5, 1995 he submitted a letter to Mr. Al Ignatonis, USNRC, a long certificate list, which he labeled "Attachment A" and a synopsis of Watts Bar Nuclear plant Unit 1, Nuclear Safety Problems and Non-compliances with Title 10, CFR50 Appendix B, which he labeled "Attachment B". I am hereby attaching a copy of Mr. Guity's letter, Attachments A and B, and making it my Attachment #4.

Mansour Guity, an engineer and lead investigator for the Nuclear Safety Review Staff at Watts Bar, not only listed the problems that he identified there, but also listed the applicable 10 CFR50, Appendix B rules that were violated.

Quality Technology Corporation (QTC) was hired by TVA to confidentially interview WBNP employees and others who had concerns, Over 5000 concerns were collected, of which about 1800, according to Guity, page 7 of Attachment B, were determined to have Nuclear Safety implications.

On Oct. 11, 1995, I sent a letter to Dr. Shirley Jackson, then Chairperson of the

NRC detailing the inadequacies that I discerned from the NRC inspection report 50-390-95-47 and 50-391-95-47. A copy of said letter is hereby referenced and is made my Attachment #5 to this document.

In summary, the approximately 5000 employee complaints, 1800 of which according to Mr. Guity had Nuclear Safety implications, had been penciled down to 27 by TVA. according to IR 50-390-95-47 , 50-391-95-47. This NRC document was the official NRC sign off document for those employee concerns.

(1) The original concerns were not identified.

(2) The cover letter of IR 390/391-95-47 stated , "We have completed our inspection of your (TVA's) Design Baseline Verification Program Corrective Action Program (CAP) and concluded that the CAP has been adequately implemented." Then the following sentence proved that that could not be true. "Three items, involving completion of CAP source issues, evaluations of assessments, and FSAR table errors will be reviewed further."

TVA consolidated the employee concerns into 27 Corrective Action Tracking Documents. The NRC Inspection Report 50-390/391 95-47 states "Although some discrepancies were found, in general the PAC/AQ (Program for Assurance of Completion/Assurance of Quality) review and FSAR were considered adequate. The employee concerns were resolved."

In my letter to Shirley Jackson, I asked the following questions:

"What discrepancies were found?"

" Who were the employees who had originally made the complaints?"

" Have they been kept informed of the resolution of their concerns?"

'Have the aforementioned employee or employees review the documents?'

"Are they satisfied that the problems they identified in their original complaint have been fixed and not merely "reworded" away?

"What happened to each individual employee since he or she first voiced his or her original concern?"

NRC IR 50-390/391 -95-47 item 2-3-2 shows that some of the employee concerns were merely calculated away. Even the new calculations were questionable. ie Employee concerns involving circuit breakers: "In general, the electrical calculation program was determined to be adequate and the regenerated electrical calculation of good quality."

Then items 2. 3. 2 continues: " The inspectors questioned whether the current breaker settings had been field verified during the CATD closure process to ensure that they matched the calculations. There was no indication from the lookback sheets or from the closure folders that any field verification had been performed during the CATD closure process. TVA identified that CATD23702-WBN-06, . . . addressed actual hardware completion and that they had not performed a field verification. TVA immediately began a field verification sample review. During the review, several problems were found and documented on the corrective action document WBPER 950392. DCN 37538 was issued to address two thermal overloads that were found when the installed hardware matched the drawings but did not match the calculations. A breaker was found with an incorrect setting and a work request was issued to reset the breaker to the setting required by the Calculation. TVA intents to reopen CATD 23702-WNB-06 to address the

problems associated with the field installations. The insures- - - were resolved."

Clearly, The NRC accepted TVA's promise to resolve problems as adequate proof that the problems had actually been resolved.

The National Electric Code was abolished as a part of the design criteria. Again TVA used an eraser to remove safety concerns. (Section 2.3.4, 23702-NPS 05, Level of Conformance to National Electric Code: There were three separate CATD's 23702-WBN-02, 04, and 05 that were resolved by removing the National Electric Code as a part of the design criteria.

In the process of preparing this inspection report, TVA identified 230 additional deficiencies. The NRC inspected only 18 of them, The cover letter states: "Within the scope of the inspection, violations or deviations were not identified." Obviously, that statement was not consistent with the material disclosed in the body of the report..

Yesterday I asked Gill Melear-Hough, a Knoxvillian, to check the TVA computers at the library at TVA headquarters for this particular inspection report. The librarian even called me long distance. She was not able to locate this report Enclosed is an e-mail message to me from Mr. Hough (attachment #6).

Obviously TVA does not have information available to the public even at its Knoxville headquarters, as its web site specifies. Mr. Melear-Hough will be glad to verify this claim at the public hearing, if you wish.

In Nov. 1994, the NRC issued a draft Final Environmental Impact Statement, NUREG-0498, Supplement 1. It provides evidence that the radiation doses had been calculated away. Page 5-11, lines 37-39 states:" Radiation dose commitments

to individuals and to the public from routine atmospheric releases from the WBN Plant have been review and recalculated because the NRC analytical models have been revised. "

As a result of these new calculation methods, the cow-milk-child pathway has been eliminated from the exposure pathways. NUREG -0498, lines 19-32 "Exposure pathways" makes no mention of this pathway which was characterized as the "Critical Pathway to Man" in the Hartsville Nuclear Power Plant Environmental Report.

According to calculations made by the TVA, using Guideline 1.42, the dose to a one year old child drinking milk from a cow that grazed near the Hartsville plant, (when operational), would be 335 mrems per year. TVA called Guideline 1.42 too conservative, and substituted it's own calculation method, which they only identified as model 2. This conveniently brought the dose down to 11.5 mrems, just a little less than the allowable dose of 15 mrems. (Attachment #7) Instead of enforcing their regulations, the NRC abandoned Guideline 1.42 and introduced Guideline 1.109, sometime after the beginning of the Hartsville hearings, and the dose dropped to an insignificant 1.1 mrems. The results of this reduction by recalculation meant that TVA was not obliged to install charcoal absorbers on the ventilation system of the turbine buildings and the reactor buildings at Hartsville. It has even greater significance at Watts Bar, and to this hearing, because by using a lower calculated dose, TVA was able to justify refusing to install 23 of 26 design changes that NRC identified as being capable of mitigating consequences of sever accidents.

NUREG-0498, section 7.2, page 7-1 identifies 26 Severe Accident Mitigation Design Alternatives (SAMDAs) that TVA rejects because their cost would exceed $1,000 per person rem of radioactive exposure. NRC insisted on only 3, leaving 23 that were not installed on the Watts Bar Plant. The NRC has not considered the impact of an accident with the addition of 2304 TPBARs as a result of TVA's not implementing the 23 technical changes that would have mitigated the consequences of a severe accident at Watts Bar. TVA's unconcern for its workers is shown on page 7-23, lines 29-31 "TVA did not consider averted onsite costs or averted occupational exposures in evaluating the cost effectiveness of the proposed enhancements."

Instead of reciting the entire list of 23, I will only refer to 2, but have enclosed the entire section as my attachment #8.

Page 7-27, lines 36-40. Install Improved RCP (Reactor Coolant Pump) Seals (Enhancement III.2) "This proposed design alternative involves replacement of the current RCP O-ring seals with seals constructed of improved materials. The replacement seals would be capable of withstanding higher temperatures and would have a higher likelihood of remaining intact under loss of seal cooling conditions. "

May I refresh your memory of the tragic explosion as a result of faulty O-rings in a space craft.

Page 7-26, lines 10-29, Install Accumulators for Turbine Driven AFW Pump Flow Control Valves and Steam Generator PORVs (Enhancement III-4)

"This proposed design alternative involves installing control air accumulators for the turbine-driven AFW flow control valves, the motor-driven AFW pressure

control valves, and the steam generator PORVs. This would eliminate the need for local manual action to align nitrogen bottles for control air during loss of offsite power. The applicant estimated that a total of about 22 person-rem or 10% of the risk at the WBN Plant would be eliminated through this modification. (Remember, TVA only considered off site doses, not operator doses. The actual doses to the workers assigned to do this job is not given. Table 1, page 5-11 NUREG-0498 line 37 & 38, state: "Radiation dose commitments to individuals and to the public from routine atmospheric releases from the WBN Plant have been reviewed and recalculated because the NRC analytical models have been revised. Page 5-12 lines 2 and 3 state: "Methods of Evaluating Compliance with Appendix I, adapted from Regulatory Guide 1.109, NRC 1977)

(Mr. Sanford has identified deficiencies in Guideline 1.109 and will present evidence concerning the inadequacies of this Guideline at this hearing.)

Line 22 "The operator actions required at the WBN Plant involve manually isolating the compressed air from the control valves and then aligning nitrogen bottles to supply motive force for the valves. All these actions are via locally operated manual valves." The added heat and radiation for the 2333304 TPBARS could not have been considered in 1994 when this NUEWF was released, no could the ommission of this improvement been considered when NRC arrived at the proposed "No Significant Hazards" evaluation of the proposed amendment to the operating licenses.

Dr. Ernest Sternglass is prepared to testify about the consequences of discontinuing monitoring for Sr90, another consequence of changing the Guidelines

from 1.42 to 1.109. His curriculum vita is also attached. (Attachment #1)

The consequences of manipulating the calculation method instead of installing the best available devises to actually reduce the radiation dose to individuals and the population, the exclusion of these SAMDAs, the deficiencies outlined in Mr. Guity's Synopsis of Watts Bar Nuclear Plant Unit 1, Nuclear Safety Problems and Noncompliances with Title 10, CRF 50, Appendix B, and the deficiencies referred to in Honicker's letter to Shirley Jackson, and other problems that are included in my amendment to intervene in this hearing, (hydrogen igniters, ice condenser problems, thermolag,) are evidence that the Watts Bar plant cannot be certified as safe to operate with the inclusion of 2304 tritium producing burnable absorber rods. The NRC proposed finding of "No Significant Hazards" can not be accepted.

