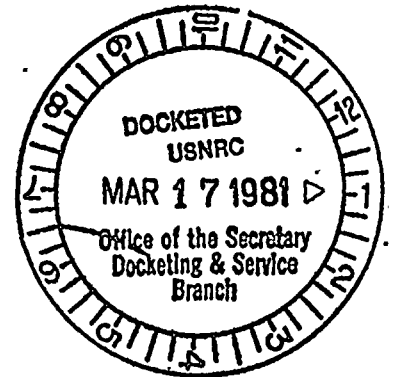


SERVED MAR 17 1981

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

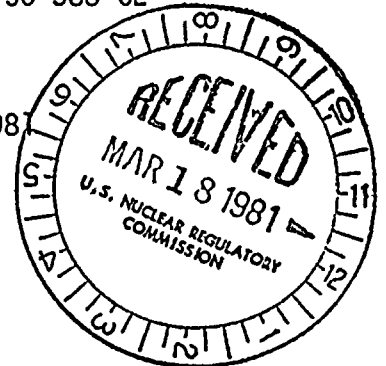
Before Administrative Judges:  
Charles Bechhoefer, Chairman  
Dr. Oscar H. Paris  
Glenn O. Bright



In the Matter of  
PENNSYLVANIA POWER & LIGHT COMPANY  
and  
ALLEGHENY ELECTRIC COOPERATIVE, INC.  
(Susquehanna Steam Electric Station,  
Units 1 and 2)

Docket Nos. 50-387 OL  
50-388 OL

March 16, 1981



MEMORANDUM AND ORDER  
(Ruling On Motions for Summary  
Disposition of Contentions 2 and 16)

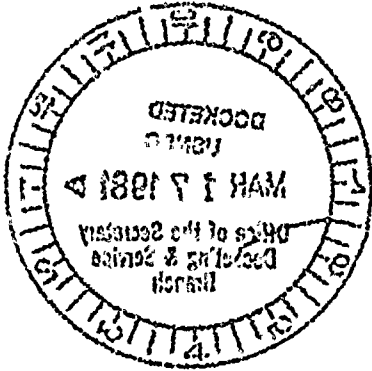
The Applicants in this operating license proceeding have filed motions for summary disposition of all or parts of four contentions: numbers 2, 12, 16, and 17.<sup>1/</sup> In this opinion, we are considering the motions relating to Contentions 2 and 16.<sup>2/</sup> For reasons hereinafter set forth, we are granting in part and denying in part the motion with respect to Contention 2, and granting the motion with respect to Contention 16.

<sup>1/</sup> The contentions are numbered as set forth in the Licensing Board's Special Prehearing Conference Order, LBP-79-6, 9 NRC 291 (March 6, 1979).

<sup>2/</sup> Responses with respect to the Contention 12 motion are not yet due to be filed.

DS02  
50/1

SERVED MAR 17 1981



A. General

Summary disposition motions are authorized by 10 CFR §2.749. Under that authority, we are directed to render the decision sought--here the dismissal in whole or in part of various contentions--"if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 CFR §2.749(d).

This provision is analogous to and has been interpreted in accord with Rule 56 of the Federal Rules of Civil Procedure. Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 217 (1974). Both the Commission and the Appeal Board have long encouraged the use of summary disposition procedures to resolve issues where the proponent of the issue has failed to establish that a genuine issue exists. Northern States Power Co. (Prairie Island Nuclear Generating Station, Units 1 and 2), CLI-73-12, 6 AEC 241, 242 (1973), aff'd sub nom BPI v. AEC, 502 F. 2d 424 (D.C. Cir. 1974); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 424-25 (1973); Dusquesne Light Co. (Beaver Valley 1), ALAB-109, 6 AEC 243, 246 (1973).

All material facts set out in the statement of material facts which accompanies a summary disposition motion are deemed to be admitted unless controverted by the opposing party. 10 CFR §2.749(a). Where, as here, motions for summary disposition are supported by affidavit, a party opposing the motion may not rest upon the mere allegations or denials of his answer; his answer by affidavits or as otherwise provided must set forth "specific facts showing that there is a genuine issue of fact." 10 CFR §2.749(b).

