xc 30

DICKSTEIN, SHAPIRO & MORIN, L.L.P.
2101 L STREET, N.W.
WASHINGTON, D.C. 20037-1526
202 785-9700

FACSIMILE: 202 887-0689
TELEX: 892608 DSM WSH

598 MADISON AVENUE
NEW YORK, N.Y. 10022-1614
212 832-1900

WRITER'S DIRECT DIAL

(202) 828-2212

June 19, 1995

RECEIVED
JUN 20 1995
DOCKETING DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

VIA OVERNIGHT MAIL

Public Utilities Commission of Ohio
Docketing Division
180 East Broad Street, 10th Floor
Columbus, OH 43215

Re: Case No. 94-1698-EL-ECP
Centerior Energy Corporation

Dear Sir or Madam:

Please find enclosed, for filing in connection with the above-referenced case, 15 copies of the following:

1. The June 19, 1995 Supplemental Written Testimony of Charles E. Mann.

2. Revised pages 3-4, 16-17, 20-21, 23-27, and 29-30 of the June 10, 1995 Written Testimony of Charles E. Mann, which are to be substituted for, and which replace, the same pages in the testimony as originally filed.

3. Revised Mann Exhibit 4, which is to be substituted for, and which replaces, Exhibit 4 filed under seal with Mr. Mann's June 10, 1995 Written Testimony. This revised exhibit is being filed under seal.

Very truly yours,

W. N. P

Woody N. Peterson

Enclosures

92TL01!; 423561

Case No. 94-1698-EL-ECP

RECEIVED
JUN 20 1995
DOCKETING DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Two-Year Review of
Centerior Energy Corporation's
Environmental Compliance Plan Pursuant
to Section 4913.05, Revised Code.

SUPPLEMENTAL WRITTEN TESTIMONY

OF

CHARLES E. MANN

JUNE 19, 1995

Q: What is the purpose of your supplemental testimony?

A: As I understand it, Centerior is asking the Commission to leave in effect its pre-approval to switch to medium sulfur coal at Eastlake 5 and Ashtabula 5, but has not yet made a final decision as to whether to implement such a fuel switch when its current Ohio high sulfur contract expires in late 1997. Originally, I was not certain what process Centerior would use to make this decision. The recent depositions of Mr. Kovach and Mr. Hoag have given me more information about this. I now believe that there is even more reason to be concerned that Centerior, if left to its own devices, may not arrive at a prudent decision.

Q: Could you summarize your conclusions?

A: Yes. Briefly, they are:

- A decision to implement a fuel switch before it is required for compliance is essentially a decision -- and a risky one -- to invest in allowances for possible future use. Yet Centerior did not make the initial and fundamental calculation it should have made to evaluate this proposed investment: the cost per ton of SO_2 removed, which is the same as the cost of creating an allowance.

- This failure to do this essential first calculation is only one example of the deficiencies in Centerior's decision-making process. That process did not include looking in depth at all the factors relevant to assessing the prudence of this investment in allowances, particularly the uncertainties inherent in the assumptions on which the proposed investment is based, and those facing the industry in general.

- Given Centerior's special circumstances (such as competitive pressures, high rates, and present and future loss of load), a thorough analysis of these factors is especially important.

- The weaknesses in Centerior's decision-making process, the riskiness of the investment, and the adverse impacts of an imprudent fuel switch decision on Centerior, the ratepayers, the Ohio coal industry, and the State of Ohio, all lead me to believe that it would be unwise to give Centerior permission to decide on its own whether to fuel switch in 1997 or later. Instead, before finalizing such a decision in the future, Centerior should return to the PUCO and seek approval at that time to make whatever fuel switch Centerior then believes it can demonstrate would be prudent.

Q: Given the way Centerior looked at decisions thus far, is it reasonable to expect that it has made or would make a prudent decision now or in 1997, such that it should be given the "flexibility" to decide on its own whether to fuel switch?

A: I agree in most respects with making the decision in late 1997. Centerior apparently intends to reserve some flexibility to re-examine the decision on its own between now and 1997. But, the process for such re-examination as described by these two witnesses appears not to meet the standard of prudence.