The information presented in this contention represents unresolved safety questions which must be considered under10 CFR 50.59 The license amendment must be denied..

CONTENTION #8, Statement of fact.

Denying the consideration of the most likely accident that could occur is ignoring the gravest threat to the public. The NRC is specifically charged with protecting the health and safety of the public. To not allow the contention that this plant will be the prime target of an attack similar to the 9/11 attack on the World Trade centers is comparable to denying the danger of an unfenced adult size swimming pool in a playground for toddlers. It is too attractive a target, or as the case of the swimming pool and toddlers, too attractive a nuisance.

As I argued in my amendment, this is a site-specific issue. This is the

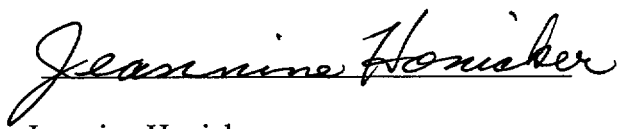
first time that any nuclear plant has been used to produce material for nuclear weapons. To argue that this is a generic issue is simply unfounded. If tritium were not the issue, the generic argument would have merit. Not now Producing tritium turns the Watts Bar and/or Sequoyah nuclear power plants into weapons material production facilities and makes them military targets. It elevates them from just another nuclear plant to the prime target as a weapons material production facility..

No additional guards can protect against a fully fueled jetliner being used as a missile.

This amendment will put a large population at risks. No one can define the extent of harm that would occur should this plant be struck as the World Trade Towers were on 9/11. Just as some illnesses must be avoided rather than trying to cure them, the only way to remedy the harm that would occur should this plant be so struck is to avoid the provocation that elevates it to the prime target of all commercial nuclear power plants. DO NOT CONVERT IT TO A WEAPONS MATERIAL MANUFACTURING FACILITY.

This is an unresolved safety issue and must be considered under 10 CFR 50.59.

Respectfully submitted March 7, 2002



Jeannine Honicker

704 Camellia Drive

LaGrange, Ga. 30240

e mail <djhonicker@msn.com>

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

BEFORE ADMINISTRATIVE JUDGES

Thomas S. Moore, Chairman

Dr. Peter S. Lam

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In the matter of

TENNESSEE VALLEY AUTHORITY	)	Docket Nos. 50-327 OLA
Sequoyah Nuclear Plant Units 1 & 2	)	50-328-OLA, 50-380-OLA
Watts Bar Nuclear Plant, Unit 1	)	ASLBP 02-798-01-OLA

CERTIFICATE OF SERVICE

I hereby certify that copies of Jeannine Honicker's contentions for the OLA hearing for TVA to produce tritium at Sequoyah and Watts Bar Nuclear Plants in the above captioned consolidated proceedings have been served on the following by deposit in the United States mail, first class, on this day, March 7, 2002. They have also been sent electronically to the e mail addresses given below each address on this date 3/7/02.

Office of the Secretary

Attn: Rulemaking and Adjudications Staff

U. S. Nuclear Regulatory Commission

/

Washington, D. C. 20555-0001

(filed an original and 2 conforming copies)

E Mailed Patricia Harich <PAH@nrc.gov>

Antonio Fernandez <AXF2@nrc.gov

Ann Nicosia <AEN@nrc.gov>

Administrative Judge

Thomas S. Moore, Chair

Atomic Safety and Licensing Board Panel

U. S. Nuclear Regulatory Commission

Washington, D. C. 20555

E Mail Thomas S. Moore <TSM2@nrc.gov>

Dr. Peter S. Lam

Atomic Safety and Licensing Board

U. S. Nuclear Regulatory Commission

Washington, D. C. 20555-0001

E Mail Peter S. Lam <PSL@nrc.gov>

Dr. Thomas S. Elleman

Atomic Safety and Licensing Board

704 Davidson Street

Raleigh, N. C. 27509

E Mail Thomas S. Elleman <elleman@eos.nusu.edu>

Ann Pickel Harris

We The People, Inc., Tennessee

341 Swing Loop Road

Rockwood, Tn. 3 7854

Donald J. Moniak

Blue Ridge Environmental Defense League

P. O. Box 3487

Aiken S. C. 29802

EMail Don Moniak <donmoniak@earthlink.net>

Jeannine Honicker

704 Camellia Dr.

LaGrange, Ga. 30240

e mail <djhonicker@msn.com>

Edward J. Vigluicci, Esq.

Harriett A. Cooper, Esq.

Tennessee Valley Authority

400 West Summit Hill Drive

Knoxville, Tn. 37902-1499

e mail Edward J. Vigluicci <EJVigluicci@tva.gov>

Harriet A Cooper <HACooper@tva.gov>

David A. Repka, Esq.

AKathryn M. Sutton, Esq.

Winston & Strawn

1400 A. Street, N. W.

Washington, D. C. 2005

E Mail David A. Repka, <Drepka@Winston.com

Kathryn M. Sutton <KSutton@winston.com

Lawrence J. Chandler, Esquire

Steven R. Horn, Esq.

Office of the General Counsel

U. S. Nuclear Regulatory Commission

Washington D. C. 20555-0001

E Mail Steven S. Horn <SRH@nrcResp.gov.>

Jeannine Honicker

704 Camellia Dr.

LaGrange, Ga. 30240

3/7/02

Attachment # 1

djhonicker

From: <MSSEJS@aol.com>
To: <djhonicker@msn.com>
Sent: Wednesday, March 06, 2002 4:19 PM
Subject: VITA OF E. J. STERNGLASS

CURRICULUM VITA

ERNEST J. STERNGLASS, Ph.D.

Professor Emeritus of Radiology
University of Pittsburgh
School of Medicine
Department of Radiology
Pittsburgh, Pennsylvania,15261

Home Address :
4601 Fifth Avenue, Apt. 824
Pittsburgh, PA, 15213
(412) 681- 6251

EDUCATION

B. E.E., Electrical Engineering,Cornell University 1944
M.S., Engineering Physics, Cornell University, 1950
Ph. D. Engineering Physics, Cornell University, 1953

HONORS

Vice-President, Cornell Chapter, Eta Kappa Nu, Electrical Engineering Honorary Society, 1943-44

McMullen Research Fellowship, Cornell University 1949-51

Sigma Xi , National Research Honorary Society

Sigma Pi Sigma, National Physics Honorary Society

Fellow, American Physical Society

President, Federation of American Scientists, Pittsburgh Chapter, 1962-63

Westinghouse Research Fellowship, Institute of Theoretical Physics, University of Paris, 1957-58.

Westinghouse Research Fellowship, Institute of Theoretical Physics, Stanford University, 1966-1967

Citation for Excellence, Scientific Exhibit, Annual Meeting of the Radiological Society of North America, 1979

Citation for Excellence, Scientific Exhibit, Annual Meeting of the American Roentgen Ray Society, 1981

George Brussel Award for Public Service,1982

Honorary Professor Emeritus of Radiology, University of Pittsburgh,1983

Leo Goodman Award for Public Service, 1985

PROFESSIONAL EXPERIENCE

Professor Emeritus of Radiology, Department of Radiology, University of Pittsburgh School of Medicine, 1983-present.

Adjunct Professor of History and Philosophy of Science, Department of History and Philosophy of Science, Indiana University, Bloomington, Indiana (1979-1984).

Professor of Radiology and Consultant, Imaging Division, Department of Radiology, University of Pittsburgh, School of Medicine (1974-1983).

Professor of Radiology and Director, Laboratory of Radiological Physics and Engineering, Department of Radiology, University of Pittsburgh, School of Medicine, 1967 - 1974.

Professor of Radiological Physics, Department of Radiation Health, University of Pittsburgh Graduate School of Public Health, 1967 - 1974.

Visiting Professor, Institute for Theoretical Physics, Stanford University, Palo Alto, California, 1966 - 1967.

Advisory Physicist and Assistant to the Vice-President for Research and Development of the Westinghouse Research Laboratories, and Scientific Director of the Apollo Lunar Scientific Station Program,Westinghouse Research Laboratories, Pittsburgh, Pennsylvania, 1960 - 1967.

Fellow Scientist, Electronics and Nuclear Physics Department Westinghouse Research Laboratories,1958-1960.

Visiting Professor, Institute Henri Poincare, Sorbonne, Paris, France, 1957 -1958.

Research Scientist, Electronics and Nuclear Physics Department, Westinghouse Research Laboratories, 1952-1957.

Research Fellow, Cornell University, 1949 - 1951.

Instructor, Physics Department, George Washington University, Washington, D.C. 1946 - 1947.

Research Engineer, Electricity and Magnetism Department, U. S. Naval Ordnance Laboratory, White Oak, Maryland, 1946- 1952.

Science Writer, Science Service News Service, Washington, D.C.1946.

Military Service, U. S. Navy, (Radar and Electronics), 1945 - 1946.

Teaching Assistant, Physics Department, Cornell University, 1943-1944.

PROFESSIONAL SOCIETIES

American Physical Society
Radiological Society of North America (Past Member)
American Association of Physists in Medicine (Past Member)
American Asssociation for the Advancement of Science
American Astronomical Society
New York Academy of Sciences
Federation of American Scientists
Philosophy of Science Association

PATENTS

Thirteen patents in the areas of Image Intensifiers for Nuclear Medicine and Astronomy; Television Camera Tubes for Space Astronomy, Night Vision and Radiology; Nuclear Particle Detectors ; Nuclear Reactors for Space Missions; Photo- Multipliers and Computerized Radiography for dose-reduction in diagnostic examinations.

