



UNITED STATES
ATOMIC ENERGY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD
WASHINGTON, D.C. 20545

October 18, 1968

In the Matter of)
)
 ARKANSAS POWER & LIGHT CO.) DOCKET NO. 50-315
 (Russellville Unit))

Mr. S. Ladd Davies, Director
Arkansas Pollution Control Commission
1100 Harrington
Little Rock, Arkansas 72202

Dear Mr. Davies:

Reference is made to your letter of October 10, 1968, in which you request an opportunity to make a statement in the course of the Hearing in the matter of the Arkansas Power and Light Company. During the Prehearing Conference the Atomic Safety and Licensing Board decided to permit you to make a Limited Appearance in accordance with the Commission's Rules of Practice, 10 CFR, Part 2, Section 2.715 (a). As you know, the Hearing is scheduled to commence on October 30, 1968. At an early stage in the Hearing the time at which oral statements may be made will be discussed.

Sincerely yours,

A. A. Wells, Chairman
Atomic Safety and Licensing Board

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QUESTIONS POSED

AT

RUSSELLVILLE (AP&L)

PREHEARING

CONFERENCE

ON

15 OCT 68

I wonder, Dr. Quarles, if you would be willing to begin with your questions.

DR. QUARLES: Yes. As the Chairman has said, I am not trying to make these specific, but rather to alert the applicant and the staff to areas in which there will be specific questions later on. On page 17 and 18 of the staff's analysis you speak of a five-year period before radiation effects become critical in the pressure vessel, and then indicate that there are means to mitigate the consequences of such failure if it should occur. I would like some discussion of what means are available, how they would be applied after five years and why they cannot be taken into consideration initially. Why wait five years? A general discussion of this whole aspect of it.

I can't help but comment that the staff's file on me seems to be quite up to date, my tornado question is already in the staff analysis but I would like to know what criteria will be used to determine if it is necessary to add protection to the fuel storage pool and other critical aspects of the whole plant.

This may be directed towards the staff of the applicant and concerns off-site power availability. I would like some discussion of just how independent the sources of off-site power may be, if they are subject to any accident that could cause failure of all sources, a single accident that could cause failure of all off-site power.

I believe criterion 39 talks about failure of one component. In a recent case, a distinction was made between an active component and a passive component. I would like some elaboration of why there needs to be any distinction between active and passive components. And in connection with this, the same question, how reliable is the automatic selection of off-site power, is there adequate redundancy to be sure it will operate and if it will not operate under all conditions, what does the operator himself do to take care of a failure of this automatic system?

We are

concerned about quality control as most board seem to be and a recent news item has caused even more concern and we wonder what effect reported delays may have on quality control. We would like some additional information on the qualifications of the key quality control personnel. And particularly to the applicant, who and his qualifications in the applicant's organization will have the competence, has or will have the competence to pass on the performance of contractors. The applicant may delegate certain things, but he cannot delegate responsibility and therefore somebody in the applicant's organization should be qualified in this area and we would like information on who this is and what his qualifications are.

We also are concerned about this gas pipeline that goes by the site and we would like a discussion of a possible rupture of this gas line and the consequences to the plant. To give you an idea of what sort of thing we are getting at here, if the gas line ruptures, it will come out of the ground and whip around and undoubtedly there will be a fire. Suppose this whipped around so that the jet flames directed against the side of the reactor containment. What then? Another possibility that we would like discussed is suppose unignited gas gets into the ventilating system, what is the relation of the ventilating system of the entire plant to this gas line, both in its present position and in any possible position the ends of the pipe may go when they break. Unignited gas going into the ventilating system could blow up the whole outfit. So I would like some assurance on the review of this particular type of hazard.

MR. BRIGGS: I have several questions here that are of interest to me. One, I would like to elaborate a little more on the gasoline problem. It would be interesting to me to know what accident was evaluated, what conditions were considered in the evaluation by the staff and its consultants and also by the applicant. This possibly will be the accident that Dr. Quarles has talked about, it might be a different one.

I would like to have information about the present state of knowledge of the background radiation at the site, how much this background can be expected to be increased by normal operation of the plant, and how these estimates of increase in background correspond to experience in existing nuclear power plants.

I would like to know

something about the experience that the designer and constructor, if a constructor has yet been selected, what their experience has been with prestressed concrete vessels and I would like to know in more detail about the program that is to be undertaken or is being undertaken to qualify the anchors for the tensioning members, and to qualify the anchors for the liners. I would be interested in knowing about the schedule for completing this work.

On page 45 of the applicant's summary there is discussion of the training program and of course further discussion in the application. In here in one phase of the training it is mentioned that there will be three to five months training in an existing plant or on a simulator. I would like to have some discussion of the equivalence of training in operating plants and simulator training, the relative merits of the two, and what basis will be decided for which kind of training will be given, I mean what basis will be used for deciding which kind of training will be given. And what the staff considers to be adequate training on simulators as opposed to training in an existing operating plant.

On page 29 of the staff analysis they discuss the containment spray system for removing iodine. I would like to have additional discussion by the staff and by the applicant. In particular, I would like to have discussion in some detail of the staff's evaluation of the iodine removal factors for the Russellville containment spray system, what removal factor is required, the staff's estimate of the degree of conservatism in the iodine reduction factor that it calculate and I would like to have the applicant's opinion of the degree of conservatism involved, or that is obtained in these calculations. I would like to know in some detail the additional R&D has required, who specifically will do the work, and the schedule for accomplishing this work, what the critical problems are that could cause the spray system to prove inadequate and whether there is really serious consideration being given to substituting charcoal absorbers for the spray system, and if so, what R&D is required for the charcoal absorption system or what evidence we have that a design can be provided with demonstrated certainty of meeting the requirements for reducing the iodine concentration in the Russellville plant.