Moreover, the flexibility that Centerior desires seems to be one-sided. As I understand it, approval of the ECP Review filing could give Centerior a leg up in justifying the fuel switch in later EFC proceedings. If the decision is made improperly, it has serious repercussions for others besides Centerior. Obviously, ratepayers would be affected. Even if some costs were found later to be imprudent (and even if some costs were ultimately disallowed), the decision would already likely have been made, and a new contract for lower sulfur coal secured. After the fact review could not address the concerns of the state of Ohio and Ohio's native coal industry. There will be significant impacts on other parties if Centerior makes a poor decision.

From what I have reviewed previously regarding Centerior's ECP filing, and more recently in depositions, there appear to be basic procedural and substantive shortcomings which make reliance on Centerior's decision-making ability troublesome.

Q: What procedural concerns do you have regarding Centerior's decision making regarding this fuel switch?

A: If one wants to preserve flexibility, the logical first question one should ask is "What policies and procedures are in place to guarantee coming up with an appropriate decision?" From what I have seen, Centerior's policies and procedures do not provide the necessary level of assurance.

Q: Can you given an example of this problem?

A: Yes. A particularly illustrative example of Centerior's present compliance decision-making was described by Mr. Hoag. In the Fall of 1994, Centerior had to decide whether to continue burning 3.8 pound coal at Avon Lake for the first quarter of 1995, instead of switching to 1.2 pound coal right away. The decision Centerior reached was to purchase 12,600 allowances to get the allowance bank back to the "proper level established," and to compensate for the allowances consumed by delaying the switch to 1.2 pound coal for three months. It is unclear from the depositions whether Centerior kept any analysis or back-up documentation of this decision. It is also unclear which allowance price forecast was provided to analyze the decision, and who actually made the decision.

Q: Did Centerior properly evaluate this decision?

A: No. Centerior seemed to use a very simple, one-dimensional calculation to evaluate this decision. Centerior calculated a discounted net present value of medium and low sulfur alternatives. The results of this calculation were then discussed by a group which included Centerior's fuel procurement manager, SO_2 allowance manager, and systems planning manager. Senior executives of the company were apparently not consulted. Because the desired allowance bank was set at a predetermined level, the decision was simply "a fuel procurement decision".

It is unclear whether the working group of mid-level managers responsible for updating the ECP would be the same group given the responsibility for making such compliance decisions in the future.

Q: Does Centerior appear to have the policies and procedures in place that it needs to make the correct decision about fuel switching in 1997?

A: No. In a desire to be "flexible", Centerior anticipates re-evaluating the fuel switch at Eastlake 5 and Ashtabula 5 sometime between now and 1997. However, Centerior does not appear to have policies and procedures in place to arrive at a sound decision. It is presently unclear how and when decisions are made, and little documentation or analysis supporting a decision appears to be retained. Mr. Hoag agreed that it would be difficult for any intervenor in a future proceeding to determine how and why a particular decision was made. This is particularly troubling, since I understand that any Centerior decision to fuel switch in 1997, if approved in this proceeding, would not have to pass the hurdle of prudence before it is implemented.

Q: What substantive concerns do you have regarding Centerior's evaluation of a fuel switch?

A: Not only is the procedural process by which Centerior would make such a decision unclear, but the analysis Centerior would conduct to arrive at such a decision is also unclear. Centerior does not appear to have a clear approach to evaluating decisions, nor is it clear what Centerior's decision-making criteria are.

As evidenced by the ECP filing and other subsequent information in the depositions, Centerior does not appear to make the appropriate analysis -- it falls short both in basic economic analysis and in the evaluation of risk and other decision criteria.

Q: In what respects are Centerior's decision criteria insufficient?

A: A decision to implement a fuel switch early is simply a decision to invest in allowances for future use. As such, it is an investment with some degree of risk.

Centerior apparently has not made the first basic calculation regarding the fuel switch in Phase I that should be made -- the cost per ton of SO_2 removed (which is the same as the cost of creating an allowance). The cost per ton of SO_2 removed for Eastlake 5 and Ashtabula 5 combined is $102 under Centerior's assumptions about coal prices ($9.0 million NPV cost of the fuel switch/88,594 allowances).

