

ILLINOIS POLLUTION CONTROL BOARD
November 19, 2020

IN THE MATTER OF:)
)
PROPOSED NEW 35 ILL. ADM. CODE 249) R20-18
ETHYLENE OXIDE AMBIENT AIR) (Rulemaking - Air)
MONITORING)

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by J. Van Wie):

The Illinois Environmental Protection Agency (IEPA) filed a proposal to add a new Part 250 to the Board’s air pollution regulations. The proposed rules address IEPA’s air monitoring for ambient levels of ethylene oxide (EtO) across Illinois, which will supplement the air monitoring being conducted by the United States Environmental Protection Agency (USEPA). IEPA’s air monitoring and these rules for carrying it out are required by new Section 9.16(n) of the Environmental Protection Act (Act) (415 ILCS 5/9.16(n), added by P.A. 101-22 (eff. June 21, 2019)).

The Board issued a first notice order, accepting IEPA’s proposal for hearing without commenting on the proposal’s substantive merits. However, since Part 250 falls into Chapter II, Illinois Environmental Protection Agency rules under the Illinois Secretary of State’s system (see generally 1 Ill. Adm. Code 100.Subpart A), the Board proposed the new rule as Part 249. After considering the first-notice testimony and comments, the Board in its order below revises its proposal and submits it to the Joint Committee on Administrative Rules (JCAR) for second-notice review. See 5 ILCS 100/5-40(c) (2018).

In this opinion, the Board first describes the rulemaking’s procedural history and then gives background on EtO and ambient air monitoring. Next, the Board provides an overview of the proposed rules, a summary of IEPA’s testimony and comments, and a discussion of the rule changes from first to second notice. The Board then makes its findings on the proposed rules’ technical feasibility and economic reasonableness. After concluding to propose a new Part 249, the Board directs the Clerk to submit its proposal to JCAR for second-notice review. Finally, the Board sets forth the proposed rules in the order following its opinion.

PROCEDURAL HISTORY

First Notice

On December 17, 2019, IEPA filed a proposal to add a new Part 250 to the Board’s air pollution regulations. Accompanying the proposal were documents including a Statement of Reasons (SR) and Technical Support Document (TSD).

On January 16, 2020, the Board issued a first-notice order accepting IEPA's proposal for hearing without commenting on the substantive merits of the proposal. As explained above, the Board proposed the new rule as Part 249 instead of Part 250. The proposed first-notice rules were published in the *Illinois Register* on January 31, 2020 (44 Ill.Reg. 2216 (Jan. 31, 2020)).

Economic Impact Study

On January 16, 2020, the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study on the proposed rules. On March 3, 2020, the DCEO issued a letter in response to the request (DCEO Ltr.).

Public Hearings

On February 6, 2020, the Board scheduled hearings and directed prefiled testimony to be filed. On February 27, 2020, IEPA filed the testimony of David Bloomberg, manager of IEPA's Air Quality Planning Section. On March 12, 2020, the hearing officer issued an order with the Board's prefiled questions for IEPA.

On March 16, 2020 and April 24, 2020, the hearings were cancelled due to the COVID-19 pandemic; they were rescheduled by orders of May 18, 2020 and July 28, 2020. On June 24, 2020, IEPA filed its responses to the Board's prefiled questions.

On June 25, 2020 and September 10, 2020, the Board held hearings by video conference between its Chicago and Springfield Offices. In addition, because of the COVID-19 pandemic, the Board allowed remote participation by computer or telephone using WebEx. IEPA were available to testify at both hearings. No other testimony or any public comment was offered at either hearing.

The hearing officer admitted all three hearing exhibits into the record at the first hearing: Mr. Bloomberg's prefiled testimony of February 27, 2020 (Exh. 1), which was entered into the record as if read; the Board's March 12, 2020 prefiled questions for IEPA (Exh. 2); and IEPA's June 24, 2020 responses to the Board's prefiled questions (Exh. 3).

