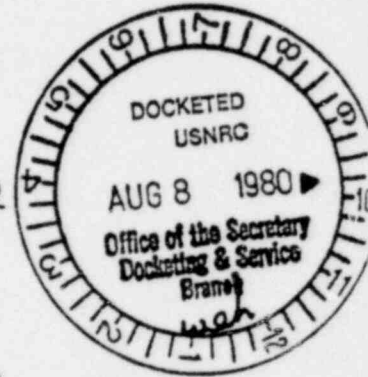


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of §
APPLICATION OF WESTINGHOUSE §
ELECTRIC CORPORATION FOR A §
SPECIAL NUCLEAR MATERIAL § DOCKET NO. 70-2909
LICENSE FOR THE ALABAMA §
NUCLEAR FUEL FABRICATION §
PLANT (ANFFP) TO BE LO- §
CATED NEAR PRATTVILLE, §
ALABAMA §
§



PROPOSED VALID CONTENTIONS OF
INTERVENOR SAFE ENERGY ALLIANCE OF
CENTRAL ALABAMA, INC.

Comes now the Intervenor Safe Energy Alliance of Central Alabama (hereinafter "SEACA") and hereby offers as valid the following contentions in connection with SEACA's petition to intervene in the above-captioned proceedings:

WASTE SAFETY:

I. Westinghouse Electric Corporation (hereinafter "Westinghouse") will not be governed by a license in disposing of its radioactive waste and effluents. Westinghouse states in its Alabama Nuclear Fuel Fabrication Plant Environmental Report (hereinafter "Report") pages 7-13 and 7-14 paragraphs 3 and 4, that its stabilized waste will be buried in a non-NRC licensed burial site. In light of this fact, Westinghouse has not proven the safety of this type of waste burial. Specifically, SEACA is concerned about:

(A) The safety of the process by which the waste will be

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degraded to natural isotopic content prior to being stabilized by either the sodium silicate process or the calcium fluoride process.

(B) The effects, both long-term and short-term, which the buried waste described in 1(a) above will have on the environment. At no place in the Report is there any discussion of the great harmful potential of these buried wastes.

(C) The fact that the radionuclides in the waste will outlive their cement matrix as described in page 3-20, paragraphs 1 and 2, and therefore contaminate the environment. Furthermore, no consideration is given to the fact that the radionuclides will emit radiation for hundreds of thousands of years, while no lifespan is given to the encapsulating matrix.

QUALITY ASSURANCE:

II. The Report fails to address the issue of quality assurance or control at any phase of production of the fuel assemblies at the Alabama Nuclear Fuel Fabrication Plant (hereinafter "the Plant"). Specifically, SEACA is concerned that:

(A) Nothing is said in the Report concerning quality assurance of equipment, either new or used, after the Plant has begun operation.

(B) Nothing is said in the Report concerning quality control of the building structure.

(1) It is necessary that the building be perfectly airtight to secure against radiation leaks and insure the 99.9% efficiency of the High Efficiency Particulate Air (HEPA) filters.

(2) It must be proven that the Plant buildings can withstand any fire, explosion, earthquake, tornado, or other geological upheaval. Otherwise every postulated release in Section 5-4.7 is grossly underestimated.

(C) Nothing is said in the Report concerning the amount of heat the building structure can withstand.

(D) The Plant building needs to be perfectly (100%) watertight to insure against leaks to the environment in the case of a spill such as that of uranyl nitrate considered in §5-4.4 of the Report.

(1) According to section 5-4.1 of the Report, the building structure is not airtight. The illustration given in 5-4.1 of the Report concerning gas seeping from the building indicates that the building is not airtight. If this be the case, the emission calculations based on the 99.9% efficient HEPA filters are inaccurate in that they don't consider seepage from the building.

SECURITY:

III. The Report fails to adequately discuss security arrangements at the Plant. SEACA is especially concerned that:

(A) Security is given only cursory treatment in such sections of the Report as 3-1.1 and 3-3.1, and this discussion is only implicit.

(1) For instance, the Report does not mention security guards, much less discuss how such guards would be trained, how they would foil a sabotage attempt, or even whether such guards could secure the Plant from unauthorized admittance to confined areas. Moreover, would security guards be required to wear dosimeters?

(B) Problems with security at Westinghouse's Columbia, South Carolina plant highlight the potential for security problems for the Plant at the proposed Prattville site.

