

AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 742

FILE: _____

FROM: Arkansas Power & Light Co Little Rock, Ark J.D. Phillips		DATE OF DOC 1-17-75	DATE REC'D 1-23-75	LTR xxx	TWX	RPT	OTHER
TO: Mr. A. Giambusso		ORIG 1-signed	CC	OTHER	SENT AEC PDR <u>xxxx</u> SENT LOCAL PDR <u>yx</u>		
CLASS	UNCLASS xxxx	PROP INFO	INPUT	NO CYS REC'D 40	DOCKET NO: 50-313		

DESCRIPTION:
Ltr notarized 1-17-75 trans the following:

PLANT NAME: Arkansas #1

ENCLOSURES:
Proposed Technical Specifications Changes to the Reactor Protection System per AEC approval.....

FOR ACTION/INFORMATION 1-24-75 JGB

- | | | | |
|-------------------------|----------------------------|--|------------------------|
| BUTLER (L)
W/ Copies | SCHWENCER (L)
W/ Copies | <input checked="" type="checkbox"/> ZIEMANN (L)
W/ Copies | REGAN (E)
W/ Copies |
| CLARK (L)
W/ Copies | STOLZ (L)
W/ Copies | DICKER (E)
W/ Copies | LEAR (L)
W/ Copies |
| PARR (L)
W/ Copies | VASSALLO (L)
W/ Copies | KNIGHTON (E)
W/ Copies | SPELS
W/ Copies |
| KNIEL (L)
W/ Copies | PURPLE (L)
W/ Copies | YOUNGBLOOD (E)
W/ Copies | |

INTERNAL DISTRIBUTION

- | | | | | |
|--|--------------------|---|---|--|
| <input checked="" type="checkbox"/> REG FILE | <u>TECH REVIEW</u> | DENTON | <u>LIC ASST</u> | <u>A/T IND</u> |
| <input checked="" type="checkbox"/> AEC PDR | SCHROEDER | GRIMES | R. DIGGS (L) | BRAITMAN |
| <input checked="" type="checkbox"/> OGC, ROOM P-506A | MACCARY | GAMMILL | H. GEARIN (L) | SALTZMAN |
| <input checked="" type="checkbox"/> MUNTZING/STAFF | KNIGHT | KASTNER | E. GOULBOURNE (L) | ABEL |
| CASE | PAWLICKI | BALLARD | P. KREUTZER (E) | |
| GIAMBUSO | SHAO | SPANGLER | J. LEE (L) | <u>PLANS</u> |
| BOYD | STELLO | | M. MAIGRET (L) | MCDONALD |
| MOORE (L) | HOUSTON | <u>ENVIRO</u> | S. REED (E) | CHAPMAN |
| DEYOUNG (L) | NOVAK | MULLER | M. SERVICE (L) | <input checked="" type="checkbox"/> DUBE (Ltr) |
| SKOVHOLT (L) | ROSS | DICKER | S. SHEPPARD (L) | <input checked="" type="checkbox"/> E. COUPE |
| <input checked="" type="checkbox"/> GOLLER (L) (Ltr) | IPPOLITO | KNIGHTON | M. SLATER (E) | PETERSON |
| P. COLLINS | TEDESCO | YOUNGBLOOD | H. SMITH (L) | D. THOMPSON (2) |
| DENISE | LONG | REGAN | S. TEETS (L) | KLECKER |
| <input checked="" type="checkbox"/> REG OPR | LAINAS | <input checked="" type="checkbox"/> PROJECT LDR | G. WILLIAMS (E) | EISENHUT |
| FILE & REGION <input checked="" type="checkbox"/> | BENAROYA | <u>MIRASLIA</u> | V. WILSON (L) | WIGGINTON |
| MORRIS | VOLLMER | HARLESS | <input checked="" type="checkbox"/> R. INGRAM | |
| STEELE | | | | |

EXTERNAL DISTRIBUTION

- | | | |
|---|--------------------------------|---|
| <input checked="" type="checkbox"/> LOCAL PDR Russellville, Ark | | |
| <input checked="" type="checkbox"/> TIC (ABERNATHY) (1)(2)(10) | NATIONAL LABS | 1 - PDR-SAN/LA/NY |
| <input checked="" type="checkbox"/> NSIC (BUCHANAN) | 1 - W. PENNINGTON, Rm E-201 GT | 1 - BROOKHAVEN NAT LAB |
| 1 - ASLB | 1 - CONSULTANTS | 1 - G. ULRIKSON, ORNL |
| 1 - Newton Anderson | NEWMARK/BLUME/AGBABIAN | 1 - AGMED (RUTH GUSSMAN)
Rm B-127 GT |
| <input checked="" type="checkbox"/> 2 ACRS <input checked="" type="checkbox"/> SENT | | 1 - R. D. MUELLER, Rm E-201
GT |

