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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of the Application of	)	
Public Service Company of Oklahoma,	)	
Associated Electric Cooperative, Inc.	)	Docket Nos. STN 50-556
	)	STN 50-557
and	)	
Western Farmers Electric Cooperative	)	
	)	
(Black Fox Station, Units 1 and 2)	)	

APPLICANTS' RESPONSE TO NRC STAFF MOTION FOR A  
PRELIMINARY RULING RELATING TO THE INITIATING  
CAUSES FOR THE DESIGN BASIS FIRES

Applicants respectfully respond to the Staff Motion of January 8, 1979, for a Preliminary Ruling (hereinafter, "the Motion") by stating that the Motion is untimely, prejudicial and procedurally improper, and that to the very limited extent to which the Motion can be responded to on the present record, the requested relief is highly ambiguous and also unsupportable. For

these reasons we submit that the Motion cannot be granted in the present circumstances but must either be denied (perhaps without prejudice to be resubmitted following completion of the evidentiary record herein), or alternatively must be held in abeyance for decision in connection with the entering of findings of fact and conclusions of law on the Construction Permit application. 1/

Two points of clarification are necessary before proceeding to the detailed response. First Applicants intend to submit further testimony in rebuttal to

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1/ We urge the Board to act now on the Motion by denying it without prejudice. This position is advocated because (i) we believe Applicants' rebuttal testimony will moot the Motion, and (ii) if the Motion is not mooted, further responses from both parties would be necessary once the record is completed. Consequently, it makes good sense to start, if at all, on a clean slate after all the evidence is received on Contentions 8 and 9.

the testimony of Messrs. Giardina and Behn on Contentions 8 and 9. At appropriate points in the following discussion, we point out how this rebuttal testimony will relate to the substance of the Motion such that any decision on the Motion prior to receipt of such testimony would be highly improper. Second, while the Motion is very unclear as to the specific "Preliminary Ruling" that is sought, it is Applicants' understanding that Staff seeks a ruling that Applicants must commit to an exposure fire as the design basis fire for the whole plant; wherein "exposure fire" is defined as non-electrically initiated.

I. THE MOTION IS UNTIMELY AND PROCEDURALLY IMPROPER, AND SHOULD BE DENIED ON THESE BASES ALONE.

The Staff is here asking the Board for a very broad substantive ruling, subsuming both factual findings and legal conclusions as well as procedural instructions to the Applicant for compliance, at a time when the record is incomplete and before Applicants have had an opportunity to finish their evidentiary presentation. This novel suggestion would be highly extraordinary in any circumstances, but the circumstances of this case certainly do not present a basis for granting the request.

First, we note that Staff has cited no authority

or precedent for issuance of substantive preliminary rulings on the basis of an incomplete evidentiary record and prior to the close of Applicants' case in chief. In the absence of such authority or precedent, we would suggest that the Staff would at least have to demonstrate some compelling need to obtain a ruling at this time, combined with a showing of prejudice or irreparable injury to the Staff's interests if such ruling were delayed until close of the evidentiary presentation. This much, as a bare minimum, should be required in order to justify the disruption of the orderly administrative proceeding which the Staff is here requesting. However, the Motion is entirely silent on these points.

Furthermore, if entry of a substantive preliminary ruling on the basis of an incomplete record could ever be justified, we submit that it would at least require that the moving party would have laid a very clear and strong foundation for such ruling in its evidentiary presentation. However, as detailed below, that is certainly not the case here. The Staff's testimony on the subject of exposure fires has several very confusing ambiguities and even appears contradictory at some points.

The Motion would also seriously infringe upon Applicants' procedural rights and prerogatives as to the presentation of its evidence under the NRC's procedural rules, and is therefore prejudicial. The rules grant Applicants considerable latitude both as to the form in which information can be submitted as a basis for a decision on the CP application, as well as to the timing of such presentation, particularly in the case of rebuttal testimony. The Motion would seriously limit Applicants' prerogatives in these areas, if not overtly cut them off.

Applicants neither need nor desire a preliminary ruling. We request that the evidentiary hearing be allowed to proceed to completion in an orderly fashion, following which the parties will present proposed findings of fact and conclusions of law and briefing thereon. We see no need to divert from this customary procedure.

And perhaps most importantly, to invoke the Board's decision-making process at this time is not only disruptive of the administrative process but would very likely be a sheer waste of time. It would at best result in a decision that the current record was incomplete and that Applicants must present more evidence.

We admit that the record is incomplete; we intend to present more evidence. Why make an unnecessary and meaningless ruling now, which the further evidence will very likely obviate?

For all of these reasons we submit that the Staff has wholly failed to justify the extraordinary procedure underlying its Motion, and we ask that the Motion be denied. Notwithstanding these objections, however, and solely in the interest of resolving this controversy so that the licensing process can proceed expeditiously, we will respond to as much of the Motion as possible on the basis of the present record. We will respond to the remainder of the Motion, if necessary, in connection with our filing of proposed findings of fact and conclusions of law. We adopt this procedure on the understanding that the Staff has completed or essentially completed its evidentiary presentation on Contentions 8 and 9. See Tr. 7096.