CHAIRMAN WELLS: That is not a mistake. ----- The question that I had in mind about this is are these dates realistic in light of possible delivery of pressure vessel and the supply of components and that kind of thing? As I indicated, this is informal, but I think this has an indirect relationship to the quality assurance question. - I don't know how badly you are going to need the electricity in early 1972, but if you were going to need it very, very badly, this raises the question of how fast you and your contractors are going to have to work to get it done and does the quality assurance program take into account the strain that might thereby be placed? I would be very grateful for any general exposition you might be able to make on that at the hearing.

CHAIRMAN WELLS: I think perhaps related to this also -- and this question perhaps should be directed to the staff at the hearing -- since as of now at least this is an uncontested proceeding, this Board will be required only to ascertain that the manufacturer supports the application and the review of the application has been adequate -- it might be useful if the staff would give the Board, if it continues to be an uncontested case, some general ideas of how they evaluated the quality assurance program in terms of the ability of the contractors to meet their obligations on a timely basis.

CHAIRMAN WELLS: One of the favorite questions that I have with reference to these kinds of applications is whether or not the materials that will be produced or the materials that will be used for fuel will be adequately safeguarded against diversion for unauthorized uses. I noticed the applicant has stated it will abide by the regulations of the Commission. I am not informed as to what the status of the Commission's regulations on this particular point is. I know in the Diablo case the Board was informed that they were in preparation. Perhaps the staff at the hearing would be good enough to bring us up to date on the status of the regulations.

MR. ENGELHARDT: Because neither Mr. Long and Mr. Schwencer are conversant in this area, this area of safeguarding the material is a responsibility of a newly formed Division of Nuclear Materials Safeguards, and normally their testimony is not required in hearings of this nature, but I would be happy to provide a response to your question if that would be satisfactory.

CHAIRMAN WELLS: That would be satisfactory for my purposes.

CHAIRMAN WELLS: Mr. Briggs asked a series of questions concerning the plans for removal of iodine. As I understand it in general certain chemical additives are expected to do this. Research or experimentation is being done to ascertain if they will. If they don't, then the alternative is to have charcoal filters. This general subject, I said, has been the subject of considerable discussion in many of the hearings. I confess I am not quite sure why it has taken so much time in each hearing, but it has. So I expressed the hope that the Board and the applicant and the staff, with a reciprocal sympathy in asking and answering the questions, might be able, one, to minimize the time that is required to be spent on this subject, and two, perhaps get it answered in a sufficiently definitive way that it would be acceptable to this Board and perhaps to later boards.

DR. CEYER: One thing that it seemed I would like to have a little additional information on is the whole question of protection against floods. It seems a bit unusual that a plant be designed to have eight feet of water around it under the extreme conditions -- I realize these conditions are exceedingly remote. But then the question comes up what constitutes protection provided by Class 1 structures and problems of floating tanks, anything floating away in the vicinity of the plant, any drains that might admit water inadvertently back into places where it wasn't wanted.

CHAIRMAN WELLS: Yes. I wonder if the question might not be posed this way -- and I think it is a useful one to whoever is participating on the Board -- what does the word "applicant" imply in the proposed finding that the applicant is qualified? Does it ipso facto include its contractors, or is it just the applicant alone? The staff might wish to advise the Board on that. Isn't that essentially the problem, Mr. Board?

But I do think that the one question that would be useful for the staff to reply to is when the proposed finding refers to the technical qualification of the applicant, does that include the utility whose name appears on the application, or does that include his principal contractors, his servants, employees, and what not. And therein I think probably lies the answer to this question.

the
contractor to do the construction work apparently has not
been selected yet. Is that correct, Mr. Jewell?

MR. JEWELL: That is correct, sir.

CHAIRMAN WELLS: I don't know whether this is
customary or not, but whether it is or not, I suppose that
might have some bearing on the question, if the applicant
includes its principal contractors, and if the contractor
to do the construction work is one of the principal
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MR. LONG: I just, Dr. Quarles, I would like to inquire, you mentioned active versus passive with relation to off-site power.

DR. QUARLES: Yes.

MR. LONG: Are you referring mainly to switching equipment versus transponders?

DR. QUARLES: I would like a definition of that. I am referring to the Maine Yankee case specifically. I just read it this morning. I was alternate on that Board, and didn't get the transcript until this morning. But one of the questions I posed in that case was the redundancy of off-site power.

they hedged on the answer to the question by saying the ACRS which referred to redundancy of off-site power, had meant active components,

But my question really goes to the point that I see no difference in the ultimate result, whether you call a component active or passive, provided that component's failure causes loss of power. I couldn't care less whether it rotates or stands on its head if it fails.

MR. LONG: Fine, thank you.

I have one other question in general to the Board, as far as the iodine removal, the expression has been made that we be direct and I guess short in our response. We feel that in order to adequately cover the subject, particularly in light of Mr. Briggs' questioning, it might be more adequate if the staff were able to prepare -- and I am not saying now I am, --- but able to prepare an exhibit which we could submit to the Board and then summarize at the hearing to indicate what we have done, but the exhibit itself would set forth the details.

Would this be acceptable to the Board if we are able to do it between now and the hearing on the 30th?

MR. BRIGGS: I think that could be acceptable. I believe the problem Mr. Wells was concerned with is our spending three or four hours on one day and three or four hours on the next day asking questions and getting answers and then asking questions again. One would like to clear it up with the staff telling what the status is, and what work needs to be done and what they went through in making the evaluation, what the conservatism is, and then the Board having to ask maybe only a very few questions to clear the whole matter up.