Using the price at which Ohio Valley would sell high sulfur coal to Centerior, the cost per ton of SO_2 removed would be more on the order of $144 ($14.5 million NPV cost of the fuel switch/101,250 allowances). The cost to create an allowance, in that case, would be higher than the current $135 cost of allowances. If Ohio Valley's high sulfur prices are more accurate, Centerior would in effect be paying a $1 million premium for this fuel switch. Centerior never made this calculation.

Q: Did Centerior consider buying allowances as a least cost measure?

A: No. It does not appear that Centerior considered buying allowances now. Centerior does not appear to have squared its compliance plan with the "keep costs down" mission of its allowance manager, Mr. Hoag. Rather, it relied on a "free" allowance forecast to analyze the plan, and had no sense of whether the forecast was in the high, low or middle of the range.

Q: Has Centerior shown that it can structure a proper analysis of its proposed investment in allowances?

A: No. Centerior has not demonstrated that can structure how such an investment decision would be made, or understand how sensitive such an investment decision is to minor changes in assumptions. Rather, Centerior appears to view this fuel switch as merely a "fuel procurement decision", which does not place it in its proper context. Thus, Centerior basically freezes the level of its projected allowance bank and then makes a fuel cost decision. The size of the bank is considered to be static. While Centerior seemed satisfied with its ECP as developed, it did not know what effect a lower or higher allowance forecast would have on its plan.

Q: Did Centerior properly analyze the impact of uncertainties on its decision to fuel switch?

A: No. Centerior does not adequately evaluate the effect of uncertainties on the prudence of a fuel switch decision. Instead, Centerior's decision process is based on a single, simple measure of economic benefits. Thus, Centerior proposes to commit $9 to 14.5 million NPV of customer funds to make a 10 year investment in SO_2 allowances without asking any of the following questions:

- Is the investment risky?
- How large an investment does Centerior already have in allowances being held for future use?
- Does the pay-off come quickly enough so that there is a reasonable chance that the ratepayers who pay will benefit?
- Given the uncertainties associated with allowance prices and the pressures to hold down Centerior's costs, does it make sense to make a large investment in allowances which will not be used for many years?
- Does the switch have an undesirable effect on the Ohio coal industry which is tolerable given the economic benefit?

Q: Should Centerior have addressed these questions?

A: Yes. As covered in my prior testimony, an investment in the SO_2 allowance market is risky. Moreover, a delay in the payoff associated with this investment is a distinct possibility.

For example, Centerior did not examine the effect of uncertainties such as the variability in its own load forecast. Centerior's 1994 Long Term Forecast Report showed a +8% to -22% range of uncertainty in its load forecasts. This risk is not symmetrical, and the downside is more likely than any upside.

If Centerior's more pessimistic forecast is accurate, Centerior would <u>never use</u> the allowances conserved by the fuel switch in Phase I. A 22% decrease in load starting in the year 2004, for example, would result in roughly 50,000 tons fewer SO_2 emissions per year. Not only would Centerior <u>never use</u> the incremental allowances from the switch, but its bank would <u>continue</u> to grow.

Even a more modest decrease in load could have this effect. A 10-15% decrease in Centerior's load starting in 2004 would have the effect of delaying indefinitely the use of any allowances conserved by this Phase I switch.

Q: **Can you further explain why Centerior's proposed investment in allowances could be imprudent?**

A: Yes. Another illustration may help make this point more concretely. Centerior projects allowances prices to be $840 by the year 2015. By investing $144 per allowance created in today's dollars (assuming Ohio Valley coal prices and a 10.5% discount rate), Centerior would in effect be paying $1,060 for an allowance in the year 2015 if these allowances are not used until then for compliance. The level of uncertainty in Centerior's future load growth, and the potential for early retirements and/or repowerings at several of Centerior's existing fossil units, make this possibility not all that unlikely. In that case, Centerior's investment in 1997 would result in a significant loss in the future. Centerior would in effect be paying <u>over $200 per allowance too much</u> for the 100,000 allowances conserved by the switch. In other words, the investment <u>would lose $20 million 20 years from now</u>.