II. THE EVIDENCE NOW OF RECORD, TO THE EXTENT THAT IT ALLOWS RESPONSE TO THE MOTION, SHOWS THAT THE REQUESTED RULING IS UNSUPPORTED AND WOULD BE FATALLY AMBIGUOUS.

The Motion raises three issues:

1. What is the regulatory guidance applicable to Black Fox Station for implementation of General Design Criterion 3?

2. What is the proper interpretation of such regulatory guidance with respect to design basis fires?
3. Does the fire hazards analysis for Black Fox Station meet this interpretation?

The extent to which these issues can be addressed and decided on the basis of evidence now on the record, or evidence of which the Board may take official notice, varies. So far as we are aware, all of the evidence pertinent to the first issue either is on the record or can be officially noticed. Thus, we respond to it below. While considerable evidence has been presented on the second issue, we submit that the reasonable assumption is that this evidence is not complete. 2/ Consequently, we respond in the following sections to as much of this issue as the evidence now of record permits. With respect to the third issue, since Applicants will be changing the fire hazards analysis for Black Fox Station, all evidence that has been presented with respect thereto must be considered incomplete. Therefore, the issue cannot be answered on the present record, but must await the closing of the record.

With these ground rules, we proceed to answer the first two issues.

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2/ One reason which necessitates this assumption is that Applicants do not foreshadow their rebuttal testimony by filing this memorandum.

A. WHAT IS THE REGULATORY GUIDANCE APPLICABLE TO BLACK FOX STATION FOR IMPLEMENTATION OF GENERAL DESIGN CRITERION 3?

The relevant evidence on this point uniformly demonstrated that the applicable regulatory guidance is contained in the Branch Technical Position 9.5-1, Rev. O, dated May 1, 1976 (hereinafter, "BTP 9.5-1, Rev. O") and Appendix A thereto. The applicability clause of Appendix A clearly indicates that it is the applicable guidance.<sup>3/</sup> The relevant testimony also supports this conclusion.<sup>4/</sup> The decision of the Nuclear Regulatory Commission in Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC 400(1978) (hereinafter, "the Petition") endorses this version of the Branch Technical

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<sup>3/</sup> Appendix A of BTP 9.5-1, Rev. O is applicable to plants for which applications for construction permits were docketed prior to July 1, 1976, if such permits had not been issued as of August 23, 1976, the date of issuance of the Appendix. The Black Fox application was docketed December 23, 1975. Safety Evaluation Report, NUREG-0190, p. 1-1.

<sup>4/</sup> Mr. Giardina testified that the BTP 9.5-1, Rev. O and Appendix A thereto are applicable to Black Fox Station, although the Applicant could choose between this version and the later version. Tr. 7016. Dr. Cox testified that the Applicants had been specifically instructed by the Staff to use BTP 9.5-1, Rev O. Tr. 6965. Mr. Engmann testified that this version was in fact the design basis for Black Fox Station. Tr. 6849. Indeed, a lengthy series of correspondence between Applicants and the Staff, which are appended to this Response, establishes very clearly the understanding and intent that BTP 9.5-1, Rev. O would be applied to the Black Fox Station. See Attachment A.

Position and contains no suggestion that it may be incomplete or obsolete. See 7 NRC at 422,424. While the motion itself is not explicit on this point, it appears to acknowledge that the Rev. 0 version of the Branch Technical Position is the applicable guidance. See Motion at 5-6.

The opposite side of the coin is that the only other candidate, Regulatory Guide 1.120, Revision 1 5/ is clearly not applicable, except in certain specifics. 6/ Until recently, it was out for an extended period of comment and has not yet been adopted in final. 7/

In the light of this, we are deeply troubled by the apparent attempt by the Staff to force the Applicants, by means of this Motion, to comply with Reg. Guide 1.120, Rev. 1. See particularly footnote 18, p. 8. The Staff is apparently attempting to use the procedure of a Preliminary Ruling in a licensing docket as a means of altering the applicability of regulatory guidance which is clearly inapplicable. We find this highly improper and objectionable.

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5/ Reg. Guide 1.120, Rev. 1 is essentially identical to BTP 9.5, Rev. 1

6/ Mr. Giardina testified that Rev. 1 of Reg. Guide 1.120 contained certain requirements which were less stringent and more realistic than corresponding requirements of BTP 9.5-1, Rev. 0, and that the former would be used in reviewing the BFS fire hazards analysis. Tr. 7019-20. Applicants have no quarrel with that approach, but it certainly would not justify application of other broad provisions and definitions in Reg. Guide 1.120, Rev. 1 to the Black Fox Station analysis.

7/ Giardina, Tr. 7020. On November 7, 1977, Reg. Guide 1.120, Rev. 1 was distributed for an extended period of comment of one year.

needs to be altered, there are appropriate procedures to do so. But this Motion is not a proper vehicle.

The simple truth is that BTP 9.5-1, Rev. 0 is the applicable regulatory guidance for implementation of GDC-3 and it is unnecessary and inappropriate to look any further.