When a response to a summary disposition motion has been provided, we must view the record and affidavits both supporting and opposing the motion in the light most favorable to the opposing party. See Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-74-36, 7 AEC 877, 879 (1974). Moreover, the party seeking summary disposition has the burden of showing the absence of a genuine issue of material fact; if it fails to do so, summary disposition will not be granted irrespective of the quality of any response. Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 752-54 (1977). In short, prior to granting summary disposition, we must be convinced that there are no significant outstanding unresolved questions material to the particular issue under review.

We have applied the foregoing standards in ruling upon the motions before us.

B. Contention 2 (Chlorine)

1. The Applicants filed their motion for summary disposition of a portion of Contention 2 on November 6, 1980. On November 24, 1980, Citizens Against Nuclear Dangers (CAND), the sponsor of the portion of Contention 2 to which the motion relates, filed a document entitled "Petition and Motions on Summary Disposition" which, in part, addressed the Applicants' Contention 2 motion. On December 2, 1980, the NRC Staff filed an answer in support of the Applicants' motion. CAND filed a somewhat belated response to the Staff's answer on January 7, 1981.<sup>3/</sup> No other party has filed any response to the Contention 2 motion.

---

<sup>3/</sup> Our Order dated December 9, 1980 invited CAND and other parties to file such a response by January 5, 1981.

Contention 2, as accepted by the Board in LBP-79-6, supra, 9 NRC at 301, reads as follows:

2. The residual risk of low-level radiation which will result from the release from the facility of radionuclides, and particularly from the release of cesium-137 and cobalt-60, into the Susquehanna River, and the health effects of chlorine discharged into the river, have not been, but must be, adequately assessed and factored into the NEPA cost-benefit balance before the plant is allowed to go into operation.

Applicants' motion requests summary disposition, in their favor, of that portion of Contention 2 which alleges that the health effects of chlorine discharged into the river have not been adequately assessed.

2. Both the Applicants and Staff filed discovery requests against CAND to obtain more specific information about CAND's concerns. In response to the Staff's request for specific information about the amount of chlorine to be released and the health effects which would result,<sup>4/</sup> CAND indicated that the adverse health effects from the discharge of chlorine from the plant would be greater than estimated because the Applicants will be compelled to use more chlorine than specified in the application. CAND asserts that more chlorine than anticipated will have to be used because of river pollution resulting from: (1) "continual pumping of billions of gallons :

---

<sup>4/</sup> NRC Staff's First Round Discovery Requests of the Citizens Against Nuclear Dangers (CAND), dated May 21, 1979, pp. 3-4.

of mine acid drainage into the Susquehanna River from numerous existing abandoned mine workings\* \* \*to make possible the new mining operations" planned in Anthracite coal deposits near the river, and (2) "the Butler Mine Water Tunnel waste chemical spills into the Susquehanna River" involving "hundreds of thousands of barrels of highly toxic chemical wastes (possibly including radioactive wastes) [which] were covertly dumped down boreholes into abandoned coal mine voids near Pittstone, Pennsylvania\* \* \*."<sup>5/</sup>

Applicants' motion is grounded on the claim that there is no genuine issue of material fact to be heard with respect to the chlorine issue as clarified by CAND in discovery.<sup>6/</sup> Through the affidavit of Mr. James Rios, the Supervising Engineering Specialist for the San Francisco Power Division of Bechtel Power Corp. (Rios affidavit), the Applicants assert that the purpose of chlorinating the water systems in the Susquehanna plant is to control the growth of slime-forming organisms on equipment surfaces and to disinfect the potable water supply and sewage effluent. Further, they say that the presence of mine acid drainage and spills of toxic chemical wastes will not result in any significant increase in the rate of growth of bio-fouling organisms on equipment surfaces, nor will the mine drainage and

---

<sup>5/</sup> Citizens Against Nuclear Dangers Motions and Replies to Interrogatories Concerning Contentions Nos. 2, 16 & 17, dated April 29, 1980, pp. 4-5.