ACCIDENTS:

IV. The Report is deficient for its failure to adequately address the subject of accidents occurring at the Plant or occurring in transportation to and from the Plant. SEACA is especially concerned that:

(A) The Report's discussion on security at the Plant is very subjective and does not explain the basis for their system of rating the probabilities of an accident. More pointedly, how does Westinghouse justify rating accidents as "credible," "incredible," and "remotely possible?"

(1) These descriptive terms appear to be grounded on calculations either unfounded or based on fuel fabrication plants using an entirely different process than the one proposed.

(B) The Report fails to address the possibility of a leak of hydrofluoric acid in the tank farm area. (This assumes that the tank farm area is where the hydrofluoric acid will be stored since there is no information to the contrary.)

(1) In the event of a hydrofluoric acid leaking into an outside area (i.e. tank farm), it would quickly reach the sandy soil on the site which would provide a direct path to the ground water.

(2) The Report does not consider the extremely corrosive properties of hydrofluoric acid.

(a) In fact, this acid is so corrosive that it will cause leaks and equipment failures throughout the fabrication process.

(C) The Report on page 5-15 states that UF_6 leaks are possible outside the Special Nuclear Materials (SNM) building. If this is so, there must be a release of some radionuclides, contrary to what is stated on Table 5-1 of page 5-2 of the Report.

(1) Page 5-4.1 of the Report states that upon discovering a leak in the UF_6 tank outside the SNM building, the tank would be immediately brought inside. There is no consideration given to what happens to the UF_6 released before the tank is brought inside. Presumably, this leak would be a significant and dangerous release of UF_6 , in the absence of proof to the contrary.

(D) The Report does not address the issue of worker safety during an accident at the Plant, even though plant workers will be most affected by any in-plant accident.

(1) Nothing is stated in the Report as to what will happen to a worker once he has received the maximum dose allowable.

(2) There is no mention as to whether the workers will wear dosimeters.

HEPA FILTERS:

V. The Report does not adequately treat the problems which can arise with HEPA filters.

(A) Throughout section 5 estimates are too conservative; in reality the estimates appear to be the contrary.

(1) For example, the Report does not consider that the HEPA filters used will become clogged and less efficient. The Report states on page 5-11 that the HEPA filters will operate at a 99.9% rated efficiency level. This means that normally there will be a release of effluents equal to 0.1% of the radionuclide level inside the SNM building. Therefore, if the HEPA filters became slightly clogged so that their efficiency level decreased to a 0.2% level, the damage potential would double. Likewise, a 0.3% deficiency would triple damage potential.

(B) There is no assurance in the Report that the HEPA filters will not become less efficient during plant operations and no way to determine whether or not the HEPA filters will become less efficient.

(1) The Report does not indicate whether any check will be made to determine whether or not the seals around the filters are air-tight.

(2) If 1% of the atmosphere inside the Plant seeps into the outside atmosphere in the manner stated in page 5-4.1 of the Report, the release to the environment would be 10 times the calculations shown in the Report.

(C) A normal part of the Plant's operations will require the changing of HEPA filter banks, and an accident occurring simultaneously with such a change would release massive amounts of radiation into the atmosphere.

(1) HEPA filters will supposedly be operating 24 hours

a day, 7 days a week and said filters are so important to the safety of the Plant that the Plant should never operate without them.

PLUTONIUM:

VI. The Report does not address the role plutonium will play in the future of the Plant. In particular, SEACA is concerned that

(A) The present supply of uranium is likely to last for no more than 30 years, which is a shorter period of time than the projected life of the Plant.

(1) Since the projected life of the plant is 40 years, there will be a 10 year period in which the Plant cannot operate without plutonium.

(2) Simple economics will induce Westinghouse to convert to a similar process using plutonium oxide.

(3) Exposing the public to anything as toxic as plutonium would be an act of aggravated negligence on the part of Westinghouse.

ALABAMA RIVER

VII. The Report inadequately assessed the impact of the Plant on animal and plant life in the Alabama river.

(A) The Report, section 3-2.11.1, states that 21,000 gallons of water will be dumped into the Alabama river.

(1) All 21,000 gallons of water will contain radionuclides, which will concentrate themselves thousands of times into tissues of plant and animals in and around the Alabama river.

(a) One of the main forms of animal life in the Alabama river are fish, which will be caught and eaten by human beings. Said fish, when eaten, will transfer their radionuclides into the human body, producing dangerous and potentially lethal results.

