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Office of the Secretary
Planning & Service

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Nuclear Fuel Plant Who Has Jurisdiction Who Has Liabilities

70-2909
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U.S. NUCLEAR REGULATORY
COMMISSION

February 11, 1981

To:— Dr. Ira L. Myers, M. D.,
State Health Officer, The Alabama State
Board of Health, Public Service Building
Montgomery, AL 36130

- (1) Mr. James W. Warr, Director
Alabama Water Improvement Commission
- (2) Mr. Aubrey V. Godwin, Director
Division of Radiological Health
- (3) Mr. Alfred S. Chipley, Director
Solid and toxic waste (nonradioactive)
Control

For Public Participation:—
(4) Alabama Environmental Quality
Association, P. O. Box 11000,
Montgomery, AL 36111

Federal Regulators:—

- (5) U. S. Environmental Protection Agency
(A) Environmental Impact Statement
Branch
(B) Water Enforcement Branch
Region 4, 345 Courtland Street
Atlanta, GA 30308
- (6) Docket Number 70-2909
Atomic Safety and Licensing Branch
U. S. Regulatory Commission
Washington, D. C. 20555

For the Alabama Legislature:—

- (7) Ms Dannie Schockley, clerk
Nuclear Activities Committee
State Capitol
Montgomery, AL 36130

From:— Louis G. Williams, Ph. D.,
Emeritus Professor of Ecology
Science advisor for SEACA
Home address:—
1246 Northwood Lake
Northport, AL 35476

In the Matter of:—

Licenses from the State of Alabama
Licences from the federal government
Alabama AGREEMENT status
Need for Alabama Public Hearing
on the application of the Westinghouse
Electric Corporation to build and to
operate a Nuclear Fuel Plant in the
Prattville-Montgomery area.

Source Reading Materials:—

Prattville Public Library
Westinghouse's NRC Licensing application
Westinghouse's Environmental Report
Westinghouse's supplemental reports

Vital concerns for citizens of Alabama:—

What are the risks and who bears them?
How can jargon, rhetoric, special nuclear
regulatory terminology, and complex
technology of Westinghouse's proposals
be explained in order that the Alabama
legislature and the average citizen can
make value judgments and decisions?

The Nuclear Regulatory Commission is being
sued because it failed to properly regulate
the Three Mile Island Nuclear Plant. Cali-
fornia and Colorado are suing the NRC for
not carrying out regulations by making the
states meet safety standards. Westinghouse
is requesting exemptions for several impor-
tant safety regulations. When it is unable
to meet some of the standards it is requesting
to use a lower standard called ALARA, which
is as low as reasonably achievable, i.e., in
holding down radioactive contamination.

Westinghouse is requesting the Alabama
Water Improvement Commission (from a
meeting with Prattville city officials
on October 24, 1978) for an EPA grant
of \$8,500,000, some 75% federal funding,
to allow Prattville to update its
secondary sewage plant. Page 3-13 of
the Westinghouse Environmental Report
requests, quote, "Typical sewage wastes
generated in washrooms and sanitary
facilities will be routed to the Pratt-
ville treatment plant..." On page
4.38, paragraph 4-2.4 the report pro-
poses to discharge 55,000 gallons per
day of "sanitary" waste into the Pratt-
ville sewage treatment plant. This
discharge (page 3-13) would contain
wastewater from cleaning up to 45,000
pounds per month of protective clothing,
respirators, towels, rags, etc. This
sewage plant is not designed to remove
radioactive contaminants, such as several
isotopes of uranium, thorium, and other
chemical pollutants. Also, Westing-
house is asking for permission to dis-
charge cooling tower wastes into the
Prattville sewage treatment plant.

The Alabama Water Improvement Com-
mission and the Water Enforcement
Branch of the US EPA should reject this
request for both laundry wastes and
cooling wastes to the Prattville treat-
ment plant. These wastes should be
treated in house by Westinghouse and
final discharge from the treatment
should be to the Alabama River, and not
to Autauga Creek. The citizens of
Prattville should be informed that if
Westinghouse is allowed to discharge its
wastes into their treatment plant that
the citizens, not Westinghouse, will
assume responsibility and liabilities.