<sup>6/</sup> Applicants' Motion, p.1.

chemical spills change the amount of chlorine required to disinfect the potable water supply and sewage effluent.<sup>7/</sup>

In its December 2, 1980 answer, the NRC Staff independently evaluated the chlorine issue as raised by CAND's and the Applicants' documents and concluded that the chlorine portion of Contention 2, as refined by discovery, lacks a factual basis.<sup>8/</sup> This conclusion was supported by the affidavit of John C. Lehr, a Senior Environmental Engineer in the Environmental Engineering Branch, Division of Engineering, of NRC's Office of Nuclear Reactor Regulation (Lehr affidavit). The Staff concurred with the Applicants' statement of material facts and went on to assert that acid mine drainage would tend to decrease the extent of biofouling through direct and indirect toxic effects on the biota. As a consequence, the amount of chlorine needed to defoul the plant's water systems could decrease if the conditions alleged by CAND came into existence.<sup>9/</sup> With regard to toxic chemical spills, the Staff said it could not make a judgement as to the need to alter the chlorination level proposed by the Applicants, but it noted that chlorination is not generally used to treat water polluted by toxic chemicals.<sup>10/</sup>

The Staff also addressed the broader question of whether the health effects of the chlorine to be discharged at the levels indicated in the application have been adequately assessed, even though CAND's response to

---

<sup>7/</sup> Applicants' Statement of Material Facts as to Which There Is No Genuine Issue To Be Heard (Contention 2 - Chlorine), dated November 6, 1980, pp. 1-2; Rios affidavit, dated November 4, 1980, p. 2.

<sup>8/</sup> NRC Staff Answer, at pp. 2, 6.

<sup>9/</sup> Lehr affidavit, p. 3.

<sup>10/</sup> Ibid.

the Staff's interrogatories did not indicate that such was the thrust of Contention 2. (The wording of Contention 2 clearly encompasses such health effects.) The Staff attested that active chlorine chemical species will be reduced to below detectable limits by a dechlorination system. This system will remove chloramines from the effluent, but some chlorides and trihalomethanes will be released by the plant. Chlorides are not likely to be discharged at levels that will threaten the public health.<sup>11/</sup> However, the Staff appears to be less certain about trihalomethanes.

Trihalomethanes and halomethanes are suspected to be carcinogenic. An NRC sponsored study which examined the products of low-level chlorination of various natural waters in the U.S. showed that chloroform was the principal trihalomethane product; in freshwater it occurred in concentrations ranging from 2 µg/l to 25 µg/l. Haloforms occurred in concentrations up to 55 µg/l.<sup>12/</sup> The Staff compared these levels with standards set forth in EPA's Interim Primary Drinking Water Regulations, which provide that total trihalomethanes in community drinking water systems serving 75,000 or more persons not exceed 100 µg/l, and noted that the allowable limit is comparable to or well above the values reported for chlorinated cooling tower waters.<sup>13/</sup> The Staff was unable, however, to estimate the likely levels of trihalomethanes to be produced by the Susquehanna plant. The Staff indicated that the Applicants have not made a quantitative estimate of trihalomethane concentrations in the plant discharge and pointed out that

---

<sup>11/</sup> Lehr affidavit, p. 4. Also see Draft Environmental Statement (NUREG-0564), June 1979, pp. 4-4 through 4-7.

<sup>12/</sup> Lehr affidavit, p. 6.

<sup>13/</sup> Id., p. 7.



active chlorine behavior depends on the specific water chemistry existing under operating conditions, which cannot be predicted accurately.<sup>14/</sup>

Although the Staff concluded that the use of chlorine for biofouling control will not result in a significant impact on the public health, it was able to state only that "[t]he trihalomethane content of the discharge may be below the maximum contaminant level [established] by EPA under the Safe Drinking Water Act" (emphasis added).<sup>15/</sup>

CAND has provided two responses with respect to this motion. To deal with the last response first, CAND's January 7, 1981 filing generally denied the Applicants' and Staff's conclusions and went on to allege that many of the Applicants' findings "are based on misleading extrapolation of data" and that Applicants "have cleverly compiled selective statistics to estimate or infer findings beyond the known range on the basis of certain variables within the known range; from which the estimated values are assumed to follow."<sup>16/</sup> No details are provided. This response thus fails to present material or substantial facts to support this allegation or otherwise to controvert the facts advanced by the Applicants and/or the Staff.<sup>17/</sup>

---

<sup>14/</sup> Id., p. 5.

<sup>15/</sup> Id., p. 9.

<sup>16/</sup> CAND "Motion and Responses Concerning Summary Disposition," p. 2.