BOOKS

"Low-Level Radiation", Ballantine Books, New York, 1972

"Secret Fallout: Low Level Radiation from Hiroshima to Three- Mile Island", McGraw-Hill Book Co. 1981.

"Before the Big Bang: The Origins of the Universe", Four Walls Eight Windows, New York, 1997.

SCIENTIFIC PAPERS

Over 150 papers and review articles in the field of nuclear particle physics, cosmology, nuclear instrumentation, electronic imaging for astronomy and medicine, and epidemiological studies of the effects of low-level radiation exposures.

#2

Questions and Comments Presented by Members of the Public

Comment:

The public needs better NRC notifications of such meetings.

Reply:

The NRC's policy is to announce public meetings at least 10 days before the meeting date. Following this policy, the NRC's Lead Project Manager posted the required details of the meeting on the NRC's external website and noticed the meeting in four local newspapers (Dayton, TN — *The Herald News*; Spring City, TN — *Watts Bar Lake Observer*; Chattanooga, TN — *The Times Free Press*; and Sweetwater, TN — Monroe County/ Advocate-Democrat). Furthermore, Francis "Chip" Cameron, the NRC's meeting facilitator, personally talked with some key stake holders before the meeting. During the course of the meeting, the Lead Project Manager requested the meeting participants to leave their names on a list if they wanted to be personally informed about any future meetings on this topic.

Comment:

An NRC inspection report (IR) stated that 3 times the allowable tritium effluent was released from Watts Bar over a 3-year period.

Reply:

Our review of NRC IRs did not support this comment. The tritium releases at Watts Bar were a small percentage of the allowable limits specified in Title 10, *Code of Federal Regulations* (CFR) Part 50. The radiation doses and the amounts of activity from tritium released during 1997 at Watts Bar were approximately 3 times larger than those for 1996 due to the normal operational need to process large amounts of reactor coolant system water during the Unit 1 refueling outage. Although the effluent releases for 1998 were even higher than in 1997, the contribution from tritium was less than 3 percent of the 10 CFR 50, Appendix I, limits.

Title 10 CFR Part 50, Section 50.36(a), requires licensees to submit radiological discharge reports to the Commission giving quantities of the principal radionuclides discharged to unprotected areas. Title 10 CFR Part 50, Appendix I, Section IIA, addresses the calculated annual quantity of all radioactive materials that are released from a nuclear power plant to unrestricted areas. Section IIA of that Appendix states that the annual release must not result in an estimated dose from liquid effluents in excess of 3 millirem (mrem) to the total body or 10 mrem to any organ for any individual in an unrestricted area.

DOE's tritium lead test assemblies (LTAs) were irradiated in the Watts Bar core from June 1997 to March 1998. NRC IR 50-390, 391/99-08, stated that Watts Bar had releases and corresponding radiological effluent discharges (which include tritium) as shown in Table 1 on the following page.

Table 1 — Watts Bar Radioactive Liquid Effluent Releases for 1996 Through 1998

Curies Released				Dose (mrem)	
Year	F&AP Effluent	^{3}H Effluent	D&EG Effluent	Total Body (percent of regulatory limit)	Organ (percent of regulatory limit)
1996	0.05	223	3.30E-1	9.76E-4 (0.033%)	1.41E-3 (0.014%)
1997	1.32	639	7.73E-0	2.53E-1 (8.43%)	3.57E-1 (3.568%)
1998	0.23	713	1.14E-2	6.16E-3 (0.205%)	8.20E-3 (0.082%)

Key for Effluents

F&AP= fission and activation products
^{3}H = tritium
D&EG = dissolved and entrained gases

The amounts of activity released during 1997 at Watts Bar were approximately 3 times larger than those for 1996. The effluent releases for 1998 were higher than 1997, but the contribution from the tritium isotope was less than 3 percent of the 10 CFR 50, Appendix I, Section IIA, limits.

The NRC's regulatory dose limits are 3 mrem to the total body and 10 mrem to any organ for any individual in an unrestricted area, as previously indicated. Thus, our search and review of NRC IRs did not support the claim that Watts Bar tritium effluent releases to the unprotected areas were three times the allowable. In fact, the releases were a small percentage of the allowable limits specified in the 10 CFR Part 50.

Comment:

There was a 20 percent increase in dose rate at Sequoyah associated with the use of down-blended highly enriched uranium LTAs at the facility.

Reply:

The staff reviewed Framatome Cogema Fuel's Topical Report BAW-2328, "Blended Uranium Lead Test Assembly Design Report, July 1998," which contained the analyses for Tennessee Valley Authority (TVA) to insert a limited number of LTA's into the Sequoyah Unit 2 core. Page 2 of BAW-2328 stated that the increase in radiation exposure rates (not doses) associated with the blended fuel assemblies are estimated to be as much as 20 percent higher

#3

CHARLES STEPHEN SANFORD
EIT, BSE, MS
1801 Primrose Avenue
Nashville, TN 37212-6013
Phone and fax: (615) 383-8428

CREDENTIALS

TN DOP classification (Nashville, 2000): Environmental Protection Specialist, Transportation Planner, Environmental Coordinator; (1990) Information Systems Analyst and Statistical Analyst.
ISO 1400/14001 Environmental Management System training and certificate (1999)
US OSHA Instructor Certificate (Construction, 1992)
NSTI Specifications certificate (CEU, 1987)
EPA Facility Plan Review Certificate (1987)
US Office of Personnel Management Classification (Philadelphia, 1984): Civil, Mechanical, Environmental, Industrial and Aerospace Engineering.
UTSI GRA (1982, remote sensing - wetlands)
Tennessee Engineer (EIT Certificate No. 7356, 1981)
EPA Air Pollution Control Certificate (1978)

EDUCATION

Master of Science - Aviation Systems: 1987, UT Space Institute, Tullahoma, TN. My educational emphasis has been in Remote Sensing for Geographic Information Systems. Thesis: "Fluid Streamlines' Flow".

Von Karman Institute of Fluid Dynamics (NATO, Brussels, Belgium), 1983. Research work was flow visualization of fluid streamlines.

Bachelor of Science - Engineering: 1979, University of Tennessee (UT), Knoxville, TN. My major option was Civil Engineering with a geology emphasis. Classes were held on the Nashville campus (UTN). Many of my electives were at the graduate level in Industrial Engineering.

Vanderbilt University: 1968, Nashville, TN, Mechanical Engineering and Engineering Management (no degree).

WORK HISTORY

Sanford & Associates (2001-present) - see below. I have had personal training and hands-on experience with many state, federal, and proprietary engineering and environmental software programs and databases including: HEC I/II (stormwater flow), STORET (water pollution), CAPDET (construction costs), EIS/CDHS (air pollution), EPA Flex (landfill cover), numerical groundwater modeling (flow and contaminant migration), and various large data files (50 years of Mississippi River pollution parameters, TN drinking water supply, etc.) Some projects have utilized in-house office tools including the following personal computer platform software packages: MS Office 2000, DeLorme 3-D Topo Maps, 2001 CD Estimator (construction costs), Civil Engineer's Solution Suite w/ MathSoft, and AutoCad 2000. Local projects have included site visits with preliminary field surveys, while the foreign projects have relied on maps and aerial photo scanning for GIS information analysis.
US Census Bureau (2000) - As a recruiter and an Office Operations Supervisor in the local Nashville office I assisted in establishing work procedures, standard methods for employee productivity measurement, clerk work load

balancing, and future trend analysis for recruiting and hiring. We selected and established training for 3000 employees in six weeks. I was line supervisor for 24 clerks and my duties included work scheduling and work force shift balancing.

W.R. McLeod & Associates (1999) - My specialization in this competitive sales position was engineering and technical employment placements with local middle Tennessee and national companies. My expertise included knowledge, skills, and abilities analysis of professionals with graduate degrees in math, science, and engineering.

Tennessee Department of Environment and Conservation (TDEC):
Division of Drinking Water Supply (1998) - I reviewed design plans and specifications for upgrades and modification to municipal water supply plants, subdivision utility layouts, and commercial/industrial water supplies for approval with State Design Criteria, EPA standard Methods, NSF, NMEA, SBC, and other pertinent codes. As Standard Operating Procedures (SOP) Manager I compiled and edited all, and wrote many, SOPs for all divisional management functions - including regional field enforcement of rules and regulations.

TDEC Construction Grants and Loans (1985-1993) - My responsibilities included compiling county and municipal capital investment needs for the federal Clean Water Act. These figures included non-traditional funding needs: combined-sewer overflow, stormwater management, non-point source pollution, etc. I compiled, edited and reported Utility Districts' rate charge structures for compliance with equitable and pro-rated rate categories by usage. I wrote an analysis of statewide construction contracts' civil engineering fees (basic and planning and design). I reviewed plans, specifications and contract documents of wastewater treatment plants for design construction criteria compliance and approval on a case-by-case basis. These review documents included blueprints for large facilities, pump stations, force mains, cut/fill disposal berms, irrigation systems, etc. I wrote environmental assessments and environmental impact statements for these construction projects. These assessments included advanced treatment, inter-municipal agreements, funding feasibility, shared costs, and innovative alternatives. I used the federal computer database (CAPDET) to calculate cost estimates for facility plant construction, and I developed several automated spreadsheets (Lotus/Excel), which calculated cost estimates for various plant design configurations. I was the designated project engineer for fifty Tennessee cities.

TDEC Air Pollution Control (1978-1979) - I performed air pollution emission calculations, and confirmed federal computer database emission inventory system (EIS) entries for factories and manufacturing facilities statewide. In this special projects section I recalculated and cross-checked the air emission calculations prior to keying data into the mainframe computer. I ran routine and special printouts showing categories and quantities and quality of data.

