

ILLINOIS POLLUTION CONTROL BOARD
April 15, 1999

CENTRAL ILLINOIS LIGHT COMPANY,)	
)	
Petitioner,)	
)	
v.)	PCB 99-80
)	(Variance - Air)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	
)	

JON S. FALETTO AND DIANA M. JAGIELLA OF HOWARD & HOWARD APPEARED ON BEHALF OF THE PETITIONER; and

RACHEL DOCTORS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY APPEARED ON BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (by K.M. Hennessey):

This case arises out of the petition of Central Illinois Light Company (CILCO). CILCO is an electric and natural gas utility that operates a generating station near Peoria, Illinois, called the E.D. Edwards Generating Station (Edwards Station). CILCO burns coal in three boilers at the Edwards Station. In this case, CILCO seeks a variance from 35 Ill. Adm. Code 214.141, which limits CILCO's sulfur dioxide emissions from one of the boilers. The Illinois Environmental Protection Agency (Agency) recommends that the Board grant CILCO a variance, subject to certain conditions.

The Board finds that CILCO has established the factors necessary to the grant of a variance. The Board therefore grants CILCO a variance from 35 Ill. Adm. Code 214.141, subject to the conditions set forth in the order that follows this opinion.

BACKGROUND

As noted, CILCO operates three coal-fired boilers at the Edwards Station. One of those boilers, Boiler No. 2, is subject to a regulation that limits its sulfur dioxide emissions to 1.8 pounds of sulfur dioxide per million British thermal units (lb/mmBtu) of actual heat input. See 35 Ill. Adm. Code 214.141. "Actual heat input" is the quantity of heat produced by the combustion of a fuel (in this case, coal), calculated by a method specified in the regulations. See 35 Ill. Adm. Code 211.210.

The Board adopted Section 214.141 to help ensure that the Peoria major metropolitan area (Peoria MMA) would attain and maintain compliance with the federal National Ambient

Air Quality Standard (NAAQS) for sulfur dioxide. See Sulfur Dioxide Emissions Limitations: Rule 204 of Chapter 2 (February 24, 1983), R80-22 (codified in part at 35 Ill. Adm. Code 214.141). The purpose of the sulfur dioxide NAAQS, which the federal Clean Air Act directed the United States Environmental Protection Agency (USEPA) to establish, is to protect public health and welfare. See 42 U.S.C. § 7409. The federal Clean Air Act also requires each state to develop a “State Implementation Plan” (SIP) to ensure that each air quality region within the state achieves and maintains compliance with the NAAQS. See 42 U.S.C. § 7410. Section 214.141 is part of Illinois’ SIP, and USEPA has approved it as such. See 49 Fed. Reg. 31687 (August 8, 1984).

CILCO filed a petition with the Board for a variance from Section 214.141 on December 17, 1998. The Board may grant a variance from the Act “whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation . . . of the Board would impose an arbitrary or unreasonable hardship.” 415 ILCS 5/35(a) (1996). The Board may impose conditions on a grant of a variance, but may not grant a variance for longer than a 5-year period. 415 ILCS 5/36 (1996).

The Agency must recommend whether the Board should grant the variance. 415 ILCS 5/37 (1996). On February 5, 1999, the Agency filed a recommendation in which it recommended that the Board grant the variance, subject to certain conditions.

On March 18, 1999, the Board held a hearing on the petition at which hearing officer Amy S. Jackson presided. Three witnesses testified on behalf of CILCO: Robert M. Bisha (Bisha), CILCO’s Director of Environmental Services and Compliance; John M. Planck (Planck), Supervisor of Fuel Procurement for CILCO; and John E. Shrock (Shrock), Manager of Air Resources Division of QST Environmental Inc. One witness testified on behalf of the Agency: Robert J. Kaleel (Kaleel), Manager of the Modeling Unit of the Air Quality Planning Section of the Agency. The transcript of the hearing is cited as “Tr. ___.” Following the hearing, the hearing officer filed a report in which she stated that she found all witnesses credible.

The hearing officer admitted into evidence ten exhibits offered by CILCO and two exhibits offered by the Agency, including the written testimony of Troy Poorman (Poorman) of the Agency’s Permit Section, who was not able to testify because of illness. Tr. at 106-107.¹ CILCO’s exhibits are cited as “Pet. Exh. ___” and the Agency’s exhibits are cited as “Resp. Exh. ___.” The parties elected not to file posthearing briefs. Tr. at 108.