B. WHAT IS THE PROPER INTERPRETATION OF SUCH REGULATORY GUIDANCE WITH RESPECT TO DESIGN BASIS FIRES?

The problem therefore becomes one of interpreting the design basis fire provision of BTP 9.5-1, Rev. 0 <sup>8/</sup> together with General Design Criterion 3. A starting point in doing so is to identify the elements that the parties have already agreed to, and then to see whether, on the basis of competent evidence, any further elements are needed, and specifically whether the concept of exposure fire would add any meaningful element to the interpretation.

One of the consensus elements is the defense

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8/ The BTP defines design basis fires as:

Those that are considered to cause most damage, and are fires that may develop in local areas assuming no manual, automatic or other fire fighting action has been initiated and the fire has passed flash over (i.e., the temperature at which auto-ignition of other combustions in the area will occur) and has reached its peak burning rate.

This definition was characterized as the "worst case fire." Engmann, Tr. 6854.

in depth philosophy. Staff has cited 9/ this requirement and Applicants have committed 10/ to it. While a final decision on whether this principle has been faithfully carried out cannot be made on the present record, Mr. Giardina expressed confidence 11/ that any necessary alterations in the plant could be made during construction and at the OL review stage.

Another consensus element is that all combustible material postulated to be present in a given fire zone should be assumed to be burned. The Staff cited 12/ this as a requirement, and Dr. Cox said 13/ that it was in fact the principle which had been applied in performing the Black Fox fire hazards analysis. Thus, there is no dispute as to the applicability of this principle, the only question is whether it has been faithfully carried out. On the latter question we submit that Applicants are entitled to have that decision

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9/ Motion, p. 2, citing Petition; see Giardina, TR. 7088.

10/ Cox, Tr. 6971-72; Johnson, Tr. 6794.

11/ Tr. 7064.

12/ Tr. 6880; Tr. 7034.

13/ Tr. 6871; Tr. 6957.

delayed until after they have completed their evidentiary presentation.

Beyond these two elements, it becomes a question of whether anything further is needed to meet the BTP definition, and specifically whether recitation of an exposure fire as the design basis would add any meaningful element. And here the record becomes very ambiguous and confusing. Mr. Behn testified at one point <sup>14/</sup> that the difference between postulating an exposure fire as opposed to an electric fire depended upon the assumptions made as to presence of transient combustible materials. Later he said <sup>15/</sup> the amount of transient combustibles was not important, but that it was the configuration of the room, the cable tray arrangement, and the location of the fire that mattered. As a further confusion of the question, he later stated <sup>16/</sup> that it does not really matter whether one postulates an exposure fire or an electrical fire, so long as all combustibles in the area are assumed to be burned.

In the light of this very confused and ambiguous

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<sup>11/</sup> Tr. 7042.

<sup>15/</sup> Tr. 7082.

<sup>16/</sup> Tr. 7084. The Motion, on the other hand, makes no mention of transient combustibles, and appears merely to request a preliminary ruling that the design basis fire must be non-electrically initiated. See Motion, footnote 1, page 1.

record, we submit that the Board simply cannot make a finding that BTP 9.5-1, Rev. O requires postulating an exposure fire as the design basis, so the instant Motion should be denied. The Staff's evidence is so ambiguous that one cannot determine what the significance of such an action would be. What would be gained by changing the recitation of the design basis fire to an exposure fire? The controversy raised by the Staff appears to be purely one of semantics.

One additional factor bears on the question of design basis fire and demonstrates that even the position of the Staff witnesses, if logically carried to a conclusion, does not support the necessity of positing an exposure fire in all instances. Following Mr. Behn's identification <sup>17/</sup> of four unacceptable areas in the Black Fox fire hazards analysis, both he <sup>18/</sup> and Mr. Giardina <sup>19/</sup> testified as to what changes would be necessary to make those areas acceptable. Mr. Behn testified that the insertion of a 3 hour fire barrier would satisfy his concerns, while Mr. Giardina added

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<sup>17/</sup> Tr. 7057-61. In all four cases the problem was the presence of redundant cable trains in a single area, separated by the IEEE 384 criteria. Mr. Behn concluded that this separation was not sufficient to protect against the design basis fire set forth in BTP 9.5-1, Rev O. Tr. 7060.

<sup>18/</sup> Tr. 7061-62.

<sup>19/</sup> Tr. 7088.

that fire suppression systems and detection would also be necessary to achieve the defense in depth philosophy. Conceding this point for the sake of argument (and again without foreshadowing Applicants' rebuttal testimony), one is left with the conclusion that to also require Applicants to posit an exposure fire in these areas would not add anything. Applicants agree that the design basis fire of BTP 9.5-1, Rev. 0 embodies the defense in depth philosophy, and they intend to comply with this concept. But that does not necessitate positing an exposure fire in these areas, and certainly not throughout the whole plant. Again, the Staff's requested ruling would be purely semantical rather than substantive, and it is not supported by their own testimony.