<sup>17/</sup> To the extent that either of CAND's responses included any facts at all, they were not presented through affidavit. By our Memorandum and Order Inviting Further Responses to Summary Disposition Requests, dated November 4, 1980, at pp. 4-5, we apprised CAND that factual information which may contradict material supplied by affidavit should likewise be presented by affidavit. Despite CAND's failure to supply affidavits, we have nevertheless given due account to such information as has been provided.

In its earlier November 24, 1980 filing, CAND mentioned an incipient CEQ study which allegedly will link chlorinated drinking water and cancer, a matter related in general to the health effects encompassed by Contention 2. Although the quantity of permissible chlorine released is controlled by the Environmental Protection Agency (EPA), not by NRC, the NRC is authorized to ascertain the health effects of chlorine releases and to include them in the cost-benefit balance for the facility. Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-248, 8 AEC 957, 975-77 (1974). To the extent that the CEQ study mentioned by CAND might include health effects relevant to this facility, it could contradict certain of the NRC Staff's health-effects conclusions. Consequently, our action here will not preclude adjudication of such question.

In addition, CAND refers, in its November 24, 1980 filing, to a plan for the construction of a large ethanol production facility on the Susquehanna River about 15 miles upstream from the Berwick plant. CAND claims that this facility will release "hundreds of millions of gallons of liquid wastes" into the river annually, which will cause an increase in the growth of slime-forming organisms. This increase in fouling organisms would necessitate an increase in the chlorination of the water systems at the nuclear plant, according to CAND.<sup>18/</sup>

CAND could be correct. If an ethanol facility is constructed upstream from the Susquehanna plant and does discharge large amounts of organic wastes into the river, it might necessitate an increase in the

---

<sup>18/</sup> CAND filing dated November 24, 1980, p. 3.

amount of chlorine used at the power plant, because organic waste in the river could provide nutrients which would favor a greater growth rate by slime-forming organisms. For that reason, we are denying the motion for summary disposition insofar as it bears upon the need for chlorination caused by the discharge into the Susquehanna River of liquid wastes from the proposed ethanol production facility.

3. Findings of Fact. Based on our review of the foregoing material, we make the following findings:

1. The purpose of chlorinating the water systems of the Susquehanna plant is to control the growth of slime-forming organisms on surfaces of equipment.

2. If mine acid drainage is released into the Susquehanna River in the future, it will not require an increase in the amount of chlorine used to treat the water. If mine acid drainage has any effect on the amount of chlorine that must be used to de-foul the plant's water systems, it will decrease the amount needed, because acid mine drainage tends to decrease the biota of fresh waters.

3. It is very unlikely that toxic chemical pollutants which find their way into the Susquehanna River from the Butler Mine Water Tunnel will necessitate an increase in the amount of chlorine required to de-foul the plant's water systems, because chlorination is not normally used to treat waters polluted with toxic chemicals.

4. Organic waste from an ethanol production facility could, if released into the Susquehanna River, provide nutrients which would increase the rate of growth of biofouling organisms and necessitate a greater than expected use of chlorine by the power plant.

5. At anticipated levels of chlorination, the plant's dechlorination system will remove chloramines and will reduce chlorides to levels which will not pose a significant threat to the public health.

6. No assessment of health effects of chlorine use at higher than anticipated levels, such as might be required if organic waste from an ethanol plant were released into the river upstream from the Berwick plant, has been made.

7. Trihalomethanes, which are suspected to be carcinogenic, probably will be released at low concentrations in the effluent at anticipated levels of chlorination. No quantitative estimate of the trihalomethane concentration to be expected in the plant's discharge has been made, however.

8. At anticipated levels of chlorination, the trihalomethane content of the discharge may, or may not, be below the maximum allowed by EPA under the Safe Drinking Water Act.

4. Conclusions. The Board concludes that there is no genuine issue of fact with regard to whether acid mine drainage or toxic chemical discharge will necessitate higher levels of chlorination than anticipated. Nor is

there a genuine issue of fact with regard to the health effects of chlorides and chloramines that will be produced at anticipated levels of chlorination at the plant. To the extent that Contention 2 (Chlorine) relates to these matters, therefore, we are granting the Applicants' motion for summary disposition. On the other hand, no assessment has been made of the health effects of a higher level of chlorination, should a higher level become necessary because of the discharge of organic wastes into the river upstream from the plant. Nor have the quantities and health effects of trihalomethanes and halomethanes to be released been adequately assessed, at anticipated or higher-than-anticipated levels of chlorination. To the extent that Contention 2 (Chlorine) relates to these matters, therefore, the Applicants' motion will be denied.