On March 18, 1999, CILCO filed an agreed motion to substitute a larger copy of Exhibit A, a photograph of the Edwards Station, for a smaller copy of the photograph admitted into evidence at the hearing. The Board grants the motion.

¹ The Agency later filed an affidavit of Poorman in which he stated that he had drafted the exhibit and that the contents of the exhibit were true and correct to the best of his knowledge. Affidavit of Troy Poorman at 1.

FINDINGS OF FACT

Current Operations

CILCO is an electric and natural gas utility located in Central Illinois. Tr. at 22. CILCO provides electric and gas service to approximately 172,890 residential customers and 170 industrial customers. Tr. at 22.

CILCO has two generating stations, one of which is the Edwards Station near Peoria, Illinois. Tr. at 22. At the Edwards Station, CILCO operates three coal-fired boilers, Nos. 1, 2, and 3. Tr. at 23. CILCO recently installed continuous emission monitoring systems (CEMS) on each of the boilers. Tr. at 22.

Boiler No. 2 is the Edwards Station's most efficient boiler. Tr. at 26. Boiler No. 2 requires less coal to produce the same kilowatt-hours of electricity than Boiler No. 1 or 3. Tr. at 26-27. Combusting one million tons of the same coal would produce 2.23 billion kilowatt-hours from Boiler No. 2; 2.05 billion kilowatt-hours from Boiler No. 1; and 2.21 billion kilowatt-hours from Boiler No. 3. Tr. at 28.

Boilers Nos. 1 and 3 are subject to a sulfur dioxide emission limit of 6.6 lb/mmBtu under 35 Ill. Adm. Code 214.561. Tr. at 24-25. Boiler No. 2 is subject to a sulfur dioxide limit of 1.8 lb/mmBtu under 35 Ill. Adm. Code 214.141. Emissions from all units are subject to a plant-wide sulfur dioxide limit of 34,613 pounds per hour on a 24-hour average basis. See 35 Ill. Adm. Code 214.561. The latter limit was established to maintain compliance with the NAAQS for sulfur dioxide. Tr. at 24.

CILCO currently uses a blend of mid- to high-sulfur coals in Boiler Nos. 1 and 3. Tr. at 41. CILCO uses 1.2 million tons per year of these coals in Boiler Nos. 1 and 3. *Id.* The typical spot market price for these coals is between \$24 and \$25 per ton. Tr. at 45. A spot market price is the price at which coal is currently being offered by coal companies, either directly by solicitation or in published indices. Tr. at 51-52. Spot market purchases are short-term purchases, usually for less than a year. Tr. at 52.

Although Boiler No. 2 could combust mid- to high-sulfur coal, CILCO must burn low-sulfur coal in Boiler No. 2 to comply with the 1.8 lb/mmBtu limit. Tr. at 25, 33, 41-42. CILCO currently buys low-sulfur coal from Rend Lake Coal Mine in Illinois at a price of \$32 per ton (including delivery charges). Tr. at 42, 45. It costs CILCO between \$1.6 to \$4 million more per year to purchase Illinois low-sulfur coals than it would to fuel Boiler No. 2 with mid- to high-sulfur Illinois coal. Tr. at 43, 97, 101-102.

CILCO must maintain a separate coal stockpile and coal-handling equipment for its low-sulfur coal. Tr. at 26. CILCO also incurs extra costs to monitor its supply of low-sulfur coal and to negotiate supply and transportation contracts for low-sulfur coal. Tr. at 26.

Supply of Low-Sulfur Coal

Rend Lake Coal Mine has notified CILCO that its low-sulfur coal will not be available in the year 2000. Tr. at 42. Most Illinois coal has a higher sulfur content and cannot be burned in Boiler No. 2 in compliance with the sulfur dioxide emission limit for that boiler. *Id.* CILCO therefore will have to purchase low-sulfur coal from outside of Illinois. *Id.*

While low-sulfur coal is available in several other states, it is economically feasible for CILCO to purchase low-sulfur coal only from Indiana, eastern Kentucky, and southern West Virginia mines. Tr. at 42-43. Once Illinois low-sulfur coal is no longer available, it will cost CILCO between \$5 to \$10 million more per year to purchase low-sulfur coal from outside of Illinois than it would to fuel Boiler No. 2 with mid- to high-sulfur Illinois coal. Tr. at 41-42. Boiler No. 2 can combust mid- to high-sulfur coal without any physical modification. Tr. at 33.