(B) The Report does not discuss the temperature of the water which will be discharged by the Plant.

(1) It is important that the temperature level of the water be known, since water which is too hot will produce adverse effects on the environment.

(2) Water which is too warm, in conjunction with increased nitrate levels, will cause excessive and undesirable vegetation growth.

DISPERSION MODEL:

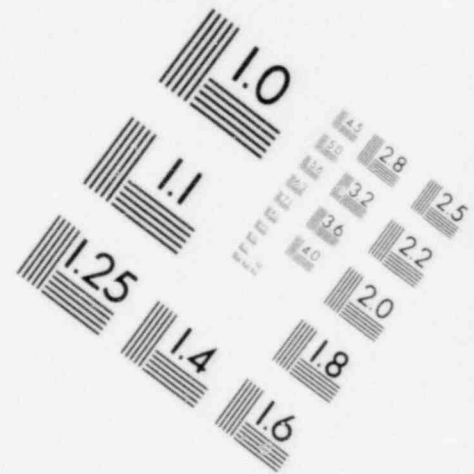
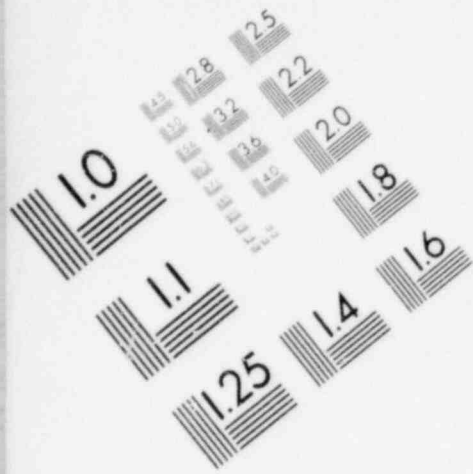
VIII. The Liquid Dispersion Model set out in Appendix C of the Report is inadequate (due to its rectangular shape) for determining correct radionuclide dispersion.

(A) The perfect rectangular nature of the model does not account for irregularities found in the Alabama river.

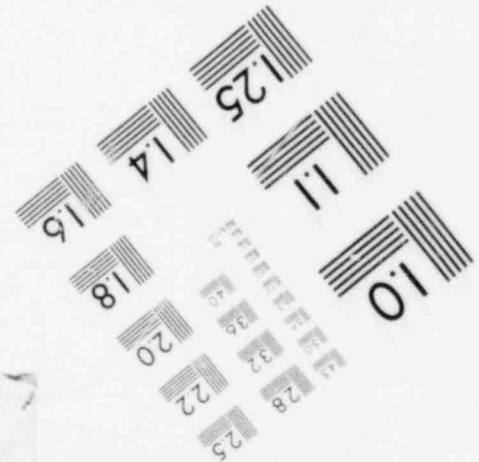
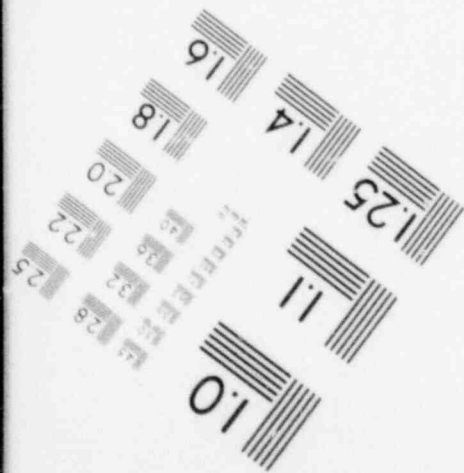
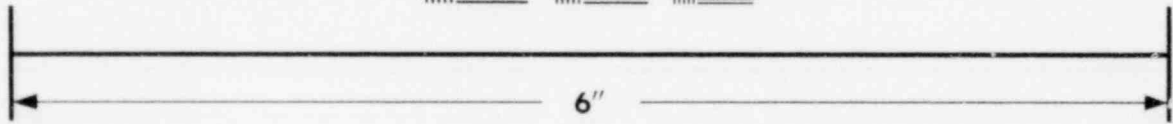
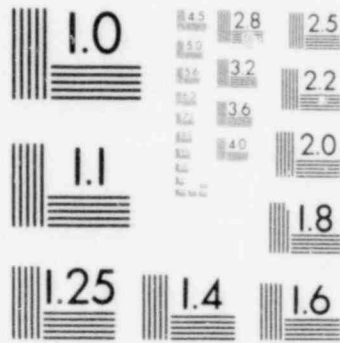
(1) Uranium, as a heavy metal, tends to settle in sediment pools along the bottom of the river, where it will concentrate up to 72,000 times normal levels.