Q: **Could an examination of these issues change the decision Centerior should make?**

A: Probably it would. As explained in my previous testimony, the market price of SO_2 allowances is quite uncertain. The only justification for, or benefit of the millions of dollars that Centerior proposes to invest in a fuel switch in order to preserve allowances is the projected increase in allowance prices. The uncertainty of future (after year 2007) allowance prices is such that there is a significant probability that the investment could lose money for Centerior's customers.

Even a delay of just a few years in the time that Centerior would use the allowances produced by the proposed switch could make the investment a loser. Centerior's own long term forecast analysis indicates that the real uncertainties are of at least this magnitude.

Q: Is there anything wrong about Centerior waiting until 1997 to see if it is then cost effective to switch?

A: In the abstract, no. But it is my understanding that Centerior does not seek that type of flexibility. Instead, Centerior wants to have PUCO approval now to be able to fuel switch in 1997 in its sole discretion, without Commission reexamination of the prudence of that decision when it is made. Given the deficiencies in Centerior's planning and decision-making processes, and the fact that it today appears cheaper to buy allowances now and continue to use Ohio coal at least to the end of Phase I at Eastlake 5 and Ashtabula 5, instead of switching away from high sulfur coal, it would not be prudent to give Centerior a blank check now to decide to fuel switch in its sole discretion in 1997 or later.

Q: Does it make sense to give Centerior pre-approval of its switch now?

A: No. There is no adequate decision process in place. Also, Centerior's own position appears to be that it should decide later whether it is prudent to fuel switch. If that is the case, then the decision whether to approve the switch should be made later, when Centerior believes it can demonstrate that it is prudent to switch.

Q: Are there additional reasons why Centerior should seek approval at a later date for its switch?

A: Yes. Today's information (especially the current prices of allowances and the price at which Ohio high sulfur coal could be brought today for the September 1997-December 1999 period) indicates that it is not "least cost" to switch. In addition, Centerior does not appear to have a solid decision-making process in place that would assure that it would make the right decision about switching, if left to its own devices without PUCO review of the prudence of the switch.

Q: Does this conclude your supplemental testimony?

A: Yes.

RECEIVED
JUN 2 0 1995
DOCKETING DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

Case No. 94-1698-EL-ECP

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Two-Year Review of Centerior Energy Corporation's Environmental Compliance Plan Pursuant to Section 4913.05, Revised Code.

WRITTEN TESTIMONY

OF

CHARLES E. MANN

JUNE 10, 1995

REVISED PAGES - JUNE 19, 1995

Q: What are your summary answers to those questions?

A: My conclusions, on which I elaborate later in my testimony, are:

- Using the coal prices offered by Ohio Valley (which take advantage of favorable rail rates to Centerior), and assuming the high and lower sulfur coal sources are otherwise comparable, it would be cheaper for Centerior to continue to use high sulfur coal in Phase I and buy allowances today than to switch away from Ohio coal in 1997.

- Since there is no least cost advantage from switching away from Ohio coal in 1997, if the Ohio policies of promoting the use of Ohio coal, avoiding adverse socioeconomic impacts resulting from reduced use of Ohio coal and preserving diversity in coal sources are to be given any effect, Centerior should not receive approval for its proposed fuel switch.

- Even under Centerior's own assumptions, its fuel switch would result in a substantial and risky up-front investment of millions of ratepayer dollars, for at best a modest return years down the road, if <u>all</u> of Centerior's assumptions are correct (which they likely are not) and <u>if</u> its belief that changes in the electric utility industry essentially can be ignored for purposes of its 1995 ECP is well-founded (which it is not).

- Centerior's request for pre-approval of an investment now of millions of ratepayer dollars for a possible payoff years away is risky. For a utility in Centerior's circumstances, facing intense competitive pressures and an eroding customer base, the overall goal should be to keep costs down whenever it is reasonably possible to do so. In this context, that means not making an investment unless the projected benefits from that investment are substantial, and reasonably certain to occur. The benefits of Centerior's proposed switch clearly do not meet that test.