Tennessee Department of Employment Security, Unemployment Insurance (1983-1985) - I was the special projects information system analyst for the Deputy Commissioner. I wrote computer spreadsheets (Lotus) for cash flow analysis of trust fund solvency showing the fluctuating balance of several hundred million dollars. I authored a LAN/WAN computer/communication network cost charge-back study report, and a statewide remote field office closure and consolidation study report. I supplied data to the state (UTCBER) and national (MERCER) computer models using employment statistics, gross domestic product values, producer and consumer price indices, standard industrial classifications, seasonal and other factors.

UT Space Institute (1982) - As a graduate research assistant I used photogrametric methods to compile a Geographic Information System for the Corps of Engineers' Tennessee-TomBigBee Waterway Corridor Study. This resulted in a statewide thematic map of wetlands vegetation and floodplain delineation along the Tennessee River. Techniques included infrared photo-interpretation, Bosch-Laumb stereo projection, hard copy data imprinting, and field verification.

I.C. Thomasson & Associates, Inc. (1981) - I was a mechanical engineer for the Tennessee Valley Authority funded Energy Conservation Opportunity (ECO) program. I was the design engineer for Meharry Medical College's HVAC central plant retrofit. I utilized computer (CPSIM and BRUTE 2) generated weather scenarios overlaid onto buildings' structural and architectural envelope to show architectural design modifications on energy consumption. I supervised four summer student interns.

Dept. of Defense, USN, Naval Sea Systems Command (1980) - I was a mechanical engineer project manager for a federal government research, development, test and evaluation program: Full Scale Development manufacturing under a research contract for a shipboard missile launching platform. I was the DoD designated liaison with the private defense contractors. I wrote and published the executive summary Master Plan reports on fleet-wide contractors' quality assurance and simulated mission test compliance. I also had authority for observation and reporting of change orders, mil-std, mil-spec, MTTR/MTBF (equipment failure rates), and contract clause precedence. I was author of the Test and Evaluation Master Plan for the Tomahawk Cruise Missile (463-1, DRAFT).

Sanford & Associates (1993 - current) - As a self-employed environmental consultant I contributed to the national effort to gain recognition of the importance of the off-site migration of toxic wastes (RCRA/CERCLA) from Oak Ridge Reservation (ORR) "superfund" site. I submitted expert testimony to the ORR management staff regarding resuspension and redeposition of toxic (radioactive alpha and beta particles) river sediment affecting the City of Kingston's public water supply. This current information is relevant to the Safe Drinking Water Act and the Clean Water Act.

My previous work includes a proposal submitted to the United Nations (UN Development Program), US Agency for International Development, US Ambassador (Chad, Africa), and US Environmental Protection Agency (Office of Research and Development) on "Remote Sensing … at Lake Chad, North Central, Africa. The purpose of this report was to emphasize the export of technology for long-term strategies to identify investment programs. These programs would be those that enhance the development of self-sustainable agricultural and other sectors of the national economies that will be inherently resistant to desertification and drought brought on by global warming.

Also, I authored "Belize, Central America - an Environmental Survey of Regional Economic Development at the Gulf of Honduras". This remote sensing project was submitted to the US Department of State, US AID, the US Embassy of Belize, and the non-governmental organization - Belize Center for Environmental Studies. The purpose of this report was to quantify the inter/intra-national impact of pollution on wetlands and fish hatcheries due to international migration of toxic pollutants. This research targeted the sewage contamination of shellfish (lobster) for tourist industry (Cancun, Mexico) consumption and the regulations affecting its inspection and export; and the foreign depletion of local fish stock, including agribusiness non-point source contamination of natural wetlands' fish hatcheries.

Recent confidential client study documents include "Cumberland River - Recreational Use in Nashville, Tennessee - Master Plan" (1999), "Rock Harbor Marina - Land Use Proposal" (1999), "Mobile Water Laboratory - Pilot Project" (1999), "Marrowbone Lake - Venture Capital Report" (1996, 2001 rev.), and "24 Square", a seven million dollar capital construction project with mitigating impact on its Cumberland River shore, (2002).

#14

Mansour Guity
Engineer
P.O. Box 50893
Knoxville, TN 37950-0893
(615) 531-3837

Certified # Z 785 465 116
Return Receipt Requested

September 5, 1995

Mr. Al Ignatonis
United States Nuclear Regulatory Commission
101 Marietta Street, N.W. Suite 2900
Atlanta, Georgia 30323-0199

Subject: Watts Bar Nuclear Plant Unit 1 Readiness for Fuel Loading

Dear Mr. Ignatonis:

Thank you for this opportunity to respond to your letter of May 17, 1995. As you will recall, I telephoned you on August 18, 1995 and informed you that I was in the process of preparing a report responsive to your request.

I hereby am advising you that I have numerous significant major nuclear safety concerns about the Tennessee Valley Authority's Watts Bar Nuclear Plant Unit 1.

The nature, scope, extent, significance of these concerns are of such a wide magnitude and detailed substance that they cannot readily be precisely, accurately and completely described by myself in writing at this time. However, I can adequately and concisely communicate them verbally with supporting and corroborating documents prepared by TVA, NRC, DOL and other governmental agencies.

I am therefore willing to thoroughly disclose these concerns to you or other NRC members as expeditiously as possible if conditions similar to the following can be arranged.

1. That a court reporter shall be made available to take the complete transcription of my presentation at no cost to me.
2. That I shall be provided with a copy of such transcription(s) including all exhibits at no cost to me and without any deletions and or omissions.
3. That I shall be permitted to have at least two observers of my choice present during the presentation(s). These observers will not participate in the presentation(s).

4. That a member of the Nuclear Regulatory Commission, Office of Inspector General, and Office of Investigations be present during these presentation(s). Preferably individuals that would be mutually agreeable to you and me.
5. That the environment under which such presentation(s) is conducted must remain non-hostile and non-confrontational at all times. Otherwise I shall excuse myself from continuation of such presentation(s). Therefore it is of utmost importance that no past or present TVA employee(s), contractor(s), or others be present during such presentation(s).

Attachment A to this letter lists the names, titles and addresses of those individuals that are recipients of copies of this letter.

Attachment B to this letter is a report that briefly describes some of my nuclear safety concerns at Watts Bar Nuclear Plant Unit 1 (WBNB-1).

Should you have any questions or comments please do not hesitate to contact me at your earliest convenience. I shall make myself available for the subject presentation(s) upon a short notice.

I look forward to hearing from you at your earliest convenience.

Respectfully yours,

Mansour Guity 9/5/95

MANSOUR GUITY
FORMER TVA EMPLOYEE (1972-1989)

"ATTACHMENT A"

Copies of my letter of Sept. 5, 1995 to Mr. Al Ignatonis and attachment B of subject letter were mailed to the following individuals via U.S. Postal Service on Sept.5, 1995.

Rep. Bob Clement
1230 Longworth House Office Bldg.
Washington DC 20515

Rep. Bud Cramer
1318 Longworth House Office Bldg.
Washington DC 20515

Rep. John Duncan
115 Cannon House Office Bldg.
Washington DC 20515

Rep. Harold Ford
2211 Rayburn House Office Bldg.
Washington DC 20515

Sen. Bill Frist
825 Hart Senate Office Bldg.
Washington DC 20510-2203

Rep. Bart Gordon
103 Cannon House Office Bldg.
Washington DC 20515

Rep. Van Hilleary
114 Cannon House Office Bldg.
Washington DC 20515

Sen. Howard Heflin
728 Hart Senate Office Bldg.
Washington DC 20510

Rep. John Kasich
1131 Longworth House Office Bldg.
Washington DC 20515

Rep. Scott Klug
1113 Longworth House Office Bldg.
Washington DC 20515

Sen. Trent Lott
487 Russell Senate Office Bldg.
Washington DC 20510

Rep. James Quillen
102 Cannon House Office Bldg.
Washington DC 20515

Rep. Bud Shuster
2188 Rayburn House Office Bldg.
Washington DC 20515

Rep. John Tanner
1427 Longworth House Office Bldg.
Washington DC 20515

Sen. Fred Thompson
508 Dirksen Senate Office Bldg.
Washington DC 20510-2203

Rep. Zach Wamp
114 Cannon House Office Bldg.
Washington DC 20515

Robert Pollard
Union of Concerned Scientists
1616 P Street NW, Rm 310
Washington DC 20036

Stephen A. Smith, DVM
Executive Director
TN Valley Energy Reform Coalition
P.O. Box 8290
Knoxville, TN 37996

Craven Crowell, TVA Chairman
ET 12A-K, 400 W. Summit Hill Dr.
Knoxville, TN 37902

George Prosser
TVA Inspector General
ET 4C-K, 400 W. Summit Hill Dr.
Knoxville, TN 37902

Oliver D. Kingsley, Jr.
President, TVA Chief Nuclear Officer
LA6A Lookout Place, 1101 Market St.
Chattanooga TN 37402-2801

Shirley Jackson, Chairman
US Nuclear Regulatory Commission
Washington DC 20555

William Russell, Director
Office of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Washington DC 20555

James Taylor
Executive Director for Operations
US Nuclear Regulatory Commission
Washington DC 20555

Leo J. Norton, Acting Inspector General, US Nuclear Regulatory Commission, Washington D.C. 20555

"ATTACHMENT B"

SYNOPSIS OF WATTS BAR NUCLEAR PLANT UNIT 1

NUCLEAR SAFETY PROBLEMS AND NON-COMPLIANCES WITH TITLE 10 CFR 50 APPENDIX B

PREPARED AND REPORTED BY
*MANSOUR GUITY**
MEMBER OF THE DEFUNCT
NUCLEAR SAFETY REVIEW STAFF
OF
TENNESSEE VALLEY AUTHORITY
**PRESENTLY NOT A TVA EMPLOYEE*

SEPTEMBER 5, 1995

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B. Inadequate Or Lack Of Tracking Program For Environmental Qualification Of Class IE Electrical Equipment.