III. STAFF'S PURPORTED WITHDRAWAL OF APPROVAL OF THE BLACK FOX FIRE HAZARDS ANALYSIS AND DEMAND FOR AMENDMENT OF THE PSAR ON THE RECORD PRIOR TO ISSUANCE OF THE CONSTRUCTION PERMIT ARE PROCEDURALLY IMPROPER AND ARE CONTRADICTED BY THE SUBSTANTIVE EVIDENCE ON THE RECORD.

Finally, some comment is required on part III of the Motion, in which the Staff takes several curious and unexplained procedural steps. We are at a complete loss to understand how these steps can be considered appropriate or necessary in the present circumstances.

Certainly some further explanation by the Staff is in order before these steps can be recognized.

The question here is not approval or disapproval of the fire hazards analysis. Applicants do not want the program approved as it now stands. Consequently, for the Staff to disapprove it is premature and inappropriate.

Also, as should be apparent from the Motion itself, the purported disapproval is overly broad and therefore arbitrary. If 90-95 per cent of the fire hazards analysis is acceptable 20/, why disapprove the entire analysis? This broad-brush approach raises questions of whether the Staff is properly performing its responsibilities of reviewing the analysis on an item-by-item basis and supplying a critique of any inadequacies found.

The demand for amendment of the PSAR prior to issuance of the CP is also deeply troublesome. Mr. Giardina testified that "the plant has sufficient flexibility such that any design changes that are made in the essence of putting in fire barriers or extra

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20/ Motion, p. 9.

sprinkler systems, this can be done during the post-construction period and during the OL review stage."

Tr. 7064. Are we to assume that the Staff is now withdrawing or changing Mr. Giardina's testimony? If so, we need something to take its place -- an explanation of why immediate PSAR amendment is necessary, with opportunity for cross-examination thereon. Lacking that, Applicants submit that the purported procedural steps taken in Part III of the Motion are so overly broad and so devoid of explanation that the only proper course is for the Licensing Board to place its reliance on the Staff's testimony on these points already in the record, rather than on the Motion.

IV. CONCLUSION

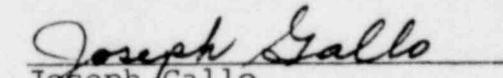
In view of the foregoing, the Motion should be denied without prejudice.

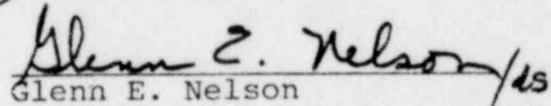
Respectfully submitted:

Dated: January 24, 1979

ISHAM, LINCOLN & BEALE  
1050 17th Street, N.W.  
Suite 701  
Washington, D. C. 20036  
(202) 833-9730

One First National Plaza  
Forty-Second Floor  
Chicago, Illinois 60603  
(312) 786-7500

  
Joseph Gallo

  
Glenn E. Nelson

Two of the Attorneys  
for the Applicants.

- Attachment A -



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

Received

MAY 10 1976

Public Reactor

Division

MAY 3 1976

Public Service Company of Oklahoma  
ATTN: Mr. B. H. Morphis  
Assistant Vice President - Nuclear  
P. O. Box 201  
Tulsa, Oklahoma 74102

Gentlemen:

The Nuclear Regulatory Commission has been evaluating the generic implications of the fire of March 22, 1975 at the Browns Ferry Nuclear Plant to identify appropriate improvements in NRC policies, procedures, and requirements in regard to fire protection. In February 1976, NRC published the report of a special review group, "Recommendations Related to Browns Ferry Fire," NUREG-0050. As part of the continuing NRC evaluation, the Office of Nuclear Reactor Regulation is issuing a revision (dated May 1, 1976) to Section 9.5.1 "Fire Protection" of the Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants (NUREG-75/987). This revised plan will be used by the NRC staff in evaluating the acceptability of designs and procedures for fire protection for construction permit applications docketed after July 1, 1976. A copy is enclosed for your information and guidance.

To the extent reasonable and practicable, the guidelines provided in the revised SRP-9.5.1 also will be used by the staff in evaluating the fire protection provisions of operating plants, applications currently under review for construction permits and operating licenses, and future applications for operating licenses for plants now under construction. As we continue to develop more definitive criteria for the application of the SRP-9.5.1 guidelines, or acceptable alternatives, to the review of these plants you will be kept informed of our progress.

Sincerely,

A handwritten signature in dark ink, appearing to read "Roger S. Boyd".

Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation

Enclosure

p. A-1



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

U.S.C.  
6212 DIW 8000900  
6212.125 3500.32

SEP 30 1976

Docket Nos. STN 50-556  
& STN 50-557

Public Service Company of Oklahoma  
ATTN: Mr. B. H. Morphis  
Assistant Vice President -  
Nuclear  
P. O. Box 201  
Tulsa, Oklahoma 74102

Received  
SEP 30 1976  
NRC Nuclear  
Division

Gentlemen:

FIRE PROTECTION EVALUATION - BLACK FOX STATION, UNITS 1 AND 2

By my letter dated May 3, 1976, you were sent a copy of revised Standard Review Plan Section 9.5.1, "Fire Protection," dated May 1, 1976. This revised SRP 9.5.1 contained new guidelines for the NRC staff evaluations of fire protection in our review of nuclear power plant construction permit applications docketed after July 1, 1976. The letter stated (1) that to the extent reasonable and practicable the guidelines in the revised SRP 9.5.1 will be used by the staff in evaluating fire protection provisions of operating plants, applications currently under review for construction permits and operating licenses and future applications for operating licenses for plants now under construction; and (2) that you would be kept informed of our progress as we developed more definitive criteria or acceptable alternatives for the application of the SRP 9.5.1 guidelines to the review of these plants.