8004180575 P



HELPING BUILD ARKANSAS

ARKANSAS POWER & LIGHT COMPANY

9TH & LOUISIANA STREETS • LITTLE ROCK, ARKANSAS 72203 • (501) 372-4311

January 17, 1975

Mr. A. Giambusso
Deputy Director of Licensing
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545



Subject: Arkansas Power & Light Company
Arkansas Nuclear One-Unit 1
Docket No. 50-313
License No. DPR-51
Proposed Technical Specification Changes

Dear Sir:

Enclosed for your review are several changes which we propose to make to the Arkansas Nuclear One - Unit 1 Technical Specification. The affected Technical Specifications and bases for the changes are as follows:

Specification 2.3 and Table 2.3-1 (Pages 13 and 15 respectively)

This change reflects the as-built operation of the Reactor Protection System per AEC approval. A 5% overpower trip is now automatically set when going to a shutdown bypass vice being administratively set.

Specification 3.3.5 (Pages 37 and 38)

Per Specification 3.3.3(D) and Specification 3.3.6(C), only one of two pressure instrument channels and one of two level instrument channels per core flood tank (CFT) are ever required to be operable. Therefore, Specification 3.3.5 does not apply and CFT instrumentation should be deleted from this specification.

Specification 3.5.2 and Figure 3.5.2-3 (Pages 48 and 48e respectively)

The present Figure 3.5.2-3, Operational Power Imbalance Envelope, is not compatible with Figure 2.3-2, Protective System Maximum Allowable Set-points, as a part of the allowable operation is greater than the protective system maximum allowable setpoints. The change to this figure will result in a change to the Bases for this figure; therefore, the change on Page 48 specifies this new basis.

~~887~~

742



Specification 4.1 Bases, Tables 4.1-1, 4.1-2, 4.1-3 (Pages 68, 72, 73, 74-75, respectively)

The change to Specification 4.1 Bases (Page 68) corrects an error in the referenced table number.

The changes in Tables 4.1-1 and 4.1-2 are necessary for testing prior to pressurization. As previously written, to satisfy testing requirements it was necessary to do a calibration. The test can now be done below 400 psig but above 320 psig and 380 psig which is the pressure at which the interlocks are set to close the valves. The relief valve on this line is set at 450 psig which gives additional protection if both decay heat isolation valves fail to close and a procedural violation occurred.

The changes to Table 4.1-3 involve clarification of existing information and re-evaluation of other information. Clarification of information requires the addition of several footnotes to this table by the following reasons:

- 1) Reactor Coolant System O₂ Analysis is meaningless when the system is open to the atmosphere (such as for refueling).
- 2) Boron Analysis in the Spent Fuel Pool is meaningless when no fuel is present in the pool.
- 3) Secondary coolant sampling is only necessary when the Steam Generators are pressurized. When they are depressurized, any release would be contained by the Dirty Liquid Radioactive Waste System.

Re-evaluation and making for more practical analysis involve changes to the terminology "Gross Beta and Gamma", the sensitivity limit for the Waste Gas Decay Tank and Reactor Building Purge, and the terminology "Gross (γ)". The basis for these three are as follows:

- 1) The terminology "Gross Beta and Gamma" implies the additive results of independent Gross Beta and Gross Gamma determinations. The disadvantages here are four-fold:
 - a) As a general rule, gross gamma activity measurements are less valuable, less sensitive, and less precise than gross beta measurements. This is due, largely, to the non-correspondence of gamma activity with the actual concentration of radioactive species in a mixed nuclide source. The ultimate cause of this problem is that for one nuclear disintegration only one beta or one alpha particle is emitted. However, these may be any number of gammas from zero to over ten.
 - b) Gross gamma measurements commonly base efficiencies on the 662 KeV Cs-137 photopeak. A number thus generated will be a

Cs equivalent number and may or may not be representative of the activity present. Gross beta counting, on the other hand, avoids the Cs equivalent problem. By liquid scintillation counting, which has a beta efficiency of upwards of 100% for betas of greater than 150 KeV, the need for reporting of "equivalent" numbers is not needed nor justified.