C. Electrical Cable Problems And Inadequacies In The Associated Corrective Action Plans(CAP), Root Cause Analysis, Preventive Measures And/Or Improper Implementation Of The CAP. (10 year old problems continue to be repetitively identified as late as 1994).

D. Failure Of TVA To Establish An Adequate Quality Assurance(QA) Program And Independent QA Organizations That Meets Title 10 CFR 50 APPENDIX B Requirements For WBNP-1.

E. Significant Events Related To And Effecting WBNP-1.(not an all inclusive listing)

F. Five Material False Statements Made To Nuclear Regulatory Commission(NRC), Four Of Which Are Directly Related To WBNP-1 For Fuel Loading And Its Compliance With Title 10 CFR 50 APPENDIX B.

G. TVA's "Whistleblowers" Dilemma-Intimidation, Retribution, Harassment, Discrimination And Reprisal(H & I) By TVA Management, Persistent Repetition And Continuation Of TVA's H & I Activities, The Chilling Effects And Absence Of Protection By NRC.

H. Cause And Effect Of Revisions To The Design, Construction And Testing Procedures And Failure To Retrofit The Design, Construction And Testing Activities Per The Latest Procedural Requirements.

I. NRC's Inadequate Inspection Processes.

J. WBNP Has Never Met Title 10 CFR 50 APPENDIX B Requirements.

K. I Told You So Nine Years Ago.

L. Conclusions.

PRESENTMENT & DEDICATION

This brief report has been prepared with much personal mental anguish, struggle, and distress in anticipation of informing the general public of the nuclear safety hazards of Watts Bar Nuclear Plant Unit 1 if it is to receive operating license.

I am dedicating this report to all the "Whistleblowers" of America, in particular those of us that at one time or other have been or may still be employed by The Tennessee Valley Authority. As Admiral Rickover admonished--"if you are going to sin, sin against God, but not against the bureaucracy--God will forgive you, the bureaucracy never will."

"Whistleblowers" have suffered needlessly and can easily identify with each others misery brought upon us by TVA which is an excellent example of a bureaucratic agency. To those of us who as "whistleblowers" have suffered as a result of our expression of nuclear safety problems and exercise of our First Amendment and because we have placed public health and safety ahead of our own personal needs and securities resulting in committing career suicide, I would like to quote you the following as a way of encouragement.

"I expect to pass through this world but once. Any good, therefore that I can do or any kindness that I can show to my fellow creatures, let me not defer nor neglect it for I shall not pass this way again.", and

"If you have tried to do something and failed, you are vastly better off than if you had tried to do nothing and succeeded."

The following is for NUCLEAR REGULATORY COMMISSION members.

"The past can not be changed but the future is what ever you want it to be."

Let us not forget about the Three Mile Island nuclear plant disaster, Browns Ferry nuclear plant fire and not to mention Browns Ferry nuclear plant units 1 and 3 shut down since 1985.

A.The Authorized Nuclear Inspector(ANI)- Responsible For Performing The Third Party Independent Inspection And Certification Of Compliance Of Watts Bar Nuclear Plant Unit 1(WBNP-1) With American Society Of Mechanical Engineers(ASME) Code Requirements Per Final Safety Analysis Report(FSAR), Which Is Required For All Nuclear Plants Prior To Granting Operating License.

1. 1985- I, as the lead NSRS investigator identified exertion of improper pressure by TVA management upon ANIs. This was substantiated by NRC Investigation Reports Nos 2-85-034 and 2-85-034s dated September 9, 1988. NRC Report of Investigation Alleged coercion of ANIs by ANI management through TVA management, case No. 2-85-034.
2. 1985- I, as the lead NSRS investigator identified that some voids in the containment penetrations at WBNP-1 had not received examination as required by ASME Code. In addition, a particular ANI was told by his supervisor to accept the welds which he did per his supervisors instructions.
3. 1985 to present NRC and TVA's failure to review the adequacy and appropriateness of ANI's inspection activities prior to 1985 supports my conclusion of indeterminate status of all ANI inspections prior to 1985. In particular since four out of nine ANI's that had worked at WBNP at one time or another had confided to NRC about such pressure. See aforementioned NRC Inspection Reports.
4. TVA's Office of Inspector General and the NRC have failed to investigate the allegation of conspiracy by TVA management that caused the NSRS lead investigator, Mansour Guity, to abort the investigation of the effect of such collusion and its nuclear safety implications. Refer to the testimony of the lead investigator, Mansour Guity, in the U.S. House of Representatives Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce on June 11, 1986.
5. How can the NRC have any level of confidence in the ANIs certification as a third party independent inspectors for WBNP Unit 1? In particular when all ASME Code activities were allegedly completed as early as February 20, 1985 when for the first time the TVA Manager of Nuclear Power declared WBNP-1 readiness for fuel loading.

B. Inadequate Or Lack Of Tracking Program For Environmental Qualification Of Class IE Electrical Equipment.

Definitions:

1. Design life is defined as "The time during which satisfactory performance can be expected for a specific set of conditions."
2. Installed life is defined as "The interval from installation to removal, during which the equipment or component thereof may be subjected to design service conditions and system demands."

3. Qualified life is defined as " The period of time for which satisfactory performance can be demonstrated for a specific set of service conditions."

Some equipment may have a qualified life less than the required design life of the plant, and some equipment may have a qualified life that is less than the installed life.

WBNP-1 does not have a system of tracking the design life, installed life and qualified life for its electrical equipment and or components such as resistors, capacitors, wires, connectors, transistors, switches, etc.

C. Electrical Cable Problems And Inadequacies In The Associated Corrective Action Plans(CAP), Root Cause Analysis, Preventive Measures And/Or Improper Implementation Of The CAP. (10 year old problems continue to be repetitively identified as late as 1994).

Such as:

1. Cable installations-sidewall pressure, pulling forces, jamming effect, minimum bend and training radius, vertical supports of cables in cable trays and conduit, adequacy of sizing of pull boxes, etc.
2. Cable sizing - Short circuit calculations, voltage drop calculations both for as constructed lengths derating of cables due to fire proof coating material and solid cable tray covers and lengths (based on scientific research and or engineering studies and analysis and not in an informal, undocumented survey of other utilities and A and E firms as stated by TVA.)
3. Cable splices - utilization of 600 volt splice kit for 6900 volt cables - identified as late as 1995 where in a letter from Oliver D. Kingsley Jr. to US-NRC dated December 16, 1988, item 4.1. TVA had allegedly identified the root cause problem and taken appropriate corrective action. While NRC Report No. 50-390/94-72, 50-391/94-72, dated 10/10/94 identifies the same problem again, over six years later.

NSRS Report No. I-85-06-WBN, prepared by Mansour Guity, several employee concerns and numerous revisions to TVA's Corrective Action Plan for cable problems, numerous NRC Inspection Reports such as 50-390/94-53, 50-391/94 53, dated 9/20/94, Franklin Research Center, Technical Evaluation Report of Cable Problems TER-C5506 649,dated January 30, 1987.

TVA once again has proven that it does not perform nor is it capable of performing adequate root cause analysis, and can not take proper action to prevent recurrence nor can it adequately inspect other similar activities and work products for the potential identification of same problems elsewhere in the plant.

This follows the old pattern and attitude of "if you don't look for deficiencies, you don't have to worry about documenting them, if deficiencies are not documented, you don't have to worry about fixing them. If you can limit its applicability so much the better, if you can word engineer your way out of rework, repair or retrofit , this is the best."

NRC's repetitive failure to recognize these inadequacies in the TVA's corrective action programs reoccurrence prevention, inspection of similar cases and inadequate root cause analysis has compounded these problems. Furthermore there are instances where the CAPs have not been properly implemented and continues to be identified by NRC as a persistent recurring problem and yet NRC fails to be aggressive enough in its enforcement authorities and responsibilities by not fining TVA for such issues.

D. Failure Of TVA To Establish An Adequate Quality Assurance(QA) Program And Independent QA Organizations That Meets Title 10 CFR 50 APPENDIX B Requirements For WBNP-1.

1. Frequent QA Organizational changes(not an all inclusive listing.)

   - Prior to 1982 - Design QA, Construction QA staff, Construction QA at each plant site, Office of Engineering and Design QA staff, Office of Nuclear Power QA staff (Chattanooga), Office of Power QA at each plant site.
   - 1982 - Abolishment of QA organizations as listed above
   - 1982 - Establishment of Office of QA
   - 1984 - Abolishment of Office of QA
   - 1986- Establishment of Nuclear QA and its sub-set, EngineeringAssurance
   - 1989 - Abolishment of Engineering Assurance
     QA organization continues to go through frequent changes requiring new inter/intra office procedures, establishing new reporting processes, taking away some authorities and responsibilities and distributing it among others while holding no one responsible. Revising FSAR, meeting within NRC to sell the new organization, its authority, independence and almost in all cases for exactly the same reasons that brought about the previous changes. While all these activities are going on its effect on the quality of design, construction and testing has been minuscule as noted by NRC and others.

2. Lack of independence of QA members (not an all inclusive listing.)
   - Prior to 1980 - There was no independence.
     NRC-RII Inspection and Exit notes - Team Leader Virgil Brownlee - None of the TVA QA organizations in the offices of Engineering Design and Construction had sufficient authority and organizational freedom to identify

Nuclear Quality problems

- 1982-1984- during OQA existence- there was slight independence. OQA spent the entire period establishing internal policies and procedures, drastically cut back on Appendix B type Audits and performed surveillances that amounted to nothing more than fixing small problems - The record speaks for itself.
- 1986 and on- during Nuclear QA period- there has not been any independence.
  Nuclear QA managers reported to the Nuclear Power Manager. Engineering Assurance manager reported to the Nuclear Engineering Manager neither of which have had sufficient authority and organizational freedom to identify Nuclear Quality Problems.