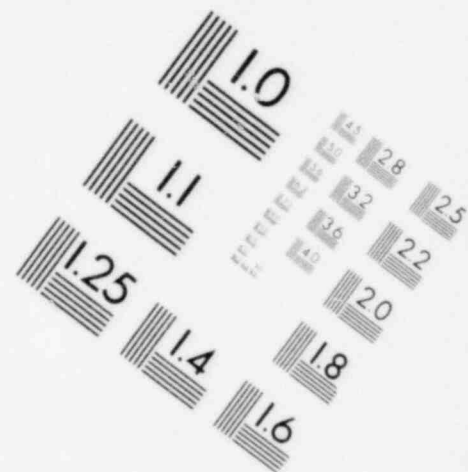
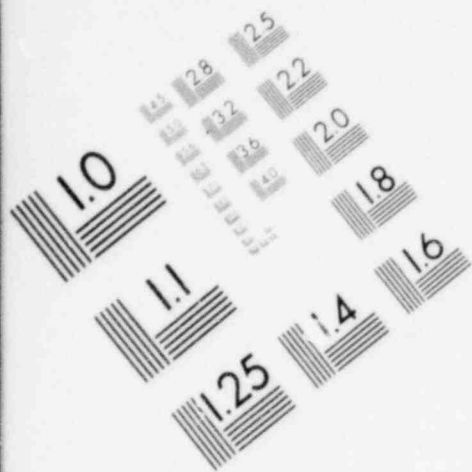
(a) These high radionuclide concentrations will enter the food chain where they become more densely concentrated in animal and plant tissues.

(b) These higher concentrations are then transferred up the food chain where they reach human beings at many thousands of times the levels coming out of the

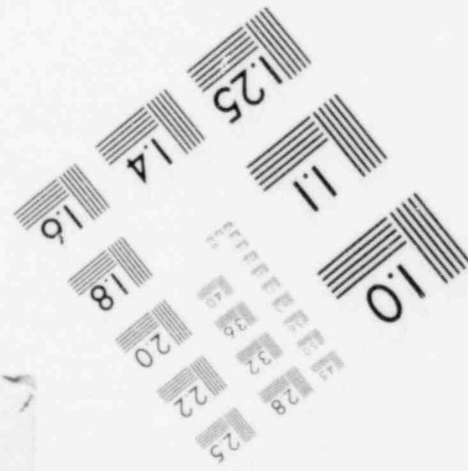
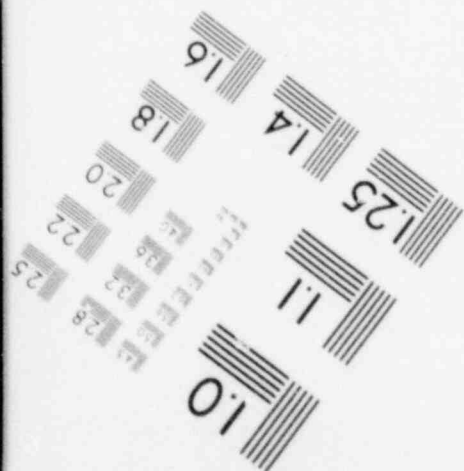
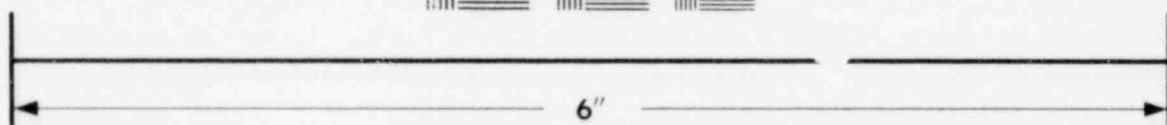
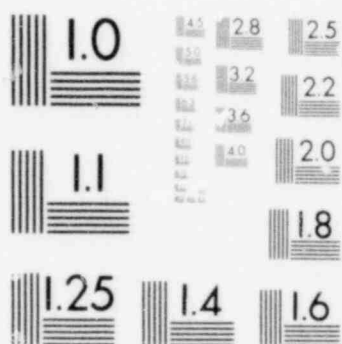


**IMAGE EVALUATION
TEST TARGET (MT-3)**





**IMAGE EVALUATION
TEST TARGET (MT-3)**



Plant.