- c) Of the major fission, corrosion, and/or activation products produced by nuclear facilities, essentially all decay by a beta emission. Most all decay by one or more gamma emissions. Separate gross beta and gross gamma analyses could show activity for both a particular isotope's beta and gamma(s). Additively, these could lead to an erroneous result in activity.
 - d) Gross beta, when performed by liquid scintillation, plus tritium, will additively account for 95% of soluble isotopes, excluding noble gases.
- 2) The 10^{-11} $\mu\text{Ci/cc}$ sensitivity for the Waste Gas Decay Tanks and the Reactor Building Purge analyses are, for all practical purposes, unreasonable. To achieve this limit, based on a 2-sigma over background calculation with ANO-1's 3 x 3 NaI(Tl) gross gamma system, would require 48 hours of counting and 100 liters of sample. On the other hand, a 10-minute count time and a 1000 cc sample yields a sensitivity of $\approx 4.8 \times 10^{-8}$ $\mu\text{Ci/cc}$.
 - 3) Considering the difficulty involved with the setting up and subsequent analysis of gas samples for gross beta and that the sensitivity of gamma isotopic analysis is also 10^{-6} $\mu\text{Ci/cc}$, it is proposed that "Gross (γ)" analyses for unit vent gases be changed to "Gamma Isotopic Analysis".

Specification 4.4.1.2.5 (Page 83)

Previously, the Reactor Building equipment hatch could be open and leak testing of the outer door seals would be required by this Specification. The change will prevent the requirement for leak testing the outer door seals when Reactor Building integrity is not required.

Specification 4.6.2.4 (Page 100a)

The previous Technical Specification required surveillance of only the third battery charger. This change will apply to all three battery chargers and, due to normal operational rotation of the chargers, should require no additional surveillance requirements.

Environmental Technical Specifications Table 2-2 (Pages 2-17 to 2-19)

The changes to this table involve clarification of existing information and re-evaluation of that information already contained in the table.

The change to Footnote 5 specifies exactly under what conditions the unit vent would be sampled. Previously this instruction was vague and subject to interpretation.

The items which were re-evaluated and changed as a result of that re-evaluation are the same as those covered by "Specification 4.1 Bases, Table 4.1-1, 4.1-2, 4.1-3" above.

Environmental Technical Specification 4.1.2.a(1)(a)3)2) (Page 4-8)

This change was omitted from those changes forwarded to Mr. A. Giambusso from Mr. J. D. Phillips on April 12, 1974. The change involves redistributing the sampling days. It will not reduce the number of sampling days and will provide better data, both quantitatively and qualitatively as well as provide for unusual river or weather conditions.

Environmental Technical Specification 4.2.10 and Table 4-2 (Pages 4-15 and 4-28, respectively)

Liquidation and/or sale of farms from which samples are collected require Environmental Technical Specification changes to be made. In order to alleviate repetitive changes to the same specification, this change will eliminate specifically named farms in the Environmental Technical Specifications but will specify those farms used for sampling purposes in the Semiannual Operating Report.

Environmental Technical Specifications Table 4-3, Figure 4-3 (Pages 4-29, Figure 4-3)

The "Sample Frequency" on Table 4-3 did not correspond to the text requirement (4.1.2.a(1)(a)3)c)) for the trap net survey. This change corrects that error.

Also, the "Sample Station #" for the Gill Net Survey, Trawling Survey, Trap Net Survey, Cove Rotenone Survey, Shoreline Seine Survey, and Fish Cage Survey indicate that these surveys are to be done at points ranging in number from eight to twelve. Input to this sampling program indicates monitoring is being done in areas rather than at sample points. In order to correlate this data with Table 4-3 and Figure 4-3, "Areas" rather than "Sample Stations" are shown for the above mentioned surveys on Table 4-3 and corresponding areas have been added to Figure 4-3. Sample Station #19 has been moved on this figure also to correct an error in location.

These changes, individually or collectively, will cause no effect on plant operation or environmental impact.

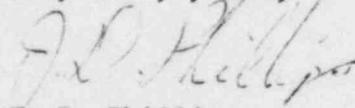
Mr. A. Giambusso

- 5 -

January 17, 1975

Your comments and/or concurrence with these proposed changes are requested.

Very truly yours,

A handwritten signature in cursive script, appearing to read "J. D. Phillips".

J. D. Phillips
Senior Vice President

JDP:WC:RC:mc

STATE OF ARKANSAS)
)
COUNTY OF PULASKI) SS

J. D. Phillips, being duly sworn, states that he is a Senior Vice President of Arkansas Power & Light Company; that he is authorized on the part of said Company to sign and file with the Atomic Energy Commission this Supplementary Information; that he has read all of the statements contained in such Information, and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.

J. D. Phillips
J. D. Phillips

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named this 17th day of January, 1975.

Linda B. Thomas
Notary Public

My Commission Expires:

March 1, 1978