TVA announced its decision to build WBNP-1 August 1970, applied for a construction permit in May 1971, received construction permit in January 1973 with a probable conservative estimate date of November 1985 for Commercial Operation. Construction progress was reported to be 99% complete on September 1984.

In view of these major organizational changes and lack of independence of QA members throughout the life of WBNP, so far we do not have to wonder long to recognize as to why WBNP-1 did not meet title 10 CFR 50 APPENDIX B requirements in 1986 when it was certified and declared to be ready for fuel loading (meaning that all of the design, engineering, construction and testing activities had been completed successfully). Almost ten years later how could a plant that was complete and ready for fuel loading be declared and certified as complete once again.

So far WBNP-1is at least 16 years behind TVA's critical path for fuel loading, which at one time was set for 1979.

As one of my colleagues used to say and an NRC senior manager had echoed the same concern which is " quality has to be designed in, constructed in, you can not study it in after the fact." Is TVA suggesting that they have built quality into WBNP for the last 10 years? Is the NRC staff once again going to allow TVA to "SNOOKER" them?

E. Significant Events Related To And Effecting WBNP-1.(not an all inclusive listing)

- 1979-NRC-RII conducts its first inspection of TVA Design, Engineering and QA staff in Knoxville(I was interviewed by NRC.)

- 1979- TVA establishes Nuclear Safety Review Board. It gives it significant autonomy and has it report to the General Manager and Staff of Directors. NSRS performs superbly in identifying Significant Nuclear Safety Problems.
- 1981-McDonald Motivational Research Center performs a review called Diagnostic Evaluation of Morale and productivity at WBNP (Report dated 10/4/81) and identifies employees lack of trust in management.
- 1981- TVA studies the FSAR representation of Design Changes included by ECN's at WBNP, report dated April 21, 1981 identifies significant safety problems.
- 1982- US-NRC Advisory Committee on the Reactor Safe Guards Notes " A serious QA break down was identified late in the construction of WBPN."
- 1983,1984- Black and Veatch(B&V)- IDVP at WBNP-1 identifies significant problems in Auxiliary Feed Water System and recommends generic applicability of their findings for other systems. TVA force feeds problems in to groups and categories in such a manner to minimize their impact on that system and others.
- 1984- Management Analysis Company Project No. MAC-84-F139 identifies inadequate QA program, QA organization and week management.
- 1985- NRC meets with TVA about B&V Report on 1/12/85.
- 1985- Quality Technology Corporation (QTC) is hired by TVA to confidentially interview all WBNP employees and others who have concerns and collects over 5000 concerns of which about 1800 were determined to have Nuclear Safety implications.
- 1985- EG&G report substantiates overall welding problems at WBNP.
- 1985- TVA Office of General Council substantiates allegations of reprisal at least by four individuals, OGC85-037, OGC85-418, OGC85-131, OGC85-277.
- 1985- Three NSRS members assigned to WBNP brief then commissioner James Asseltine on their perception of WBNP meeting 10 CFR 50 Appendix B requirements. These NSRS members are stripped of their supervisory roles and three separate complaints are filed with the Department of Labor which rules in their favor. Department of Labor(DOL) report prepared as the result of Mansour Guity's allegations contained a full description of the inception of TVA's nuclear QA program effort as "unsuccessful" and one of the root cause problems underlying the nuclear power program."
- 1985- TVA establishes Office of Inspector General (not independent from the Board of Directors).
- 1986- QCT contract is canceled - NRC collects all the data and individuals confidentiality is breached.
- 1986- TVA creates its own Employee Concern Program
- 1986- TVA abolishes NSRS in Knoxville.(I was a member of this staff)
- 1986- TVA establishes the so called"Blue Ribbon" panel called Nuclear Manager Review Group(NMRG) reporting to the manager of Nuclear Power (not independent) in Chattanooga.(I was a member of this group)

- 1986- Five NSRS Nuclear Engineers, including Mansour Guity, testify in the U.S. House of Representatives about nuclear safety problems at WBNP-1 and serious problematic QA program and construction deficiencies at WBNP, as well as, intimidation and harassment, retaliation and discrimination they have suffered as a result of their pursuit and reporting nuclear safety problems at WBNP.
- DOL and NRC substantiate these allegations
- 1986- US-NRC Advisory Committee on Reactor Safeguards drills TVA about Intimidation and Harassment, meeting dated June 12 and 13, 1986.
- 1986- An NRC executive manager threatens TVA executive managers to correct Intimidation and Harassment problems or else.(see memorandum from Carl Crawford to S.A. White, dated June 20, 1986 TVA no. 86062602417)
- 1986- NMRG Maintenance Report No. R-86-02-NPS dated September 30, 1986 identifies problems at WBNP. (I was a member of the group that performed this review)
- 1986-TVA names four nationally recognized safety and engineering experts to a top level panel to review Watts Bar Special Program involving resolution of employee concerns.
- 1986- TVA-OIG and NRC enter into a Memorandum of Understanding leading to TVA's awareness of the identification of names of TVA employees who have voiced concerns to the NRC (NRC has not yet conducted its own investigations of these concerns.)
- 1987- A TVA Employee Task Concerns Group releases a report concluding that "the quality of TVA's nuclear plants was highly criticized.
- 1988- Inside NRC reported that a draft report prepared by NRC details TVA's Watts Bar nuclear quality assurance program failure at WBNP and throughout TVA dating back to 1981.
- 1990- Complete "Stop Work" order was issued for WBNP-1 construction activities, due to faulty construction activities.
- 1991- NRC, in a letter to Oliver Kingsley, TVA's President of Generating Group notes that the primary factors in the TVA decision to shut down the entire nuclear program in 1985 were still occuring-that is six years later.
- 1991- NRC, in a letter to Oliver Kingsley notes that NRC continues to have serious concerns with TVA's overall QA program.
- 1993- NRC, in a letter to TVA notes that it continues to have concern over TVA QA program for assuring that construction, maintenance and test activities are properly accomplished.
- 1993- Nuclear Utility Services (NUS) prepares a report for TVA on The Assessment of WBNP Management and the QA program and concludes that WBNP-1 could not achieve a level of quality that would support April 1994 completion of the plant.
- 1993- WBNP receives a low mark (category 3) for overall nuclear safety assessment and quality verification per NRC's Systematic Assessment for Licensee Performance (SALP) and that TVA'sQA program did not provide

consistent that the activities were being performed in accordance with QA requirements.

- 1994- NRC continues to find repetition of previously identified problems.
- 1995- An NRC executive manager publicly expresses his lack of confidence about WBNP management.
- 1986-1993- Employee Concern Program Survey, Office of Nuclear Power, 1986 report, Employee Opinion Survey results of 1991 at WBNP report, Employee Opinion Survey of 1991 Nuclear Generation- Compliance Assurance report, Employee Opinion Survey- TVA wide, 1992 report, and Organizational Effectiveness Consultants, 1993 report, all echoed "eye opening" and significant revelations of TVA's top level management's continuous failures in all major areas within nuclear program.

F. Five Material False Statements Made To Nuclear Regulatory Commission(NRC), Four Of Which Are Directly Related To WBNP-1 For Fuel Loading And Its Compliance With Title 10 CFR 50 APPENDIX B.

1. Hugh Parris, Manager of Nuclear Power, certification of WBNP Unit 1 readiness for fuel loading, February 20, 1985. NRC Disposition Report of Investigation Report OI-2-86-002 dated April 19, 1990 accompanied by Report of Investigation WBNP, possible material false statement regarding certification for fuel load, case no. 2-86-002.
2. Steven White, Manager of Nuclear Power, statements of March 20, 1986 and June 5, 1986 pertaining to WBNP QA overall compliance with 10 CFR 50 APPENDIX B. NRC case No. 2-87-002 dated September 28, 1987, that the Manager of Nuclear Power "knowingly and willfully" made a material false statement on two occasions to US-NRC.
3. Herb Sanger, General Counsel for TVA, "knowingly and intentionally misled the US-NRC Commissioners about TVA's handling and investigation of the charges of Intimidation and Harassment, retaliation and discrimination by four Nuclear Engineers from NSRS. I was one of these nuclear engineers. NRC Investigation report No. 86-015 dated February 15, 1990.
4. Four of these substantiated Material False Statements had to do with WBNP Unit 1 readiness for fuel loading and compliance with 10 CFR 50 Appendix B.

G. TVA's "Whistleblowers" Dilemma-Intimidation, Retribution, Harassment, Discrimination And Reprisal(H & I) By TVA Management, Persistent Repetition And Continuation Of TVA's H & I Activities, The Chilling Effects And Absence Of Protection By NRC.

1. TVA has had the highest and overwhelming percentage of "Whistleblowers" in the nation, Why?
2. NRC's role in the protection of these people has been non-existent.

3. TVA's attitude toward such people has been to intimidate, harass, retaliate and discriminate and put them through costly legal battles. NRC's role, lets watch. Why?
4. The message of TVA is to keep quite if you want to keep your job. Cause and effect, those that are in positions to know the problems will be reluctant (chilling effect) based on their observations of what they happened to these "whistleblowers."
5. Therefore not all problems are identified and yet they can not be corrected. Has the NRC looked at and followed up on these whistleblowers? Are they still employed at TVA? How many has TVA settled out-of-court and brought their silence? How many have been rewarded for their courage? The list can go on.

H. Cause And Effect Of Revisions To The Design, Construction And Testing Procedures And Failure To Retrofit The Design, Construction And Testing Activities Per The Latest Procedural Requirements.

Revisions to the deficient design, engineering, construction, testing procedures and drawings continues with very little retrofitting thereby rendering the activities performed under those deficient procedures unacceptable and not in compliance with new revisions. Those design, construction and testing activities performed and not reworked or redone per revised procedures fail to establish that WBNP-1 was designed, built and tested per a QA program that meets Title 10 CFR 50 APPENDIX B and FSAR commitments.