DECOMMISSIONING:

IX. The Report is fatally flawed in its failure to address the subject of decommissioning of the plant.

(A) After a 40 year lifespan, it will be necessary to decommission the Plant.

(1) Decommissioning is a multi-million dollar process involving tremendous amounts of low-level waste.

(a) The process presents enormous costs and dangers, yet nothing is said concerning decommissioning in the Report.

(2) It is necessary for Westinghouse to do an in-depth study concerning every aspect of decommissioning, including:

(a) who will pay for it?

(b) how decommissioning will be achieved?

(c) what are the short-term and long-term effects of decommissioning on the environment?

(d) what will happen if there is no decommission or if decommissioning is incomplete.

(1) If Westinghouse were to bankrupt or otherwise denounce responsibility and abandon the Plant, the taxpayers would be left with removing a highly radioactive building or leaving the same as a public nuisance.

NEED FOR PLANT:

X. The need for the Plant is based on an underlying erroneous

assumption that the number of nuclear reactors will increase throughout the next 40 years. SEACA is especially concerned that:

(A) The projected life of the Plant is 40 years, yet page 7-1 of the Report, which is the only part of the Report substantiating the future need of the Plant, projects only to the year 1990 and not beyond.

(1) This means that the need for this plant is unsubstantiated during the majority of the years of its operation.

(B) The Report states on page 7-2 that the energy needs of this country have increased linearly to this point and will continue to do so.

(1) This is untrue, and it is probable that energy needs will increase minimally, if not decrease, over the next two decades. See article entitled "Getting Efficient" by Amory Lovins, table 1, page 5, Rain magazine, November, 1979.

NON-INDUSTRIAL NATURE OF PLANT SITE:

XI. The Report inaccurately states on page 7-7 that the plant site is already in "an industrial site locality."

(A) It is misleading for the Report to claim that the site is industrial because it is so zoned and to further imply that the Plant will have no effect on an already industrial ecology.

(1) Eleven pages of the Report (2-65 - 2-76) itemize a myriad of wildlife species which roam the area of the Plant. All of these species would be endangered, and most likely exterminated, by the construction and operation of the Plant.

(a) This listing proves the pristine nature of the site, therefore disproving the theory that the plant would not cause significant changes in the ecology due to its industrial nature.

RADIATION DOSE MODELS:

XII. The radiation dose models used in the Report come from extremely outdated sources in view of the tremendous advances being made in health-physics.

(A) The newest reference concerning dose models used in the Report is 4 years old and does not consider reports done by Dr. Carl Morgan, Dr. T.F. Mancuso, Dr. Berndt Franke, Dr. Dieter Teufel, and others.

(B) It is necessary that Westinghouse consider reports as recent as the one prepared by Franke and Teufel, Heidelberg, June 12, 1980 and entitled "Radiation Exposure Due to Venting TMI-2 Reactor Building Atmosphere," and subtitled "A Study Prepared by the Institute for Energy and Environmental Research, Heidelberg, Federal Republic of Germany for the Three Mile Island Legal Fund, Washington, D.C."

(1) Many of the attitudes and practices of Metropolitan Edison criticized in the Report are exemplified by Westinghouse.

(a) For example, Westinghouse fails to include in its Report certain radionuclides and gases which are necessarily present with uranium, mostly notably plutonium, strontium, cesium, and other daughter elements of uranium as well as radon gas.

(C) The dose models used in the Report have come into

question since they were based on nuclear fallout and were formulated under prejudiced conditions.

(1) In order to determine dose through the food chain, only those soils which retain least radioactivity were used. The soils were then baked to destroy radionuclide-bearing germs, and therefore the dose transferred to man in the food chain was low.

WELLS:

XIII. The wells cited on page 2-34 of the Report by Westinghouse for testing ground water are useless in that they are located upstream from the Plant and therefore cannot accurately monitor the Plant's effects on the environments.

(A) The artesian flow, as indicated by the U.S. Geological Survey, show that the wells would not correctly monitor any effect from the Plant on the ground water.

(B) It is necessary that Westinghouse produce three viable wells for the accurate monitoring of the Plant's effects on the environment.