Enclosure 1 is Appendix A to Branch Technical Position APCS 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976," which gives alternative guidance and criteria acceptable to the staff to be utilized in a reevaluation of the fire protection provisions of the Black Fox Station, Units 1 and 2.

We request that you conduct a reevaluation of the fire protection program of your nuclear power plant and compare, in detail, the fire protection provisions currently proposed for your facility(ies) with the guidelines in Appendix A to Branch Technical Position APCS 9.5-1. In order to begin such a reevaluation, it is necessary that you perform a fire hazards analysis of your facility with the assistance

SEP 30 1978

and the technical direction from a qualified fire protection engineer. In order for us to evaluate your fire hazards analysis, we require that you submit the results of your fire hazards analysis in the form described in Enclosure 2, "Supplementary Guidance on Information Needed for Fire Protection Program Evaluation."

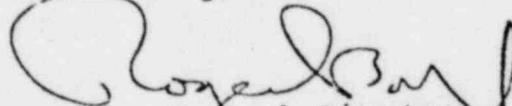
Your reevaluation should:

1. Identify the guidelines in Appendix A which are presently met and discuss how this is done;
2. Identify the guidelines for which modifications, procedural changes, or enhanced training of personnel are underway or planned, such that the guidelines will be met, and the date you intend to meet Section B of Appendix A, "Administrative Procedures, Control and Fire Brigade;" and
3. Indicate which of the guidelines you do not now meet or do not intend to meet in the future. For such items, you should provide a basis for your position.

Please respond within 20 days of receipt of this letter to inform us when you will submit the requested information, forty (40) copies of which will be required for staff review.

This request for generic information was approved by GAO under a blanket clearance number B-180225 (R0072). This clearance expires July 31, 1977.

Sincerely,



Roger S. Foyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation

Enclosures:

1. Appendix A to Branch Technical Position APCS 9.5-1
2. "Supplementary Guidance on Information Needed for Fire Protection Program Evaluation"

cc: See next page

**PUBLIC SERVICE COMPANY OF OKLAHOMA**

A CENTRAL AND SOUTH WEST COMPANY

P.O. BOX 201 / TULSA, OKLAHOMA 74102 / (918) 583-3611



Public Service Company of Oklahoma  
 Black Fox Station  
 Fire Protection Analyses  
 Docket Nos. STN 50-556 and STN 50-557

October 28, 1976  
 File 6212.125.3500.32

Office of Nuclear Reactor Regulation  
 Division of Project Management  
 U. S. Nuclear Regulatory Commission  
 Washington, D. C. 20555

Attn: Roger S. Boyd, Director

Gentlemen:

Your letter of September 30, 1976, received in this office October 8, 1976, requested a response within 20 days of receipt informing you as to when we would submit the information requested in Appendix A to Branch Technical Position APCSB 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976" (Enclosure 1), and Supplementary Guidance on Information Needed for Fire Protection Program Evaluation (Enclosure 2).

You stated in your letter dated May 3, 1976 that it is your intent that the implementation of Standard Review Plan 9.5-1 and the Branch Technical Position will be done to the extent reasonable and practicable. In view of your stated intent, and in recognition of the limited availability of "qualified fire protection engineers", the participation of which you seek to impose upon us, it appears that the minimum time required for us to conduct a fire hazard analysis will be 6 months. To meet this schedule will entail our engaging in an accelerated program since we are presently in the preliminary design phase of Black Fox Station, and there will of necessity be a period of familiarization required for any consultant who may be engaged.

Hence, responding to your request and in light of the above, we feel that we should be able to submit the requested information on or before June 15, 1977.

Additionally, in that we feel the above schedule is the minimum reasonable and practicable for the Black Fox Station, Public Service Company of Oklahoma asserts that the scheduled issuance date for the Black Fox Station Evaluation Report and the subsequent licensing process should go forward independent of the schedule

CENTRAL AND SOUTH WEST SYSTEM

 A small map of the state of Oklahoma is located to the left of the footer text.
 

Central Power and Light  
 Corpus Christi, Texas

Public Service Company of Oklahoma  
 Tulsa, Oklahoma

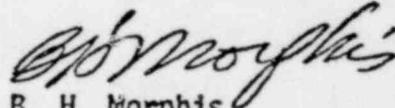
Southwestern Electric Power  
 Shreveport, Louisiana

West Texas Utilities  
 Abilene, Texas

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for our submittal of the above information. We do not believe that it is in the best interest of nuclear reactor safety or the stability of the licensing process for this applicant to engage in a highly accelerated information submittal program. Nor do we believe that this issue should cause the delay of our Safety Evaluation Report and the succeeding licensing process until the information is submitted as scheduled above. We do believe that it is reasonable to resolve any differences during the early post-CP stage.