Post-Hearing Public Comment

On October 1, 2020, IEPA filed its comments. No other public comments were filed with the Board.

BACKGROUND ON EtO AND AMBIENT AIR MONITORING

EtO is a flammable gas that is used in two ways: (1) it can be combined with other chemicals resulting in a wide array of consumer products, including detergents, solvents, plastics, antifreeze, textiles, and adhesives; and (2) it is used as a sterilizing agent for medical equipment and a fumigating agent for food products. SR at 2. EtO is also an unintended byproduct of certain processes, including combustion. *Id.* at 3. Sources of EtO emissions include plants, microbes, human exhalation, cigarette smoke, automobile exhaust, and industrial

sources (e.g., commercial sterilizers and chemical facilities). *Id.* EtO is one of 187 Hazardous Air Pollutants (HAPs) regulated under Section 112 of the Clean Air Act. SR at 3, *citing* (42 U.S.C. § 7412).

IEPA's proposal provides a mechanism to collect ambient air samples to determine the background levels of EtO throughout the State. SR at 2.

There are no federal ambient air quality standards for EtO or other HAPs, other than lead. SR at 2. IEPA states the purpose of this rule is not to establish an ambient standard for EtO in Illinois. *Id.* IEPA explains that because HAPs generally are emitted in smaller quantities and impacts are more localized, HAPs have been regulated historically through facility level emissions standards. *Id.*

IEPA indicates that ambient air monitoring will provide data regarding EtO and enable the State to determine the average EtO baseline background concentrations. SR at 2. IEPA determined that a six-month monitoring period, with samples collected every 12 days, will meet the requirements of Section 9.16(n) of the Act.¹ *Id.*

OVERVIEW OF PROPOSED RULES

The proposed rules require that IEPA monitor the ambient air for EtO Statewide in or around the locations of Northbrook, Schiller Park, Nilwood, Alton, and Bondville – where IEPA has monitoring stations. Sections 249.105, 249.110(a). IEPA must do so for six consecutive calendar months, which period must begin within one year after the rules take effect. Section 249.110(a), (b). The Board will fix a specific date in the rule at final adoption, at which point a date for filing the final rules with the Secretary of State will be ascertainable. *See* 5 ILCS 100/5-40(d) (2018).

IEPA must collect samples every 12 days, and each sample must be collected over approximately 24 hours. Section 249.110(a). IEPA must place the air monitoring results on its website within 30 days after receiving the quality-assured data. Section 249.115.

The rules will no longer apply 24 months after their effective date. Section 250.120. Here, too, the Board will insert a specific date in the rule at final adoption.

IEPA TESTIMONY AND COMMENTS

IEPA's comments focused on four subjects raised by the Board. First, Mr. Bloomberg of IEPA testified that EtO is a highly localized pollutant, meaning that any effects occur near the source of emissions. Tr. at 19, 24. IEPA further stated that it has no reason to believe that the chosen monitor sites will be affected by any of the permitted EtO sources listed in Table 1 of the Technical Support Document. Tr. at 20.

¹ IEPA's determination reflects USEPA's increased monitoring, proposed by USEPA on September 26, 2019 (84 Fed. Reg. 50825, 50826 (Sept. 26, 2019)). SR at 2.

Second, IEPA disagreed with the Board's suggestion to change Section 249.100 ("Purpose") as follows:

The purpose of this Part is to ~~specify set forth~~ the procedures and requirements that must be used by manner in which the Agency ~~shall~~ to conduct ambient air monitoring of ethylene oxide ~~under in accordance with~~ the requirements in Section 9.16 (text from P.A. 101-22) of the Environmental Protection Act (415 ILCS 5/9.16, P.A. 101-22).