I. NRC's Inadequate Inspection Processes.

NRC's inspection and review of QA Program for Design,Engineering, Construction, Pre-Operational, start up and Hot Functional Testings at WBNP for the last 22 years has been totally segmented and performed in a piece meal approach. Inspecting few chain loops here and there while missing all the links and neglecting to look at the dynamics of the plant design, construction, and testing due to the fourth dimension, namely time.

The question NRC should ask and be concerned about is does the design, construction, and testing activities at WBNP-1 meet TVA's present QA program, procedures, FSAR, design and construction specifications as of the date of TVA's certification or not? Obviously WBNP-1 with 22 years of constant and frequent organizational, QA program, design, construction, and testing procedure changes does not meet the 10 CFR 50 Appendix B requirements. It did not meet that 10 years ago and it does not meet it today. It is not sufficient for TVA to have a QA program that meets Appendix B at the time of certification. What is significant, is whether the plant meets today's QA program?

J. WBNP-1 Has Never Met 10 CFR 50 APPENDIX B Requirements.

In conclusion, I am of the opinion that WBNP has never ever met 10 CFR 50 Appendix B during its design, engineering, construction and testing. This opinion is based on my engineering education, skills, nuclear expertise, qualifications and technical knowledge about WBNP-1 and research and analysis of related information compiled over the last 16 years.

K. I Told You So Nine Years Ago.

1. In my letter of September 24, 1986 to Chairman Charles H. Dean, Jr. TVA board of director and Board Member, John H. Waters (Exhibit I), I, at that time believed that "our nuclear problems as of today are manageable and have the potential of being resolved."

2. After nine years and twelve billion dollars nothing has changed about TVA's management style, attitude and abilities to fix nuclear safety problems at TVA nuclear plants. Although TVA has supposedly hired nuclear "experts" , these so called "experts" and "nuclear czar" have failed to resolve these problems and such problems continue to remain unresolved and out of control just as bad, if not worse, than they were nine years ago. At least TVA was in much better financial shape then than it is today.

3. Browns Ferry nuclear plant units 1 and 3 remain shut down since 1985, WBNP-2 has been deferred, Bellefonte nuclear plant units 1 and 2 have been canceled. Browns Ferry nuclear plant unit 2 and Sequoyha nuclear plant units 1 and 2 continue to suffer from assorted operational problems.

4. Watts Bar Nuclear Plant unit 1 at an approximate cost of three billion dollars as of 1986 could not have paid for itself during the plant's life expectancy.How about now at a cost of six to seven billion dollars? Where is TVA's cost vs. benefit analysis? Why was Watts Bar Nuclear Plant unit 1 excluded from TVA's Integrated Resource Planning(IRP)?

5. Chairman Charles, H. Dean, Jr. in his response of October 14, 1986(exhibit II) to my letter indicated that "they were on the right track.", and that "history will have to record as to what kind of leadership we have provided." I believe the history now speaks for the kind of leadership TVA had then and much the same will be recorded for those in charge of the agency's leadership since then.

In conclusion, I am of the opinion that WBNP-1 has never ever met 10 CFR 50 APPENDIX B during its design, engineering, construction and testing. This opinion is based on my engineering education, skills, expertise, qualifications, technical knowledge, research and analysis of WBNP-1 information compiled during the last 16 years as an Electrical Engineer, QA Evaluator, QA Engineer, QA Analyst, Nuclear Engineer and Nuclear Evaluator about WBNP-1.

L. Conclusion

Therefore US-NRC should seriously consider **DENYING** TVA's application for fuel loading to avoid a point of no return -once the fuel is loaded then we shall have a plant worse than Browns Ferry Nuclear Plant Unit 1 and 3.

Watts Bar Nuclear Plant unit 1 is the safest nuclear plant in the world just as it is- without loading fuel.

Very truly yours,

Mansour Guity 9/5/95

Mansour Guity
Former TVA employee till 1989
Member of The Defunct Nuclear Safety Review Staff

EXHIBIT 1

September 24, 1986

TO: The Honorable Chairman, Charles H. Dean, Jr., TVA Board of Directors
The Honorable Board Member, John B. Waters, TVA Board of Directors

I believe you gentlemen have the best interest of the agency and the rate payers in mind and at heart. Furthermore, I am sure that both of you are doing the best that you would possibly do to have our nuclear problems resolved and get our nuclear plants back on line. I am also convinced that TVA's nuclear dilema has been a continuous nightmare for both of you gentlemen for the last 18 months, if not longer. I am just as equally sure and convinced that there are situations where ones best intentions and hard, long hours of work falls too short of expectations as well as obligations.

Gentlemen, I believe that your records of persistent, continuous failures as well as ineffective management style speak for itself and need not be repeated here. Regardless of what your intentions are and how hard you are working at getting our nuclear plants back on line safely, you have without a doubt proven that either this task is too complex for you to resolve it or that it is an impossible one. I believe our nuclear problems as of today are manageable and have the potential of being resolved. The time is running out and so is the money. How much longer and how many more billions of dollars are you willing to waste? I, as a very concerned Tennessee Valley resident and ratepayer, therefore, request that you gentlemen remove yourselves from the leadership positions you have been holding within this agency immediately in the best interest of the agency and the ratepayers.

I am convinced that most if not all the people of the valley would remember your action to remove yourself as the most courageous and unselfish decision you have ever made. They will remember you as the ones who put the agency's survival and the ratepayers pleas ahead of your own personal needs and interests. We all need to do what we can to help expedite our nuclear recovery program and I am convinced you gentlemen will agree with me on this point. Therefore, let us help save the agency. Let a new team take over the leadership and future direction of the agency as it is the leadership at your level that is a key factor in the success of the recovery program.

Respectfully yours,

Mansour Guity
Tennessee Valley Ratepayer for
the Last 25 Years

EXHIBIT 2

TENNESSEE VALLEY AUTHORITY

Office of the Chairman

400 Summit Hill Drive
Knoxville, Tn 37902
Telephone 615/632-2921

OCT 14 1986

Mr. Mansour Guity
11512 Packard Lane
Knoxville, Tennessee 37922

Dear Mr. Guity:

Your letter of September 24 was very interesting. We think we are on the right track to solve our nuclear problems, even though we agree with you that they are very complex. The rest of your remarks concern whether we should stay in the jobs we have, and history will have to record as to what kind of leadership we have provided.

Best regards,

C. H. Dean, Jr.
Chairman

cc: John B. Waters

#5

To: Dr. Shirley Jackson, Chairperson
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

From: Jeannine Honicker
362 Binkley Dr.
Nashville, Tn. 37211
fax # 615-333-2879

Subject NRC INSPECTION REPORT NO. 50-390/95-47
AND 50-391/95-47

Background: Prior to 1986, more than 5,000 employee concerns were communicated to the Tennessee Valley Authority (TVA) bringing to light problems with the construction of the Watts Bar Nuclear Plant.

TVA tentatively plans to load fuel on October 28, 1995, but first must receive a licence from the Nuclear Regulatory Commission (NRC). NRC inspection report No 50-390/95-47 and 50-391/95-47 intends to put to rest all of those employee concerns not covered in the previous report and clears the way for the issuance of an operating licence for the Watts Bar Nuclear Plant.

First comment: Cover letter dated August 16, 1995

The conclusion as specified in paragraph 3 of NRC's cover letter is "We have completed our inspection of your (TVA's) Design Baseline Verification Program Corrective Action Program (CAP) and concluded that the CAP has been adequately implemented. Three items, involving completion of CAP source issues, evaluations of assessments, and FSAR table errors, will be reviewed further.

Within the scope of the inspection, violations or deviations were not identified."

This report validates my concern that the Watts Bar Plant is not safe to operate. The TVA knows it, NRC knows it, and an operating licence must be denied.

(1) More problems have been identified as a result of this inspection.

(2) TVA resolved employee concerns that certain parts of the construction did not meet the requirements of the National Electric Code by eliminating the National Electric Code from the design criteria.

(3) Out of 230 deficiencies identified by TVA, the NRC inspected only 18. Logic says this is completely unacceptable. How can NRC in good faith state "The inspectors concluded that the DBVP CAP had been adequately implemented" when by their own admission there are 212 deficiencies remaining that they have not inspected?

The following is my critique of the inspection report:

(1) Until these problems are solved and a complete hearing is held on the safety of this plant;

(2) Until every employee who voiced a concern has been involved in looking at the resolution of their complaint and has agreed that the problem identified in their concern has actually been satisfactorily fixed and not just resolved by removing the rule that it violates;

(3) Until the public is satisfied that they will suffer no monetary or health damage as a result of the operation of the Watts Bar Nuclear Plant;

(4) And until other uses for the building other than the production of electricity, specifically, the sale of the containment building to be used by DOE as a Repository of HEU from dismantled weapons, to meet a more pressing national security need, have been addressed;

I hereby request that NRC deny TVA a licence to load fuel at the Watts Bar Nuclear Plant.

Here are my concerns specifically:

NRC's Summary: "The inspectors concluded that the DBVP CAP had been adequately implemented. However, the following unresolved item (URI) and inspector follow-up items (IFIs) related to the DBVP CAP were identified for review in a subsequent inspection"

This is an oxymoron. The DBVP CAP can not have been adequately implemented if there are any outstanding deficiencies or unresolved items. This inspection report clearly points out that the NRC has not adequately performed its duties to adequately inspect the plant and enforce the regulations and accompanying safety codes.

Unresolved deficiencies were identified, but the employee concerns were declared "resolved."