Other Compliance Alternatives

As an alternative to purchasing low-sulfur coal from outside of Illinois, CILCO could install a scrubber that would allow it to burn mid- to high-sulfur Illinois coal in Boiler No. 2 and maintain compliance with the emission limit. Tr. at 29. A scrubber would cost approximately \$40 million to install, or \$350 per ton of sulfur dioxide removed over the life of the scrubber. Tr. at 96. A scrubber could not be installed by the year 2000, and it would take CILCO several years to design, finance, and install a scrubber. Tr. at 29, 97.

The Phase II Acid Rain Program

Beginning on January 1, 2000, CILCO will be subject to the Phase II Acid Rain Program established under Title IV of the federal Clean Air Act. Tr. at 29. CILCO has obtained a permit under that program under which CILCO must limit its sulfur dioxide emissions to 18,792 tons per year. Tr. at 29.

CILCO has not yet determined whether it will be most economical to meet its obligations under its Phase II Acid Rain Program permit by purchasing sulfur dioxide allowances, purchasing low-sulfur coal, or installing a scrubber. Tr. at 29-30, 97. CILCO expects that the demand for allowances and low-sulfur coal will increase in the year 2000, but there is limited experience upon which to predict the impact of this increased demand. Tr. at 30. The deregulation of electric utilities now proceeding in Illinois creates additional uncertainty for CILCO. Pet. Exh. E.

Terms of Proposed Variance

CILCO seeks a sulfur dioxide emission limit of 4.71 lb/mmBtu, on average, for all three boilers combined. Pet. Exh. F. CILCO requests that the variance provide that each boiler would be subject to a maximum sulfur dioxide emission limit of 6.6 lb/mmBtu. *Id.* The current plant-wide sulfur dioxide emission limit of 34,613 pounds per hour on a 24-hour average basis would remain in place. *Id.* CILCO would use its existing CEMS to monitor emissions and demonstrate compliance. *Id.*; Tr. at 31. CILCO states it will calculate

emissions and determine compliance with the proposed limits on a daily basis. Tr. at 30; Exh. H at 7.

Beginning in December 2000, CILCO would file semiannual reports with the Agency on the cost and availability of sulfur dioxide allowances and low-sulfur coal. Pet. Exh. G; Tr. at 31. CILCO also states that by January 31, 2001, CILCO will provide the Agency an interim report evaluating the feasibility of various strategies for complying with the Phase II Acid Rain Program. Exh. H at 8. CILCO asserts that the proposed variance is not inconsistent with CILCO's obligations under the Phase II Acid Rain Program, and the Agency agrees. Tr. at 105.

CILCO requests that the variance remain in effect until January 31, 2002, unless CILCO notifies the Agency, by that date, that CILCO will request permanent site-specific relief regarding its sulfur dioxide emissions. Exh. H at 8. If CILCO notifies the Agency that CILCO will seek site-specific relief and files a petition for such relief by February 28, 2002, the variance would not terminate until July 31, 2003. *Id.*

The Agency has agreed to the terms of the proposed variance. Tr. at 91-92. While the Agency will need to amend the Illinois SIP if the variance is granted, it believes that CILCO has provided the information necessary to request a SIP amendment. Tr. at 103-104.

Environmental Impact of Proposed Variance

CILCO employed QST Environmental Inc. (QST) of Gainesville, Florida, to analyze the impact of the proposed variance on air quality. Tr. at 60. QST used a state and federally approved regulatory air quality simulation model to address the impacts from the facility. Tr. at 62, 67, 94. All modeling inputs utilized in the analysis were based on Agency and USEPA recommendations, including the use of five continuous years of local meteorological data recorded by the National Weather Service at the Peoria airport. Tr. at 67, 94. The analysis incorporated emissions from the Edwards Station and other industrial facilities in the area based on data provided by the Agency. Tr. at 67-69, 94. The analysis accounted for impacts from upwind background sources based on the most recent ambient monitoring data collected by the Agency at its monitoring station in Pekin, Illinois. Tr. at 69-70, 94.