Exh. 2 at 3. IEPA stated that it did not intend for this rulemaking to prescribe all the procedures and requirements applicable to its monitoring efforts, "most of which are federally driven and subject to change." Exh. 3 at 8-9. Rather, with this rulemaking, IEPA intended to address statutory requirements and prescribe the location and duration of air monitoring. *Id.* at 9. Further, IEPA must have the "flexibility to utilize the most appropriate, accurate, up-to-date method." *Id.* at 5. IEPA also stated that its monitoring procedures are "largely governed by evolving federal guidance, methods, and requirements and therefore are not generally prescribed in State regulations." *Id.* This is why, IEPA explained, it proposed broad language in Section 249.110(c), requiring IEPA to comply with "all federal monitoring guidelines, to confirm that its procedures will conform to federal requirements with respect to [EtO] monitoring, just as with monitoring for other pollutants." *Id.* at 9.

Third, IEPA opposed removing "approximately" from the last sentence in Section 249.110(a), arguing that some of the sampling is initiated and terminated manually and,

[w]hen USEPA has collected samples under similar circumstances, they ensured that a sampling timeframe began and ended within roughly the same hour, for example between 9 am and 10 am, each day. As long as the exact time is logged and provided to the lab, this is not an issue in determining the ETO concentration.

Exh. 3 at 6.

Finally, in response to Board questions regarding USEPA ambient air monitoring, IEPA referenced relevant USEPA regulations. So, to cover the proper procedures and guidelines, including regulations, IEPA recommended adding the words "regulations and" to Section 249.110(c) before the word "guidelines". Exh. 3 at 7.

DISCUSSION OF CHANGES FROM FIRST TO SECOND NOTICE

In questions to IEPA witnesses, the Board raised several potential changes to the proposed language. IEPA opposed two of those changes. First, IEPA opposed changing the language in Section 249.100 ("Purpose") to specify the procedures and requirements for ambient air monitoring. IEPA cited reasonable concerns that it wanted the flexibility of its original proposed language to address changing federal guidelines. The Board finds IEPA's arguments persuasive and adopts IEPA's proposed language in Section 249.100 for second notice except for the change below.

Second, IEPA opposed removing “approximately” from the last sentence in Section 249.110(a). IEPA provided a reasonable explanation why requiring an exact 24-hour sample period would conflict with manual sampling. The Board finds IEPA’s arguments persuasive and retains “approximately” in this Section as proposed by IEPA.

In addition, the Board finds IEPA’s addition of “regulations and” to Section 249.110(c) to be a useful clarification and revises the Section accordingly.

After reviewing the first-notice testimony and comments, the Board makes the following revisions.

In Sections 249.100, 249.105, 249.110, and 249.115, the Board replaces “shall” with “must”.

In Section 249.105, the Board strikes “levels of” before “ethylene oxide”, and adds “levels” after “ethylene oxide”. After “Illinois”, the Board strikes “in accordance with” and adds “under”. After “requirements”, the Board strikes “set forth in” and adds “of”.

In Section 249.110(c), after “USEPA”, the Board adds “regulations and”.

In Section 249.115, before “ambient”, the Board adds “ethylene oxide”.

Finally, in Section 249.120, after “Part”, the Board strikes “shall” and adds “will”.

ECONOMIC REASONABLENESS AND TECHNICAL FEASIBILITY

Economic Impact Study

As required by Section 27(b) of the Act (415 ILCS 5/27(b) (2018)), the Board requested that DCEO conduct an economic impact study of IEPA’s proposed rules. DCEO issued a letter declining to do so, stating that “[t]he proposed rule will not have any economic impact as the rule will not alter any restrictions, requirements, or incentives for Illinois residents or businesses.” DCEO Ltr. at 1.

Affected Facilities

The air sampling locations in Northbrook, Schiller Park, Alton, Nilwood, and Bondville are currently in use by IEPA’s Air Quality Planning Section for other ambient air monitoring. Exh. 1 at 2. IEPA does not identify any other affected facilities.