Section 2.3 page 4 defines the problem and translates the abbreviations. A CATD is a Corrective Action Tracking Document to assure completion of corrective actions for validated issues identified from employee concerns. TVA identified 27 of the CATDs as addressing deficiency items that were source or associated issue items for the DBVP CAP (Design Baseline and Verification Program, Corrective Action Plan) It discloses that a portion of the employee concerns were dealt with in document IR 390/95-46. I have requested a copy of that document. The items listed as part of section 2.3 are the other employee concerns in the DBVP CAP and their review and NRC's supposed resolution thereof.

2.3.1 10200 WBN-02 Update and Clarify FSAR (Final Safety Analysis Report)
80454-NPS-01 FSAR Commitments Not Being Met.

The layers of review are detailed and the documents that have been generated as a result of this employee concern are identified. The NRC has looked at these documents and their conclusion is "**Although some discrepancies were found, in general the PAC/AQ** (Program for Assurance of Completion/Assurance of Quality) **review and FSAR were considered adequate. The employee concerns were resolved.**"

What discrepancies were found?

Who were the employees who had originally made the complaints? Have they been kept informed of the resolution of their concerns?

Have the aforementioned employee or employees reviewed the documents?

Are they satisfied that the problems they identified in their original complaint have been fixed and not merely "reworded" away?

What has happened to each individual employee since he or she first voiced his or her original concern?

Item 2-3-2 Employee concerns involving circuit breakers.

NRC's resolution"In general, the electrical calculation program was determined to be adequate and the regenerated electrical calculation of good quality."
This answer implies that there are still some unresolved problems, that the electrical calculation program is not 100% perfect, only,"generally adequate." Specifically, what is still wrong with it?

Same employee questions as for 2.3.1

The second part of 2.3.2, that dealt with 23702-WBN-05 is even scarier than the "Is generally adequate" response. "The inspectors questioned whether the current breaker settings had been field verified during the CATD closure process to ensure that they matched the calculations. There was no indication from the lookback sheets or from the closure folders that any field verification had been performed during the CATD closure process. TVA identified that CATD 23702-WBN-06, a different CATD in the series, addressed actual hardware completion and that they had not performed a field verification. TVA immediately began a field verification sample review. During the review several problems were found and were documented on corrective action document WBPER 950392. DCN 37538 was issued to address two thermal overloads that were found where the installed hardware matched the drawings but did not match the calculations. A breaker was found with an incorrect setting and a work request was issued to reset the breaker to the setting required by the calculation. TVA intends to reopen CATD 23702-WBN-06 to address the problems associated with the field installations. the issues involved with the 02 and 05 CATDs were resolved.

Same employee questions as 2.3.1

Is this included in any of the three open items? Please provide proof that the problems have been fixed not merely settled by declaring them "resolved".

Item: 2.3.3 Regarding 23702-WBN-04 No Fuse Capacity Calculations for Short Circuit Settings for Motors. This item concludes with: "In general, the electrical calculation program was determined to be adequate and the regenerated electrical calculations of good quality. The employee concerns are considered resolved.

This is the same answer as given in 2.3.2. first paragraph. "In general" lacks specificity. What is wrong with the calculations if it is only "generally adequate?"

2.3.4 23702-NPS 05 Level of Conformance to National Electric Code

Of all the complaints and gobbledegook resolutions, this one really riles me the most.

There were three separate employee concerns out of the 27 that were included in the DBVP CAP that were resolved with a stroke of a pen, or should I say an eraser. CATDs 23702-WBN 02, -04, and -05. TVA's solution: "Reference to the NEC was removed from Design Standard DS-E2.3.2- - - - The level of conformance in a design Standard to any invoked standard outside of the TVA system (including the NEC) that is not committed to through the FSAR or QA Plan is defined in SEP 0.5.4 Design Standards and Guides, REV. 0., Section 3.2.6. The employee concerns were resolved.

Outrageous! I renovated my house a few years ago. The inspectors insisted that I use only an electrician that was licensed in Davidson County. If codes are strictly enforced, even for a small garage conversion in Davidson County, shouldn't National Electric Codes be enforced in the construction of a nuclear plant? TVA has clearly shown that they consider themselves above the law. If they don't like a regulation, they just eliminate it from their "standard", and the NRC has shown that they do not stand up to TVA. If the public is to have confidence in NRC, then the NRC must deny the operating licences for Watts Bar

Nuclear Plant until TVA complies with all NRC regulations, without exemptions, including the NATIONAL ELECTRIC CODES,

Specify what the employee concerns were, send a copy of CATDs 23702-WBN- 02,- 04, and -05. Specify what section of the NEC these concerns referenced.

Who were the employees that voiced these concerns? (2.3.1. questions)

Did TVA commit to inclusion of the National Electric Codes in its construction permit? Are they eliminated from all of the Watts Bar Design Criteria, since they are NOT COMMITTED TO THROUGH FSAR OR QA PLANS?

2.3.5 21809-WBN-01 Annulus Area Clearance for Thermal Expansion

"This CATD was issued because the clearances for thermal expansion of the steel containment vessel were not sufficient. . .The outliers were potential deficiencies found by the walkdown (Inspection carried out by walking though the specified area)... Of the 181 outliers, six were still not resolved....When the remaining six outliers are resolved, the employee concerns will be resolved."

What is the worst accident that can occur based on the deficiencies as originally reported and by those discovered by the walkdown, both those that have been resolved (how were they resolved) and those still unresolved?

2.3.6 10400 WBN-02 Deficiencies in Calculations for Embedded Plates
Design & calculation errors. The NRC is reviewing this issue under another document CDR 390/86-39. When this CDR is closed, the employee concern will be resolved.

What is the status of CDR 390/86-39. It has been known for nine years as indicated by "86" in the problem number. Why is this still an outstanding problem. If it hasn't been fixed in nine years, can it ever be fixed? How much has been spent trying to resolve this problem since 1986. How much time, how many man hours has been spent on it?

Who was the original complainer, employee concern reporter? (same questions as in 2.3.1)

2.4 Resolution of Other Deficiency Items.

TVA identified 230 deficiency items. NRC looked at 18 of them. What about the other 212? How did NRC choose which ones to inspect and which ones to ignore?.

What document details the entire 230 deficiencies?

How were the 27 CAPDs culled from 5,000 employee concerns? What document lists all of the original concerns?

How can the NRC reach the conclusion that the DBVP CAP has been adequately implemented when they have only inspected 18 deficiencies out of 230, when 6 deficiencies are outstanding from a walkdown inspecting the clearance of the steel containment building, when it is now 1995, and an item has been outstanding since 1986 and is still not closed?

How can TVA jettison the National Electric Codes from its design criteria?

How can the NRC not follow up on what happened to the employees who brought these original complaints to light? To ask people who now have jobs to offer their concerns is ludicrous when they all know full well the history of the original "whistleblowers."

The NRC should bring these TVA employees, many of whom are now ex-TVA employees, those who offered the 5,000 concerns, to a public hearing. They should first be provided documents outlining TVA's complete handling, or lack there of, of their original concerns. Give these employees an opportunity to say, "The problem is fixed to my satisfaction." If they do not make that statement, TVA should be denied an operating licence.

The public should also have an oportunity to voice their concerns as part of a formal operating licence hearing,

Respectfully submitted October 11, 1995

Jeannine Honicker

Jeannine Honicker

#6

djhonicker

From: "Gil Melear-Hough" <gil@cleanenergy.org>
To: <djhonicker@msn.com>
Sent: Wednesday, March 06, 2002 3:33 PM
Subject: TVA documents

Jean,

The librarian at the TVA Library was unable to locate the inspection document that your requested on Watts Bar. She suggested that you try with the NRC.
Sorry,

--
Gil Melear-Hough
Green Power Organizer
Southern Alliance for Clean Energy
P. O. Box 1842
Knoxville, TN 37901-1842
Phone (865) 637-6055 Fax (865) 524-4479
Gil@cleanenergy.org
www.cleanenergy.org
Choose a Cleaner Environment. Choose Green Power!

#7

In summary, TVA is committed to maintaining thyroid doses during operation of the HNP within the guidelines adopted in Appendix I to 10 CFR 50 for limiting conditions for operation of light-water-cooled nuclear power reactors. TVA believes that the mathematical models specified in Regulatory Guide 1.42 (Model 1) for calculating radioiodine source terms and cow-milk-child pathway doses are unduly conservative in the areas discussed. For this reason, TVA has taken a more realistic position (Model 2) in estimating the doses for the cow-milk-child pathway for the proposed Hartsville Nuclear Plant. Calculations using Model 2 (annual child thyroid dose of 11.5 mrem) indicate that the proposed Appendix I design objective of $\leq$ 15 mrem/y (DO 1) can be met with the proposed plant design. However, if the calculational methods of Regulatory Guide 1.42 (Model 1) were applied, the calculated annual child thyroid dose would be 335 mrem. Using the AEC Regulatory Staff philosophy regarding "baseline in-plant control measures,"[5, 6] the installation of carbon adsorbers in the turbine building and reactor building ventilation systems would be required to lower this dose calculated using Model 1 to within the design objectives of the proposed Appendix I (DO-3, $\leq$ 60 mrem/y). The calculated annual child thyroid dose using Model 1 with carbon adsorbers added would be 38 mrem, and the cost of this equipment would be more than 8 million dollars. If the results of further studies on the parameters used in the Model 2 calculations indicate that additional equipment will be required to meet the design objectives for radioiodine releases, the proposed design of the Hartsville Nuclear Plant does not preclude the addition of this equipment. However, TVA expects that additional equipment will not be required.

Attachment #8

Get NUREG-0498
Supplement #1 from NRC

Final Environmental Statement
related to the operation of
Watts Bar Nuclear Plant
Units 1 & 2

Draft Report
Docket No 50-390 & 50-391
Tennessee Valley Authority
Nov 1994

I would have to cut my copy to
have it printed, & I do not wish to
destroy it - Jeannine Honeker