(C) Westinghouse must show, once a noticeable effect on the water supply has been discovered, that there is some way to remedy the contamination, leaving Prattville with a safe and potable source of drinking water.

SLAG:

XIV. The Report does not address the problem of slag developing on the interior of pipes and fittings used in the fabrication process at the Plant, nor does the Report address the danger to the public presented by removing the low level waste created by the slag.

(A) The slag on the pipes and fittings will have to be removed by acidic slurry.

(1) This process is not mentioned in the Report but will produce large quantities of unmanageable low level waste that will surely confront the public with dangers and possible accidents not considered by Westinghouse.

(B) It is necessary that Westinghouse provide precise information on the following:

(1) How will the Plant be maintained during its projected 40 year life span?

(2) How frequently will the slag removal process or one similar to it be required?

(3) What are the dangers of the slag removal process?

(4) What is the basis of a projected life span of 40 years for the Plant?

(a) Is the accumulation of slag a consideration?

POPULATION PROJECTIONS:

XV. The population projections on page 2-9 of the Report are inaccurate.

(A) The Report projects that the population within a 5-mile radius of the Plant will only grow by 5,949 in the 10 year period between 1980 and 1990, even though the population within the same radius grew by 1,023 between 1978 and 1980.

(1) This projection is illogical when it is considered that the Plant itself will add thousands of people in the Prattville area.

(2) If the logic of this population projection is

followed, and even assuming that sun-belt migration will not increase population (an erroneous assumption) between 1980-1990, and even assuming that the Plant will add no secondary population increase (another incorrect assumption), then the Plant will add no more than 834 people (about 200 employees plus dependents) to the population. This is clearly not the case and therefore the population figures in Table 2-5 appear to be wholly unwarranted. The other Tables are similarly flawed.

ALTERNATIVE SITES:

XVI. The criteria listed on pages 7-5 to 7-7 of the Report by Westinghouse for choosing the Prattville site for its Plant are surpassed by alternative sites; therefore there must be a reason other than the criteria stated for the choice of the Prattville site by Westinghouse.

(A) On the basis of proximity to nuclear reactors, the point most centrally located is in the middle of Ohio, hundreds of miles from Prattville.

(B) An Ohio site would be closer to:

- (1) Westinghouse's home office in Pittsburgh, Pa.
- (2) Users
- (3) Adequate transportation
- (4) Adequate labor market
- (5) Zircaloy products in Pennsylvania
- (6) Gasification plant in Portsmouth, Ohio.

(C) An Ohio site would be nearly as close to a licensed burial ground as Prattville, Alabama and just as close to West-

inghouse's Columbia, South Carolina plant as Prattville.

(1) Prattville, Alabama is at the very southern extremity of a likely site area and is only a marginally acceptable site; much more likely sites closer to the center of sources of materials and need for distribution would logically lie somewhere between Oak Ridge, Tennessee and Pittsburgh, Pennsylvania.

(a) There are many logical sites in Kentucky, Tennessee, West Virginia, Virginia, Maryland, Ohio, and Pennsylvania with hydrological, meteorological, and even demographic characteristics similar to Prattville.

(E) Prattville, Alabama appears to have been chosen for purely political reasons, namely that the level of anti-nuclear protest is much lower in Alabama than it is in the states mentioned in XVI(D) above.

ERRONEOUS INFORMATION:

XVII. The entire Report is suspect and its credibility dubious in light of numerous examples of erroneous information contained therein.

(A) The following are examples of erroneous information:

(1) "The Alabama river is not prone to flooding" (page 5-5 of the Report). It is well known in Central Alabama that the Alabama river floods frequently.

(2) "The Plant site is 12½ miles from Montgomery, Alabama." (page 1-1 of the Report). In actuality, the plant site is 6½ miles from Montgomery.

(3) "Spring is a relatively dry season." (page 2-55) of the Report). It is well-known that spring is a very wet season in central Alabama.

(4) Page 2-91 of the Report states that there was a sudden increase in gross beta activity during the months of November and December, 1976 and Table 2-29 is cited. Turning to Table 2-29, it can be seen that the beta activity actually decreased from a peak in October, 1976 of 1.9 pCi/M³ to 1.2 pCi/M³ in November, 1976 to .4 pCi/M³ in December, 1976.

(5) Page 4-5 of the Report states that the Plant will use only 5% of the present Prattville water supply capacity. Yet, using the Report's own figures, it can be calculated that the Plant will use 7.3% of the Prattville water supply capacity.