The modeling analysis shows that under certain meteorological conditions, the proposed emission changes at the Edwards Station could cause short-term impacts. Tr. at 72-74. The Agency considers some of these impacts significant. Tr. at 95. However, the analysis shows that these impacts, when added to the impact of all other sources in the area, result in a total concentration of sulfur dioxide in the Peoria MMA that is well below the NAAQS for sulfur dioxide. Tr. at 95, 93. The primary reason for the lack of adverse impact is the plant-wide sulfur dioxide emission limit that will remain in force; to meet that limit, CILCO will have to offset increases in sulfur dioxide emissions from Boiler No. 2 by decreasing emissions from Boiler Nos. 1 and 3. Tr. at 75. Thus, even under worst case conditions, the analysis shows that the proposed variance will not threaten the area's compliance with the NAAQS, the standard that the USEPA has established to "protect the health and welfare of all citizens." Tr. at 93; see also Tr. at 75, 95.

DISCUSSION

As noted earlier, the Board may grant a variance “whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation . . . of the Board would impose an arbitrary or unreasonable hardship.” 415 ILCS 5/35(a) (1996). When granting a variance, the Board also considers other factors, including the environmental impact of the variance and its consistency with federal law. See 35 Ill. Adm. Code 104.121 and 104.122. The Board addresses these issues below.

Arbitrary and Unreasonable Hardship

The Board finds that continued compliance with the current limit on Boiler No. 2 will impose an arbitrary and unreasonable hardship upon CILCO. First, CILCO soon must comply with Phase II Acid Rain Program requirements. As CILCO argues, the uncertainties connected with the Phase II Acid Rain Program militate in favor of a variance; “to do otherwise could unnecessarily waste forward resources establishing a site-specific SO₂ limit, only to have the limit become unattainable” Tr. at 30. A variance will give CILCO the flexibility to meet its obligations under the Phase II Acid Rain Program in the most cost-effective way. Cf. Marathon Oil Company v. EPA, 242 Ill. App. 3d 200, 207, 610 N.E.2d 789, 793 (5th Dist. 1993) (“the words of the statute neither specifically require a past violation nor do they imply such a requirement.”).

Second, the Board finds that the additional costs that CILCO will incur if it continues to use low-sulfur coal, or if it installs a scrubber, are arbitrary and unreasonable given that CILCO has demonstrated that no environmental harm will result from a more flexible limit, as discussed below.

Environmental Impact

The Board finds that the proposed variance will not have an adverse environmental impact. The plant-wide sulfur dioxide limit that applies to the Edwards Station will remain in force, and thus there will be no net increase in permitted emissions. In addition, the QST analysis confirms that the proposed variance will not threaten the Peoria MMA’s compliance with the NAAQS for sulfur dioxide (which is, as noted above, the standard that USEPA has established to protect public health and welfare). CILCO also has agreed to various conditions, including a requirement to calculate its emissions on a daily basis, that will ensure that the conditions on the variance are enforceable.

Consistency with Federal Law

The Board finds that the proposed variance is consistent with federal law. Although the Agency will need to amend the SIP, the need to amend the SIP does not render a variance inconsistent with federal law. Marathon Oil Company v. IEPA (Nov. 7, 1996), PCB 96-254, slip op. at 13-14.

In addition, the variance will not trigger requirements of other federal regulations. First, the use of a different fuel in Boiler No. 2 is not a “modification” subject to the federal New Source Performance Standards (NSPS) at 40 C.F.R. Part 60. The use of an alternative fuel or raw material is not considered a modification under those regulations if the facility was designed to accommodate the alternative fuel. 40 C.F.R. 60.14(e)(4). Boiler No. 2 can burn high-sulfur coal without further modification, and therefore the proposed variance is exempt from the NSPS program. Second, the proposed variance is exempt from the federal Prevention of Significant Deterioration regulations under a similar exemption. 40 C.F.R. 52.21(b)(2)(e). Finally, nothing in the proposed variance affects CILCO’s obligations under the Phase II Acid Rain Program.

Terms of the Variance

While the Board grants CILCO a variance, the Board has made several changes to the terms of the variance that CILCO requested and the Agency recommended in its recommendation. The variance requested would require CILCO to notify the Agency, by January 31, 2002, whether CILCO intends to seek permanent site-specific relief. If CILCO determines not to seek such relief, the variance would terminate on January 31, 2002. If CILCO determines to seek such relief, and files a petition for such relief by February 28, 2002, the variance would remain in effect until July 31, 2003.