- The risk and the uncertainty of the benefit of Centerior's proposed investment in a 1997 fuel switch are compounded by the fact that any benefit would be realized relatively far into the future. The longer the time period between the investment and any return, the greater the odds that the assumptions on which the investment is based will be proved wrong. This is particularly true here, given the recent changes in the industry and in Centerior's own circumstances, and the potential for quite dramatic future changes.

allowance price assumptions: slight changes tilt the analysis and decisions.

I have reviewed Centerior's coal price assumptions and can comment here in very broad terms. Assumptions regarding the relative prices of high, medium and compliance coal have changed over the last three years. However, Ohio high sulfur coal is likely to continue to be significantly less expensive than 2.5 pound coal delivered to either Eastlake or Ashtabula. Using Centerior's assumptions about coal prices, Centerior would in effect be paying roughly $12.6-20.3 million (or $9.0-14.5 million NPV, discounted back to 1995) over the 2-1/4 year period after September 1997 to accomplish this fuel switch during Phase I. (See Mann Revised Exhibit 4).

Our general criticism pertaining to allowance forecasts applies to coal prices as well. Since 1992, coal prices have surprised many observers, given their expectations in 1992. We would have expected that Centerior would have evaluated its options across a broader range of assumptions about likely coal prices, and in particular the economies of high sulfur coal versus lower sulfur coal, independent of the movement in allowance prices.

Q: Did Centerior examine a sufficient number of scenarios?

A: No. Centerior looked at too few compliance scenarios in its analysis. By assuming a constant bank of allowances for all compliance alternatives, Centerior provides no analysis comparing the option of banking allowances to the option of purchasing of allowances, either now or later.

Since over one million tons per year of Ohio high sulfur coal will be burned at Eastlake 5 and Ashtabula 5 until late 1997, it would seem logical for Centerior to have evaluated, at a minimum, a case utilizing the current coal mix until the end of Phase I. In ECP Case 8, for example, Centerior considered the use of a 6.0 pound coal at Ashtabula 5 in lieu of 2.5 pound coal. For Phase I, the net present value difference was only $3 million, indicating that the economics of this alternative could be very close. It was not clear from the material provided how this case was developed, but the result seems to indicate that the option should not have been readily dismissed. Moreover, at Eastlake, Centerior did not consider the continued use of any Ohio high sulfur coal at all.

competitive marketplace could force the retirements of some of Centerior's units.

Additionally, new clean coal technologies, many under development by the State of Ohio, the U.S. Department of Energy and others, are improving dramatically. Recently, for example, GE demonstrated a very low cost ammonia scrubber technology at a coal-fired facility. The effects on Centerior could be much more cost-effective approaches to compliance with the continued use of in-state Ohio high sulfur coal.

Q: What conclusions do you reach in light of these deficiencies in Centerior's analysis?

A: Centerior did not draw the correct conclusions from its compliance analysis because it was too narrow and limited in scope.

In this proceeding, Centerior is asking for approval to continue implementing its current Phase I strategy of switching away from Ohio high sulfur coal to medium sulfur coal at Eastlake and Ashtabula in late 1997. Centerior anticipates spending $12.6-20.3 million of ratepayer dollars ($9.0-14.5 million NPV) in additional coal costs over that 2-1/4 year Phase I period to make the switch. Additionally, the allowances conserved by this early switch would not be used for compliance until 12 years from now, roughly 2007 to 2009 (see Mann Exhibit 5).

The presumed benefit of spending this amount of money early is premised entirely on assumed prices for high sulfur coal which exceed Ohio Valley's prices, and even then is primarily a function of Centerior's allowance price forecast, which indicates a savings of perhaps $5 million in today's terms.

But, these benefits would arise only if Centerior declines to purchase coal at the prices quoted by Ohio Valley, and only if Centerior's view of the future proves correct a decade later. Equally importantly, these same benefits could be obtained by purchasing allowances at today's prices without displacing any additional Ohio coal at any time during Phase I.