INADEQUATE INFORMATION:

XVIII. SEACA has been denied access to information which would further substantiate contentions already prepared and supply a basis for additional contentions. SEACA has not received information from Westinghouse in the following four areas:

(A) Westinghouse has not replied to a list of Interrogatories served upon them on July 10, 1980. The Answers to these Interrogatories are necessary to formulate a complete set of contentions.

(B) SEACA, through its executive secretary Ed Bell, has had several telephone contacts in recent weeks with Westinghouse (office of Donald Marcucci) requesting information very important to the formulation of contentions. Not a single response or answer has yet been received by SEACA to any of these requests for information.

(C) SEACA has yet to receive the Environmental Impact Statement from Westinghouse and may not receive the same for months.

(D) Much of the information in the Report is erroneous (see contention XVI) and thus the Report as a whole cannot be trusted.

LACK OF EVACUATION PROCEDURES:

XIX. The Report does not address the issue of evacuation procedures in the event of an accident, sabotage, or geological upheaval either at the Plant or in transportation to and from the Plant resulting in a release of radiation or other poisonous substance.

(A) American Broadcasting System's television presentation of "20-20" on Thursday night, July 31, 1980 highlighted the need for adequate evacuation procedures for population groups in the vicinity of nuclear plants, yet the same presentation pointed out how inadequate such evacuation procedures are.

(B) The civil authorities in the Prattville-Montgomery area have had no experience in massive evacuation procedures, and without some specific plan of action set out in the Report and without an affirmative statement in the Report that Westinghouse will instruct the civil authorities, it appears likely that chaos or pandemonium could result from an attempt to evacuate any sizeable group of people from the Prattville-Montgomery area.

ECONOMIC IMPACT:

XX. Despite the economic advantages Westinghouse believes will

enure to the community surrounding the plant, the detrimental effects to the same community will far outweigh the advantages, especially when the plant is shut down after 40 years.

(A) The Prattville community is conditioned to its present economy and is not suffering in the absence of the Plant.

(B) The Plant will bring with it the illusion of prosperity, but as the economy adjusts to the increased population through addition of small businesses, public services and governmental beaurocracy, the economy will stabilize at a level comparable to its present level.

(C) After 40 years, the Plant will shut down, leaving the Prattville-Montgomery area with the puffed-up economy from the plant and a sudden shortage of employment and cash flow. This will have a deleterious effect on the area in that people will be accustomed to the Plant economy and will suddenly be without it.

TAXPAYER'S SUIT AGAINST INDUSTRIAL BOND ISSUE:

XXI. SEACA anticipates that Westinghouse will want to finance construction of the Plant with proceeds from a tax-free industrial bond issue under the Wallace-Cater Act, yet such a bond issue would be greatly delayed, if not defeated altogether, by a taxpayer's lawsuit which members of SEACA intend to file.

(A) Such a taxpayer's lawsuit would cast a great cloud over any industrial bond issue, and members of the investing public would be reluctant to invest in such an issue in the face of determined opposition by SEACA and its members, who would

have the ability at the very least to tie the issue up in the courts for many months.

PROTOTYPE CONSIDERATIONS:

XXII. The location of the two existing plants which are prototypes of the Plant are presently unknown, and therefore SEACA has been unable to obtain and study a history of the operations of the other two plants by which it can analyze and compare the Plant.

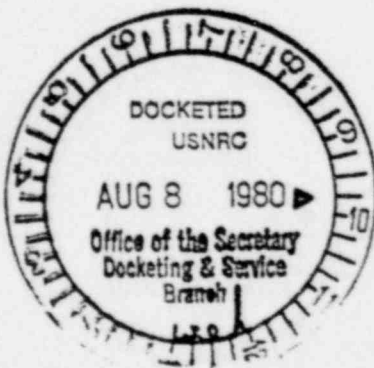
(A) To effectively study, analyze, and compare the Plant, SEACA needs to know:

- (1) Is the Plant designed to be a duplicate of the other two plants?
- (2) What Operations and Maintenance (O+M) data is available concerning the other two plants?
- (3) Has Westinghouse constructed a pilot or model plant, and if so, is it available for inspection?

Respectfully submitted,

SEACA

By Julian McPhillips
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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing upon the following named parties by mailing the same to them on this the 5th day of August, 1980.

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