The health effects of various chlorine discharges, whether ascertained through this ruling or through evidentiary hearings, must, of course, be taken into account in any cost-benefit analysis conducted by the NRC with respect to this facility.

C. Contention 16 (Cooling Tower Discharge)

1. The Applicants filed their motion for summary disposition of Contention 16 on October 27, 1980. CAND, the proponent of that contention, responded on December 4, 1980, through a document entitled "Motion and Clarification Concerning Contention 16".<sup>19/</sup> On December 5, 1980, the

---

<sup>19/</sup> By our Order dated November 21, 1980, we granted an extension of time until December 5, 1980, within which parties might respond to the Applicants' motion. As in the case of Contention 2, CAND provided no affidavits in support of its response. See fn. 17, supra.

NRC Staff filed an answer in support of the Applicants' motion. In response to our invitation,<sup>20/</sup> CAND filed a response to the Staff's answer on January 7, 1981.<sup>21/</sup> No other party has taken a position on this motion.

Contention 16, as set forth in LBP-79-6, supra, 9 NRC at 320, reads:

16. Seventy million gallons of radioactive evaporated water to be vented daily from the Susquehanna facility's cooling towers will pose an economic threat to the dairy industry in the eastern-central area of Pennsylvania. This threat has not been properly evaluated.

The Applicants moved for summary disposition of this contention on the ground that there is no genuine issue of material fact to be heard with respect to the contention.

2. In support of their motion, the Applicants supplied the affidavit of Walter J. Rhoades, the Nuclear Group Supervisor--Mechanical, Nuclear Plant Engineering Department, Pennsylvania Power & Light Co. (hereinafter Rhoades affidavit). Mr. Rhoades attests that the water evaporated from the cooling towers comes from three sources of water supplied to the towers: makeup water, return flow from the Circulating Water System, and return flow from the Service Water System. He asserts that none of these sources is

---

<sup>20/</sup> Order dated December 9, 1980.

<sup>21/</sup> As in the case of the Contention 2 motion, CAND's response was somewhat belated; it should have been filed by January 5, 1981. See Order dated December 9, 1980. No affidavits accompanied this response. See fn. 17, supra.

radioactive.<sup>22/</sup> He explains that makeup water, which replaces water lost by evaporation, comes from the Susquehanna River and is not allowed to mix with any other plant water; therefore it cannot be the source of radioactive contamination. The other two sources, the Circulating Water System and Service Water System, draw water from the cooling towers and circulate the water through plant equipment for cooling, after which the water is returned to the cooling towers. Both systems are designed to prevent mixing of radioactive fluids with water from the cooling towers. Two independent methods are employed to prevent contamination of cooling tower water. First, physical barriers, i.e., the tube walls in the heat exchangers, separate the radioactive fluids from the cooling tower water. Second, a pressure differential is maintained between the water of the Circulating Water and Service Water Systems and the systems which contain the radioactive fluids; thus if a leak were to occur, the flow would be from the Circulating Water or Service Water Systems into the systems containing radioactive fluids.<sup>23/</sup>

Mr. Rhoades further attests that the Circulating Water System is at higher pressure than the steam in the condenser. Thus if a leak develops, water will flow out of the tubes into the condenser. Further, if the pressure of the condensing steam rises above 7.3 inches of mercury absolute, which is a lower pressure than that of the circulating water, the

---

<sup>22/</sup> Rhoades affidavit, p. 2.