WESTINGHOUSE'S WATER REQUIREMENTS

The proposed fuel plant will re-
quire about 260,000 gallons of water
per day, supplied by the Prattville
water system. About 75%, or about
200,000 gallons per day will be dis-
persed into the atmosphere from cooling
towers to aggravate the high humidity
for Montgomery. In the normal operation
of cooling with water, contaminants could
go into the air, such as heavy metals,
and during incidences with the kiln or
furnace, uranium and fluoride could get
into the air. Incinerator vents would
discharge unwanted contaminants into
the air.

RADIONUCLIDES AND HEAVY METALS

Westinghouse plans to discharge
21,000 gallons per day of treated
industrial water to the Alabama River.
The contaminants of this water are
prone to cause eutrophication or
nuisance growths of algae. Both
heavy metals and radionuclides are
known to concentrate in food webs. The
average concentration during the spring
and summer could be several thousand
times. Westinghouse should think
about demineralizing this waste water.
This would help to prevent damage to
the seafood industry downstream in
Mobile Bay. Untreated wastes could
interact with papermill wastes to
exacerbate eutrophication from the
addition of compounds of nitrogen.

Some of these problems I presented
during public hearings; as on January 27,
1981 at NRC waste load allocations, and
on October 3, 1980, both in Montgomery.
During the Alabama Environmental Quality

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SOME JURISDICTIONS

For handling special nuclear fuel materials, such as U-235, U-233, thorium and plutonium the U. S. Nuclear Regulatory Commission has complete jurisdiction.

For the storage or disposal of low-level radioactive waste in Alabama the governor, now Bob James, has the jurisdiction, and the state of Alabama assumes liabilities for this waste management (not Westinghouse). There is a strong movement of seven surrounding states to "LET" Alabama be the regional dump for Low Level Ionizing Wastes. Soon the present site in Barnwell, S. C., may be closed to Alabama. Problems of disposal of high-level wastes (spent reactor fuel, and nuclear wastes from weapons development) will soon come up. There is a movement to remove uranium and plutonium from spent fuel (reprocessing) to be used in conventional nuclear power plants or converter plants. Since Westinghouse has experience in reprocessing and using mixed oxides (meaning uranium dioxide and plutonium oxide) a movement may be pushed by Westinghouse to do it in Alabama. Alabama MUST NOT allow Westinghouse to bring plutonium!

DEFINITION OF LOW-LEVEL RADWASTES

The definition of low-level radioactive wastes has now been changed by an understanding between the NRC and the EPA from a study of a Scientific Review Group. The SRG now defines low-level ionizing materials that give a single dose of 5 rem (whole body) or less, and chronic doses that accumulate at the rate of less than 5 rem per year. This is a higher dose than previously allowed. However, when this radiation dose is exceeded, Westinghouse is requesting of Alabama to be allowed even higher ionizing as... under the ALARA principal. Under normal operation the principal radiation danger will be from inhaled uranium. Since there is no dosimeter or badge that workers wear to measure alpha particles that have been inhaled or swallowed, there is NO WAY that Westinghouse can monitor, especially when workers go home and take the internal alpha emitters with them. Alpha radiation is many times more dangerous than gamma or beta. The lung cancers, bone cancers, and leukemias will not show up for several years, perhaps after the workers are retired. Will Westinghouse pay for medical costs for latent cancers? This is a problem of the Radiological Dept. of Public Health of Alabama and not Westinghouse nor the NRC.

WHOSE DEFINITION FOR LOW-LEVEL RADWASTE?