This proposal does not expressly address when the variance terminates if CILCO notifies the Agency that it intends to seek permanent site-specific relief, but fails to file a petition for such relief by February 28, 2002. To cure this ambiguity, the Board has provided that the variance will terminate on February 28, 2002, unless CILCO has filed a petition for permanent site-specific relief with the Board on or before that date. If CILCO files such a petition, the variance will remain in effect until, and will terminate on, July 31, 2003. This revision makes it clear that if CILCO notifies the Agency that it intends to apply for permanent site-specific relief, but fails to do so, the variance terminates.

As a result, termination of the variance is no longer linked to the notice that CILCO provides to the Agency, but to CILCO’s filing of (or failure to file) a petition for permanent site-specific relief with the Board. While there are other ways of clarifying the ambiguity discussed above, the Board believes that this revision is less cumbersome than the alternatives. The Board has made several other minor changes to the requested variance for clarity.

CONCLUSION

The Board grants CILCO a variance from 35 Ill. Adm. Code 214.141, subject to conditions set forth below. This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

1. The Board grants Central Illinois Light Company (CILCO) a variance from 35 Ill. Adm. Code 214.141 for Boiler No. 2 at the E.D. Edwards Generating Station (Edwards Station) near Peoria, Illinois, subject to the following conditions.
2. Sulfur dioxide emissions from Boiler Nos. 1, 2, and 3 at the Edwards Station may not exceed the limits listed below. CILCO must determine compliance with these limits on a daily basis using the sulfur dioxide methodology of the Phase II Acid Rain Program set forth in 40 C.F.R. Part 75.
 - a. The average sulfur dioxide emissions from Boiler Nos. 1, 2, and 3, as a group, may not exceed 4.71 pounds per million British thermal units (lb/mmBtu) of actual heat input;
 - b. The average sulfur dioxide emissions from any one boiler may not exceed 6.6 lb/mmBtu of actual heat input; and
 - c. Sulfur dioxide emissions for all three boilers, as a group, may not exceed 34,613 pounds per hour, on a 24-hour average basis.
3. CILCO must provide to the Illinois Environmental Protection Agency (Agency) semiannual reports for two years, beginning on December 1, 2000, with the following information:
 - a. The current cost of Phase II Acid Rain Program allowances;
 - b. The current cost of low-sulfur coal; and
 - c. A discussion of the availability of allowances or low-sulfur coal.
4. On or before January 31, 2001, CILCO must provide the Agency an interim report evaluating the feasibility of various strategies for complying with the Phase II Acid Rain Program, including the use of various types of coal, the purchase of allowances, or the installation of a scrubber or other desulfurization systems.

- 5. CILCO must notify the Agency on or before January 31, 2002, whether it will request permanent site-specific relief for sulfur dioxide emissions at the Edwards Station.
- 6. This variance will terminate on February 28, 2002, unless CILCO files a petition for permanent site-specific relief for sulfur dioxide emissions at the Edwards Station with the Board on or before that date. If CILCO files such a petition on or before that date, this variance will remain in effect until, and terminate on, July 31, 2003.

If CILCO chooses to accept this variance subject to the above order, within 45 days of the date of this order, CILCO shall execute and forward a Certification of Acceptance and Agreement (Certification) to be bound to all terms and conditions of this variance to:

Compliance Unit, Bureau of Air
 Illinois Environmental Protection Agency
 1021 North Grand Avenue East
 P.O. Box 19276
 Springfield, Illinois 62794-9276.

Such Certification must be in the form specified by the Board. The 45 day period will be held in abeyance during any period that this matter is appealed. Failure to execute and forward the Certification within 45 days renders this variance void and of no force and effect as a shield against enforcement of the rules from which this variance is granted.

CERTIFICATION

I (We), _____, hereby accept
 and agree to be bound by all terms and conditions of the order of the
 Pollution Control Board in PCB 99-80, April 15, 1999.

 Petitioner

 Authorized Agent

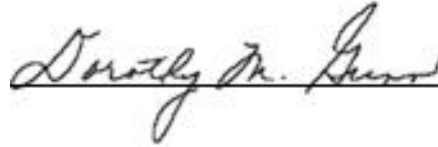
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 Date

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 172 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 15th day of April 1999 by a vote of 7-0.

A handwritten signature in cursive script, reading "Dorothy M. Gunn", written in black ink. The signature is positioned above a solid horizontal line.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board