<sup>23/</sup> Id., p. 3.

turbine is automatically tripped and the flow of steam to the condenser stopped.<sup>24/</sup>

As for the Service Water System, Mr. Rhoades explains that it cools nineteen groups of equipment, only four of which contain potentially radioactive fluids. The four are: radwaste evaporator condensers, reactor building closed cooling water heat exchangers, gaseous radwaste recombiner closed cooling water heat exchanger, and fuel pool heat exchangers. As with the circulating water system, water in the service water system is maintained at a higher pressure than the radioactive or potentially radioactive fluids in the four groups of equipment.<sup>25/</sup> The steam going to the radwaste evaporators is either non-radioactive or slightly radioactive and is at a pressure of 1 psig, whereas the service water supplied to the evaporators is at a pressure of approximately 128 psig. The water in the reactor building closed cooling water heat exchangers is circulated at a pressure of approximately 81 psig, whereas the service water supplied to the closed cooling water heat exchanger is supplied at a pressure of about 108 psig.<sup>26/</sup> The gaseous radwaste recombiner closed cooling water heat exchangers all contain radioactive fluids at pressures less than 5 psig, whereas the service water is circulated through them at a pressure of approximately 76 psig.<sup>27/</sup> Finally, the fuel water flows by gravity

---

<sup>24/</sup> Id., p. 4.

<sup>25/</sup> Id., pp. 4-5.

<sup>26/</sup> Id., p. 6.

<sup>27/</sup> Id., p. 7.



through the fuel pool heat exchangers, where it develops a head of about 30 psig.; the service water circulates through the heat exchangers, however, at a pressure of 84 psig.<sup>28/</sup>

The Applicants assert that the foregoing design features will prevent the water evaporated daily from the cooling towers from being radioactive.<sup>29/</sup> Assuming that to be so, it follows that the threat to the dairy industry raised by CAND would not exist, and that Mr. Rhoades' review would constitute an adequate evaluation of the situation.

The NRC Staff reviewed the documents submitted by the Applicants in support of their motion and also independently evaluated the issue raised in the documents; the Staff concluded that Contention 16 lacks a factual basis.<sup>30/</sup> In support of this conclusion, the Staff supplied the affidavits of Howard B. Holz, a Senior Reviewer in the Auxiliary Systems Branch, Division of Systems Integration, in NRC's Office of Nuclear Reactor Regulation, and Charles Lee Miller, a Nuclear Engineer in the Effluent Treatment Systems Branch, Division of Systems Integration. The Staff attested that there is no radioactivity released from the cooling towers in normal operation.<sup>31/</sup> Although no radioactivity is expected in the service water system, a radiation monitor is located on the downstream side of the fuel pool heat exchangers prior to discharge to the cooling tower

---

<sup>28/</sup> Id., p. 8.

<sup>29/</sup> Applicants' Statement to Material Facts as to which There Is No Genuine Issue To Be Heard (Contention 16), dated October 27, 1980, p. 3.

<sup>30/</sup> NRC Staff Answer, dated December 5, 1980, pp. 1-2.

<sup>31/</sup> Holz affidavit, p. 2; Miller affidavit, p. 2.

as a protection device, and the cooling tower blowdown will be sampled periodically for radioactivity. Should radioactivity be detected, measures can be taken to prevent a significant release.<sup>32/</sup>

CAND responded to Applicants' motion for summary disposition of Contention 16 with a "clarification" which sets forth certain claims:<sup>33/</sup>

- (1) That massive cooling tower plumes of steam create severe and almost constant adverse local weather conditions including precipitation that in turn will cause the so-called routine radiation releases vented from the reactor to be carried into these plume storms and then directly back to the land surface in hot spots contaminating nearby vegetation in farm areas, with higher than permissible levels of radiation thereby endangering the food supply--most notably cattle feed and dairy products.
- (2) In the event of the type of plumbing accident, such as occurred at Indian Point Unit 2 in October, 1980, radioactive water in one system could become mixed with separate cooling water and escape into the atmosphere devastating Salem Township!<sup>34/</sup>

As a third claim, CAND went on to state that it intends to submit a new contention alleging that the lack of "fail-safe backup systems" to prevent the type of "plumbing accident" referenced above and "subsequent massive release of radiation, could have disastrous consequences."

The first of these claims might possibly be regarded as a basis for a contention. But it includes no facts which would counteract the affidavits supplied by the Applicants and Staff. Indeed, to the extent that the

---

<sup>32/</sup> Miller affidavit, p. 4.

<sup>33/</sup> Citizens Against Nuclear Dangers Motion and Clarification Concerning Contention 16, dated December 4, 1980, pp. 2-3.

<sup>34/</sup> Id., p. 3.

routine radioactive releases to which reference is now made are not vented from the cooling towers, they have no bearing on Contention 16 as admitted to this proceeding. Absent the showing for a late-filed contention required by 10 CFR §2.714(a), we decline to consider whether the first claim might qualify as a new contention.