Technical Feasibility

IEPA stated that it is the only entity required to act under this proposed rule. Exh. 3 at 5. Further, IEPA is “already familiar with all applicable quality assurance protocols.” *Id.* at 5. Accordingly, the Board concludes that its second-notice proposal is technically feasible.

Economic Reasonableness

IEPA stated, that the “rule as proposed can be implemented without economic burden to any entity in the State except for [IEPA].” TSD at 8. IEPA estimated that it will cost approximately \$34,000 to implement the EtO air monitoring requirements of the proposed rule. Exh. 3 at 6. IEPA stated that the costs associated with the monitoring requirements to be reasonable to meet the requirements of the Act. TSD at 9. Accordingly, the Board concludes that its second-notice proposal is economically reasonable. Based on this record, the Board finds that the proposed rules will not have an adverse economic effect on the people of the State of Illinois. See 415 ILCS 5/27(b) (2018).

CONCLUSION

The Board proposes to revise its air pollution rules by adding a new Part 249. The proposed rules appear in the order below. Proposed additions since first notice appear underlined and proposed deletions since first notice appear struck through.

ORDER

The Board directs the Clerk to submit its proposal below to JCAR for second-notice review.

Title 35: ENVIRONMENTAL PROTECTION
 SUBTITLE B: AIR POLLUTION
 CHAPTER I: POLLUTION CONTROL BOARD
 SUBCHAPTER m: MONITORING REQUIREMENTS

PART 249
 ETHYLENE OXIDE AMBIENT AIR MONITORING

Section	Purpose
249.100	Purpose
249.105	Monitoring Locations
249.110	Ethylene Oxide Ambient Air Monitoring Requirements
249.115	Monitoring Results
249.120	Sunset Provisions

AUTHORITY: Implementing Section 9.16, and authorized by Sections 27 and 28, of the Environmental Protection Act [415 ILCS 5/9.16, 27, and 28].

SOURCE: Adopted in R20-18 at 44 Ill. Reg. _____, effective _____.

Section 249.100 Purpose

The purpose of this Part is to set forth the manner in which the Agency ~~must shall~~ conduct ambient air monitoring of ethylene oxide in accordance with the requirements in Section 9.16 of the Environmental Protection Act [415 ILCS 5/9.16].

Section 249.105 Monitoring Locations

The Agency ~~must shall~~ monitor ~~levels of ethylene oxide levels~~ in the ambient air in or around the following locations in Illinois ~~under in accordance with~~ the requirements ~~set forth in of~~ Section 249.110:

- a) Northbrook;
- b) Schiller Park;
- c) Nilwood;
- d) Alton; and
- e) Bondville.

Section 249.110 Ethylene Oxide Ambient Air Monitoring Requirements

- a) The Agency ~~must shall~~ conduct ambient air monitoring for ethylene oxide in or around each location specified in Section 249.105 for a period of six consecutive calendar months. During that time frame, the Agency ~~must shall~~ collect a sample every 12 days. Each sample ~~must shall~~ be collected over a period of approximately 24 hours.
- b) The six-month monitoring period ~~must shall~~ commence no later than one year after the effective date of this Part.
- c) The Agency ~~must shall~~ comply with all applicable USEPA regulations and guidelines for ambient air monitoring.

Section 249.115 Monitoring Results

The Agency ~~must shall~~ make the ethylene oxide ambient air monitoring results publicly available on the Agency's website within 30 days after receipt of each set of quality assured data.

Section 249.120 Sunset Provisions

The provisions of this Part ~~will shall~~ no longer apply 24 months after the effective date of

this Part.

IT IS SO ORDERED.

I, Don A. Brown, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on November 19, 2020, by a vote of 4-0.

A handwritten signature in cursive script that reads "Don A. Brown". The signature is written in black ink and is positioned above a horizontal line.

Don A. Brown, Clerk
Illinois Pollution Control Board