Yours very truly,



B. H. Morphis  
Assistant Vice President -  
Nuclear

BHM:VLC:bp

xc: See list attached

VLC

6212DIN8,007,461

# PUBLIC SERVICE COMPANY OF OKLAHOMA

A CENTRAL AND SOUTH WEST COMPANY

P.O. BOX 201 / TULSA, OKLAHOMA 74102 / (918) 583-3511



Public Service Company of Oklahoma  
Black Fox Station  
SER Open Items  
Docket STN 50-556 and STN 50-557

May 26, 1977  
File 6212.125.3500.21

Office of Nuclear Reactor Regulation  
Division of Project Management  
Light Water Reactors Branch No. 4  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attn: Mr. Steven A. Varga, Chief

Gentlemen:

As discussed in our meeting of May 20, 1977 regarding SER open items, Public Service Company makes the following commitments, which will be incorporated into the Black Fox Station design and licensing documents as soon as practicable.

- A. Fuel Handling Accident - As requested in your letter of March 16, 1977, PSO commits to a design which enables BFS to meet the acceptance criteria of Standard Review Plan 15.7.4 for fuel handling accidents inside the containment.
- B. Qualification of Drywell Penetrations - Qualifications of the electrical drywell penetrations for BFS are the same as in Appendix 3C to GESSAR Nuclear Island docket STN 50-447. This Appendix will be placed on the Black Fox docket in PSAR Amendment 9 as Appendix 3D-requested by NRC letter of May 13, 1977.
- C. Pool Dynamic Loads - On March 25, 1977 PSO filed Amendment 8 to the BFS PSAR. This Amendment added an Appendix 3C to the BFS PSAR as documentation of the pool dynamic loads which are being designed for Black Fox. The above loads are greater than or equal to the NRC requirements for: LOCA loads described in NRC letter of March 25, 1977 to GE and the time history shown in Figure 6.2-4 of the GESSAR Nuclear Island SER docket STN 50-447; SRV quencher loads in Table 6-1 of SER Supplement 1 to GESSAR NI docket STN 50-447.

Additionally in response to your letter of May 3, 1977 PSO commits to the revised transition zone impact load criteria for beams and pipes as shown in Attachment A to that letter.

- D. Class 1E Sensors - PSO commits to remove the Class 1E turbine island sensors not required by GESSAR NSSS docket STN 50-550; additionally the Condensate Storage Tank liquid level sensors will be located on a Category 1 structure.

CENTRAL AND SOUTH WEST SYSTEM

p. A-6

- E. Containment Elevator - PSO commits to design the BFS containment building elevator shaft such that neither the elevator nor any of its parts will fall into the suppression pool.
- F. GESSAR Nuclear Island STN 50-447 Referencing - PSO commits, as requested in NRC letter of May 13, 1977, that in all cases where the BFS PSAR has a shaded strip on the left margin of the page we will adopt the corresponding GESSAR-238 Nuclear Island docket STN 50-447 material through Amendment 45 without exception unless otherwise noted. The agreed method of referencing under the Standardization Program is further delineated in the Foreword to the BFS PSAR and in NRC letter dated November 18, 1975 (Rusche to Morphis).
- G. Spent Fuel Storage - PSO commits to size the heat removal capacity of the onsite spent fuel storage for one core plus one reload.
- H. Induced Seismicity - In response to NRC letter of February 19, 1977 PSO has previously submitted to the Staff information regarding this issue. We understand that our draft material is acceptable and hence are formally submitting it as an attachment to this letter.
- I. Nearby Rock Quarry - NRC letter of March 4, 1977 requested information about an inactive rock quarry. The rock quarry located in SE $\frac{1}{4}$ -19N-R16E was active January 1973 through December 1974. There are no plans to reactivate it. It was used only by the U. S. Army Corps of Engineers for channel rip-rap.

Blasting was contracted to a private firm. During activity the blasting firm never had more than 3 or 4 cases of 40% ammonium nitrate DuPont powder (non-sensitive type) on site. Generally, the firm only brought out enough to do blasting that particular day. Any overnight storage was limited to a case or two in a magazine. A guard was on duty 24 hours a day during activity at the quarry.

- J. Containment Vacuum Breaker Sizing Analysis - As requested in our meeting of March 4, 1977 (based on concerns received from Containment Systems Branch February 18, 1977), PSO commits to operational limits on the relative humidity inside the containment. These limits are: A relative humidity  $\geq 20\%$  when the containment ambient temperature is  $\leq 90^{\circ}\text{F}$ , and with the relative humidity increasing linearly with temperature to a value of  $\geq 30\%$  at  $105^{\circ}\text{F}$ .