Moreover, Centerior's analysis assumes that allowances will increase in price from $160 per allowance in 1995 to $550 in 2007. Centerior never fully examined whether implementing these switches for the balance of Phase I was appropriate, and could be deferred until sometime later in Phase II if necessary. Centerior's compliance plan is thus not robust under the more complete and thorough analysis called for in this proceeding. In that context, a decision to switch away customer base when the allowances are actually used for compliance. Any continuation of the current erosion of Centerior's rate base, coupled with the likelihood that Centerior might have difficulty holding on to current customers with high electricity rates in a more competitive marketplace, make this mismatch with ratepayers more likely.

Q: What investment will Centerior be making by switching during Phase I?

A: The investment consists of the higher fuel cost that Centerior must incur to use mid or low sulfur coal, compared to the cost of using high sulfur coal over the 1997-1999 period. The use of lower sulfur coal increases the number of allowances that Centerior will have banked by the end of 1999. The pay-off consists of avoiding the purchase of allowances in 2007-2009, at prices which Centerior has projected to be higher than present. The benefit of the investment depends entirely on the projected increase in allowance prices. There is no other reason to do it.

Q: Does the investment appear to have an attractive rate of return?

A: No, the rate of return is not particularly compelling. Return on investment is calculated by comparing the expenditure, at the time the investment is made, to the gains or savings in future years. The "internal rate of return" (the annual compound percentage discount rate at which the present value of the benefits equals the initial investment) of this investment is roughly 14%.

Centerior uses a discount rate of 10.5% in analyzing the economics of various compliance options. This discount rate is Centerior's "official" estimate of its cost of capital. Putting aside the question whether the current estimate of cost of capital is too high or too low, it is certainly not so precise as to preclude a conclusion that the proposed investment is roughly a break-even proposition.

Q: Are there other ways of evaluating whether this investment is attractive?

A: Yes. This investment has a very long pay-off period. Ratepayers would not see any benefit from this investment until at least 2007-2009. In the meantime, ratepayers get no use or benefit. Investments with such a long lag between cost and benefit are usually risky, since so much can change over time. A small swing in the cost of the fuel in Phase I or, more likely, in the value of the allowances in 2007-2009, could wipe out the benefits of the investment.

Q: **Should the risk of the investment be considered in evaluating it?**

A: Yes, particularly since there is substantial risk in investing in SO_2 allowances.

This is so for several reasons. First, allowance prices will significantly increase charges to Centerior's customers for the last 2-1/4 years of Phase I, for a speculative return. Second, Centerior's projected increase in allowance prices -- on which this return is premised -- is quite uncertain, since allowance prices are market-driven and influenced by many factors beyond Centerior's control. These factors include: changes in EPA regulations, changes in coal production and transportation costs in different regions, changes in national demand for electric power, and new emission control technologies, to mention only four factors out of at least a dozen.

The uncertainty in the allowance market is illustrated by the extent to which current prices are below the expectations which most market participants had several years ago. For example, Centerior's 1992 ECP projected 1995 allowance prices to be about $300, while Centerior's latest projection for 1995 is $160 (nearly 50% lower) and the current market price is around $135 for cash purchases.

Another important risk factor is the date on which Centerior would actually need the allowances which would result from the proposed fuel switch. For example, any significant erosion of Centerior's customer base due to increased competition in the electric power industry would stretch out the time required to recoup the investment. To illustrate this sensitivity, I need only point out that changes in assumptions between Centerior's 1992 and 1995 ECPs about system operation resulted in a five-year extension of the time at which allowance purchases (or a scrubber) would be needed, even assuming a higher level of consumption of high sulfur coal in the 1995 plan.

Q: Is further sensitivity analysis called for with respect to this proposed investment?

A: Definitely. If we look at Centerior's projected costs of the fuel switch ($9.0 million NPV) compared to purchasing allowances at current prices of $135, the benefit begins to erode. (*See* Mann Revised Exhibit 4).

If we take into account the price for Ohio high sulfur coal offered by Ohio Valley, the premium paid for Centerior's fuel switch would be more on the order of $20.3 million ($14.5 million NPV).