The second and third statements (which are related) are clearly irrelevant to the admitted contention: they both relate to accidental releases, whereas the contention concerns the water which is to be "vented daily"--i.e., routine releases.<sup>35/</sup> In fact, the third claim expressly mentions a new contention. Again, absent the showing required by 10 CFR §2.714(a), we decline to consider whether these statements might be acceptable as a new contention.

Further, it is clear that CAND's January 7, 1981 response to the motion for summary disposition, from which we quoted in our discussion of Contention 2, is intended to apply to the Applicants' statements about Contention 16 as well as to the statements about Contention 2.<sup>36/</sup> But

---

<sup>35/</sup> The Indian Point Unit 2 "plumbing accident" was an occurrence which caused the accumulation of several inches of water on the containment floor. See IE Bulletin No. 80-24, November 21, 1980 (of which we take official notice). The design of the water systems, as described in the Applicants' and Staff's filings, indicates that water spilled into the floor of the containment would not be vented through the cooling tower; rather, such water would normally be pumped from the containment sump to holdup tanks. IE Bulletin No. 80-24, supra. In any case, an accident such as occurred at Indian Point 2 is not a routine occurrence which could give rise to the daily radioactive releases averred to in Contention 16.

<sup>36/</sup> CAND "Motion and Responses Concerning Summary Disposition," dated January 7, 1981, p. 2.

here again CAND fails to present material or substantial facts to support its allegations. The facts submitted by the Applicants and Staff show that there will be no routine releases of radioactive material from the cooling towers and that the design of the plant will prevent radioactive water from the containment building. (given an Indian Point type accident) from mixing with cooling water which is circulating through the cooling towers. CAND has not controverted these facts.

3. Findings of Fact. Based on our review of the foregoing material, we make the following findings:

1. Water evaporated from the cooling towers comes from three sources: makeup water from the Susquehanna River, return flow from the circulating water system, and return flow from the service water system.

2. The makeup water, which replaces water lost by evaporation, is not allowed to mix with any other plant water and consequently cannot be the source of radioactive contamination.

3. Water in the circulating water system will not become radioactive in normal operation because the water is separated from the radioactive fluid which it cools by physical barriers (tube walls) and the water circulates at a higher pressure than the radioactive fluid, so that radioactive fluid cannot leak into the circulating water system should a breach occur in the physical barriers.

4. Water in the service water system is also separated from radioactive fluids in the equipment which it serves by physical barriers, and the water circulates at a higher pressure than the radioactive fluid, so that radioactive fluid will not leak into the service water system should a breach occur in the physical barriers.

5. Should radioactive material get into the cooling tower water through some abnormal occurrence, it would be detected by radiation monitoring devices and procedures, so that measures could be taken to prevent a significant release to the environment.

4. Conclusions: We conclude that there is no genuine issue of material fact pertaining to the foregoing findings; that, insofar as radioactivity is concerned, there is no threat to the dairy industry in Pennsylvania from the water to be evaporated from the cooling towers; and that Applicants' motion for summary disposition of Contention 16 should therefore be granted.

D. Order

Based on the foregoing findings and conclusions, it is, this 16th day of March, 1981

ORDERED

1. That the Applicants' motion for partial summary disposition of Contention 2 (chlorine) is granted to the extent that the contention involves chlorination to counteract releases upstream of mine acid drainage and chemical pollutants into the Susquehanna River.

2. That the Applicants' motion for partial summary disposition of Contention 2 (chlorine) is denied to the extent that the contention raises (a) the need for chlorination caused by the discharge into the Susquehanna River of liquid wastes from the proposed ethanol production facility; (b) the quantities and health effects of releases of trihalomethanes from the facility; and (c) the health effects of chlorine releases at levels permitted by governing EPA requirements.

3. That the Applicants' motion for summary disposition of  
Contention 16 is granted.

THE ATOMIC SAFETY AND  
LICENSING BOARD

*Charles Bechhoefer*  
Charles Bechhoefer, Chairman  
ADMINISTRATIVE JUDGE

*Oscar H. Paris*  
Dr. Oscar H. Paris  
ADMINISTRATIVE JUDGE

*Glenn O. Bright*  
Glenn O. Bright  
ADMINISTRATIVE JUDGE