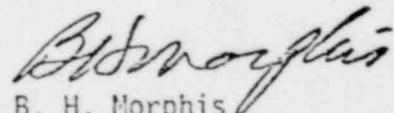
This commitment is consistent with Subsection 6.2.1.5 of Supplement 2 to the GESSAR Nuclear Island docket No. 50-447 SER.

- K. Fire Hazards Analysis - As requested by the Staff in our meeting of May 20, 1977, PSO has reexamined the status of information development and determined that, consistent with the schedule slippages in our safety review and hearings, on November 1, 1977 we will be able to supply the fire hazard analysis requested by your letters of September 30, 1976 and December 2, 1976. All other information in our letter of October 28, 1976 remains valid.

- L. GESSAR 238-NSSS Interfaces - As requested by NRC letter of May 13, 1977, PSO commits to revise the BFS PSAR Section 1.9 by incorporating Table 1.10.0 from GESSAR NSSS docket 50-550. BFS PSAR sections will be cross-referenced to the GESSAR section listing. Additionally PSO commits to ensuring that the appropriate lines of communication between General Electric Company and Black & Veatch Consulting Engineers remain open to assure that all interfaces are met.
- M. Leak Detection System - Based on the information exchanged at our meeting of May 20, 1977 no PSO action is required.
- N. Bypass Leakage - PSO commits that lines which are not considered bypass leak paths in PSAR Table 6.2.21 will be designed such that they are either totally enclosed in secondary containment or if they are routed outside of secondary containment will be designed such that bypass leakage is not possible.
- O. Division 3 Power to RPS - PSO will disconnect the alternate supply to the Division 3 Static Transfer Switch and the battery charger to the Division 3 battery when the HPCS motor is accelerating with the HPCS diesel generator as its source.
- P. Component Cooling Water System - PSO will adopt the General Electric Design to incorporate a safety grade recirculation pump trip feature to trip the recirculation pumps upon sensing a loss of pump seal cooling water. This commitment is subject to reconsideration should an analysis or alternate design be acceptable to the NRC.
- Q. Containment Isolation - PSO will require operator action to close the remote manual isolation valve on feedwater lines within 10 minutes following a LOCA and rupture of the feedwater lines.
- R. Regulatory Guide Compliance - PSO commits to update BFS PSAR Section 1.9 for Regulatory Guides issued through September 1976 for structures system and components not covered by GESSAR NSSS docket STN 50-550 and GESSAR Nuclear Island docket STN 50-447.

PSO understands that the above commitments will allow the publication of the Black Fox Station Safety Evaluation Report. We further understand that we can anticipate going to our ACRS meeting in July with no open items.

Yours very truly,



B. H. Morphis  
Assistant Vice President -  
Nuclear

BHM:VLC:bp  
Attachments

P. A-8

# Safety Evaluation Report

*Vaughn L. Conrad*

NUREG-0190

U. S. Nuclear  
Regulatory Commission

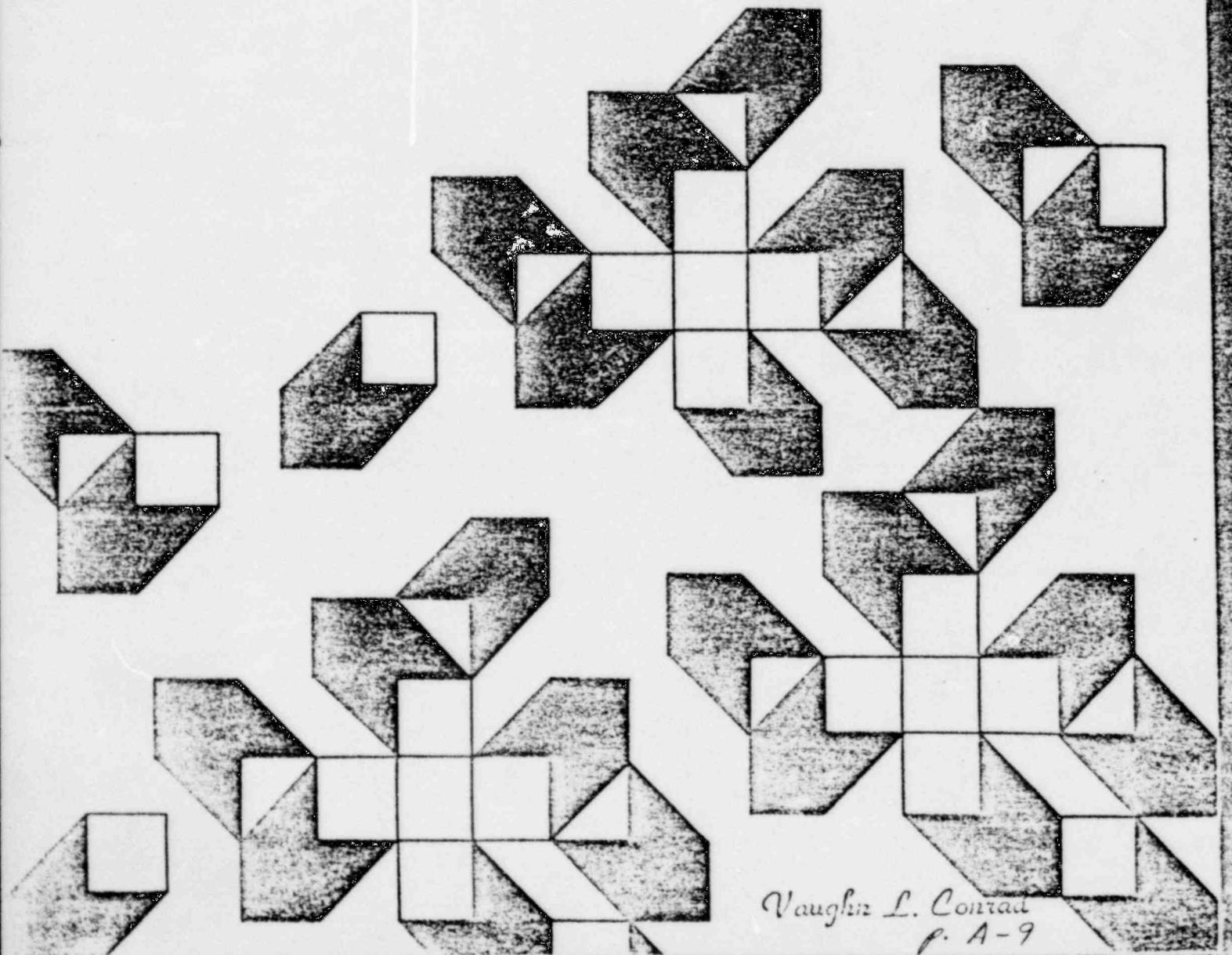
related to construction of  
**Black Fox Station,  
Units 1 and 2**