If we further consider the opportunities presented by current allowance prices, Centerior's investment in a Phase I switch would result in a loss of almost $1 million. Using Ohio Valley's offered prices and current market prices of allowances at $135, Centerior could achieve a $1 million savings by buying allowances today and securing the lower coal prices from Ohio Valley today. <u>In effect, this option would be lower cost than Centerior's current "least cost" plan.</u>

Q: How and when would ratepayers see the benefits, if any, of this investment?

A: Any savings would occur about <u>12</u> years from now, or approximately <u>10</u> years after the investment is made. In the period between 1997-1999 (when the higher fuel costs would be incurred) and 2007 (when the allowances might be needed

Given the inherent riskiness in this investment, and the likelihood that savings will never be realized by rate payers, it does not seem reasonable to make the investment. It is contrary to any strategic focus on keeping costs of generating electricity low with the expectation of a changing utility industry.

Q: **Has Centerior sufficiently demonstrated when a switch away from Ohio high sulfur coal might be warranted?**

A: No. As I stated previously, Centerior has not conclusively demonstrated any benefit in switching away from Ohio high sulfur coal anytime during Phase I.

The inherent shortcomings in Centerior's analysis, particularly its failure adequately to address changes in its generation needs in the future, leave open the question whether or not further reductions in emissions will be required. It is thus difficult to conclude when and if a switch away from Ohio coal could be justified. Of course, Centerior could return to the PUCO at some future date if it believes it can then demonstrate that a fuel switch at Eastlake and Ashtabula has become prudent.

Q: Does Centerior's proposed fuel switch appear to be least cost?

A: No. Using the coal prices offered by Ohio Valley (which take advantage of favorable rail rates to Centerior), and assuming that high and lower sulfur coal sources are otherwise comparable, it would be cheaper for Centerior to continue to use high sulfur coal in Phase I and buy allowances today than to switch away from Ohio coal in 1997.

Q: Has Centerior adequately demonstrated in its 1995 ECP that a 1997 switch away from high sulfur coal should be approved today as a prudent decision?

A: No, it has not. As I have said, Centerior should have based its request for pre-approval of its 1997 fuel switch on a demonstration that properly considered least-cost issues, risks, the consequences of matching costs to customers, and the impact on the Ohio coal industry and the State. It did not do so.

In addition, Centerior should have evaluated its proposed switch in the context of the issues facing Centerior today and uncertainties in the market. Again, it failed to do so.

RECEIVED
JUN 20 1995
DOCKETING DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on June 19, 1995, he caused to be served by overnight mail, one copy each of (1) Supplemental Written Testimony of Charles E. Mann dated June 19, 1995, (2) revised substitute pages to the Written Testimony of Charles E. Mann dated June 10, 1995, and (3) (served upon counsel for Centerior only) revised Exhibit 4 to the Written Testimony of Charles E. Mann, upon:

Mark R. Kempic, Esquire
Centerior Energy Corporation
6200 Oak Tree Blvd., Room 455
Independence, OH 44131
Attorneys for Centerior

Thomas McNamee, Esquire
Assistant Attorney General
Public Utilities Section
180 East Broad Street
Columbus, OH 43266-0573
Attorney for PUCO Staff

Langdon D. Bell, Esquire
Bell, Royer & Sanders
33 South Grant Avenue
Columbus, OH 43215
Attorneys for IEC

Colleen L. Mooney, Esquire
Office of Consumers' Counsel
77 South High Street
Columbus, OH 43266-0550
Attorney for Office of Consumers' Counsel

William M. Ondrey Gruber, Esquire
Chief Assistant Director of Law
City of Cleveland
City Hall, Room 106
601 Lakeside Avenue
Cleveland, OH 44114
Attorney for The City of Cleveland

James J. Vinch, Esquire
Hahn Loeser and Parks
10 West Broad Street, Suite 1800
Columbus, OH 43215
Attorneys for Northwest Ohio Providers Coalition

Maureen R. Grady, Esquire
Hahn Loeser and Parks
10 West Broad Street, Suite 1800
Columbus, OH 43215
Attorneys for Ohio Environmental Council

W. N. Pet

Woody N. Peterson

92TS01!; 423568