Westinghouse defines low-level ionizing waste for the Prattville fuel plant on the basis of the amount of curies (radioactivity) in a gram of uranium-235, the fissile isotope of uranium. However, Westinghouse is requesting from Alabama permission to "dilute" the uranium-235 with uranium-234 and U-238 from "depleted uranium". Depleted uranium is not depleted of uranium. It is only low in U-235. This dilution would actually increase the total radioactivity since the depleted uranium adds MORE unwanted radioactive isotopes of uranium. If this is NOT radioactive it belongs in the jurisdiction of solid, but nonradioactive, waste disposal under Mr. Chipley. If it is radioactive waste it belongs to Mr. Godwin, both of Alabama. The Code of Federal Regulations is also in the definition business. It defines radioactive materials (49 CFR 173.389e) as having activity in excess of .002 microcuries per gram. For wastes Westinghouse uses .00035 uCi/g. However these low levels however, do not mean that GOD has told these materials to stop giving off ionizations. These definitions ignore the fact that low-level ionizations accumulate in the body during a life time, which still cause cancers, mutations, etc. Also materials buried in Alabama with its high rainfall cannot be expected to stay buried. The cement mix to stabilize them has been shown to not do the job. Classification, also has not worked.

Westinghouse wishes to name its huge volumes of wastes nonradioactive and hopes that Alabama will permit on-site disposal and burial. Now Alabama will have to decide whether the huge tonnage is radioactive, nonradioactive or merely very toxic. Calcium fluoride containing radioactive materials is both toxic waste and radioactive waste. It may wish to defer the decision until the plant closes down by asking to "store" these wastes on site until the time of decommissioning. Alabama should NOT allow this. It may inherit a very bad problem. Westinghouse wishes to import its "scrap" from its operation in Columbia, S. C., so the wastes can be handled here. Barnwell, S. C., did not like the manner that Westinghouse handled its wastes in Columbia, and the NRC did not like it either, and from what I saw of it, was deplorable. We do not want this in Alabama.

SHUTDOWN, DECON, and SAFSTOR

All Nuclear Fuel Plants become very highly contaminated over the years of operation. Before allowing licensing of this Westinghouse operation the State and the Nuclear Regulatory Commission should insist on a plan for safe shutdown, decommissioning (DECON), which is mostly decontamination of ionizing materials and toxic wastes (calcium fluoride, etc.). The Westinghouse plan should include bonding to insure that funds are available for this very expensive operation. DECON is required immediately after shutdown to remove sufficient radioactive or toxic contaminated materials from the facility and site to release the property for unrestricted use. Alabama does not want SAFSTOR, which is a decommissioning alternative, which defers decontamination after shutdown. Waste problems must be solved on a daily basis, and not put off until the time of shutdown and decommissioning.

OCCUPATIONAL SAFETY AND HEALTH

I believe that Westinghouse owes a frank and complete explanation of just where ion - risk responsibility lies. Can the federal government allow Alabama to have an operation that does not meet federal standards for safety? Who will do the monitoring. If it isn't done by Westinghouse (foxes guarding chickens) who will pay for this expensive monitoring?

Is Westinghouse planning in the future to reprocess "spent fuel" (high-level waste) in Alabama? Does Westinghouse plan to use mixed oxides in its pellets fabricated in Alabama containing plutonium? Is Westinghouse obligated to bring back "spent fuel" and "scrap" from its overseas operation to Alabama? Its Environmental Report suggests this. The heavy use of nitric acid in recovering scrap uranium and/or plutonium adds much pollution to the Alabama River.

INDUSTRIAL COST RECOVERY

Will Westinghouse require tax-free industrial bonding? Will Westinghouse pay its just share for water from the Prattville water treatment plant, and for wastewater treatment from the Prattville domestic waste treatment plant?

Who will be responsible for chemical or radioactive material spills of these hazardous materials coming to and going from Prattville on the highways and in the Alabama River from barge traffic?

Who will be in charge of security? Who will be in charge of civil evacuation in case of an emergency, such as a big criticality excursion? May Alabama be allowed to operate this fuel plant with less than regulatory compliance? May the Nuclear Regulatory Commission, and the Environmental Protection Agency be sued should Westinghouse NOT meet U. S. regulatory requirements?