Office of Nuclear  
Reactor Regulation

Docket Nos. STN 50-556  
STN 50-557

Public Service Company of Oklahoma  
Associated Electric Cooperative, Inc.  
Western Farmers Electric Cooperative, Inc.

June 1977



*Vaughn L. Conrad*  
p. A-9

protected. The standby service water system safety functions can be met with one of the three divisions not operating for any reason, including overheating or freezing.

We conclude that the system design bases and criteria are in accord with General Design Criteria 2 and 4 as they relate to capability of systems to withstand the effects of natural phenomena and missiles, and Regulatory Guides 1.26 and 1.29 as they relate to seismic design and quality group classification. We, therefore, conclude the standby service water system pump room heating, ventilating and air conditioning system design bases and criteria are acceptable.

## 9.6 Fire Protection

### 9.6.1 Fire Protection System

The applicants have received our new guidelines as stated in Appendix A + Branch Technical Position APCSB 9.5-1, "Guidelines on Fire Protection for Nuclear Power Plants," and have indicated that they will provide a reply by November 1977. We will review the evaluation along with revised design features of the fire protection system and provide the applicants with the results of our evaluation on a timely basis so that they can be effectively incorporated into the final design.

The design as presently proposed meets General Design Criterion 3, "Fire Protection," and applicable guidelines in effect prior to issuance of Branch Technical Position APCSB 9.5-1 and Appendix A thereto, and for the construction permit stage of the review, we find it acceptable. Final approval of the system will depend on the review of the applicants' submittal which will be completed after a decision on the issuance of construction permits; however, based upon our current review of the facility, sufficient flexibility exists in the design to allow implementation of any design changes that may be necessary to assure compliance with Appendix A to Branch Technical Position 9.5-1.

## 9.7 Other Auxiliary Systems

### 9.7.1 Diesel Generator Fuel Oil Storage and Transfer System

The diesel generator fuel oil system will be a complete system for each of the three divisions of Units 1 and 2. Each system will consist of a storage tank in a waterproof concrete vault, transfer pumps with associated piping and controls, day tank, and a diesel engine mounted booster pump.

Storage tank capacity will be a minimum of seven days supply assuming maximum post-loss-of-coolant accident loads. Day tank capacity will be a minimum of one hour supply at maximum load. All diesel generator fuel oil systems components will be seismic Category I and designed to withstand, or be housed in structures that provide protection from the effects of internal and external missiles, tornados, and flooding. All structures housing diesel generator fuel oil system components will be seismic Category I.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of the Application of )  
Public Service Company of Oklahoma, )  
Associated Electric Cooperative, Inc. ) Docket Nos. STN 50-556  
and ) STN 50-557  
Western Farmers Electric Cooperative )  
)  
(Black Fox Station, Units 1 and 2) )

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing  
APPLICANTS' RESPONSE TO NRC STAFF MOTION FOR A PRELIMINARY  
RULING RELATING TO THE INITIATING CAUSES FOR THE DESIGN  
BASIS FIRES has been served on each of the following per-  
sons by deposit in the United States mail, first class  
postage prepaid, this 24th day of January, 1979.

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Mr. Frederick J. Shon, Member  
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Board Panel  
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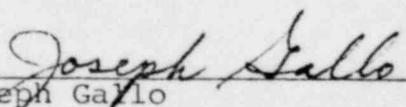
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