

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PETITION OF CITGO PETROLEUM) AS 2026 - 001
CORPORATION FOR AN ADJUSTED) (Adjusted Standard – Air)
STANDARD FROM 35 ILL. ADM. CODE)
SECTION 216.121)

NOTICE OF FILING

TO: Mr. Don A. Brown
Clerk of the Board
Illinois Pollution Control Board
60 E. Van Buren Street, Suite 630
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Brad Halloran
Hearing Officer
Illinois Pollution Control Board
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VIA ELECTRONIC MAIL

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board, **PETITIONER'S RESPONSE TO COMMENTS**, on behalf of CITGO Petroleum Corporation, copies of which are hereby served upon you.

Respectfully submitted,

CITGO PETROLEUM CORPORATION

By: /s/ Melissa S. Brown.
One of Its Attorneys

Dated: July 10, 2026

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CERTIFICATE OF SERVICE

I, the undersigned, on oath state the following: That I have served the attached **PETITIONER'S RESPONSE TO COMMENTS**, via electronic mail upon:

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That my email address is Melissa.Brown@heplerbroom.com.

That the number of pages in the email transmission is 11.

That I have sent the email transmission on July 10, 2026 before 4:30 PM.

Date: July 10, 2026

/s/ Melissa S. Brown
Melissa Brown

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PETITION OF CITGO PETROLEUM) **AS 26 - 1**
CORPORATION FOR AN ADJUSTED) **(Adjusted Standard – Air)**
STANDARD FROM 35 ILL. ADM. CODE)
SECTION 216.121)

PETITIONER’S RESPONSE TO COMMENTS

Petitioner, CITGO Petroleum Corporation (“CITGO”), by and through its undersigned counsel and pursuant to 35 Ill. Adm. Code 101.628(c)(1), hereby files a comment responding to the public comments filed and oral comments given at the June 26, 2026 hearing in this proceeding. Due to the number of comments received and the duplicative nature of the comments, CITGO’s response addresses the positions raised in the comments, generally, as opposed to addressing each individual comment.

I. TIMING OF THE REQUESTED RELIEF

CITGO initiated this proceeding to pursue an adjusted standard because it cannot guarantee compliance with the generally applicable carbon monoxide (“CO”) standard in 35 Ill. Adm. Code 216.121 during periods of startup and shutdown of select fuel combustion emission sources (i.e., select boilers and process heaters) at its Lemont Refinery. Commentors questioned why CITGO was requesting the adjusted standard relief at this point in time. CITGO is pursuing the requested relief at this time due to the outcome of two recent regulatory proceedings at the Illinois Pollution Control Board (“Board”): PCB R 23-18 and PCB R 23-18(A).

In July 2023, the Board adopted amendments to Parts 201, 202, and 212 of the Board’s air regulations, which amended and removed provisions that governed applying for and obtaining startup, malfunction, and breakdown (“SMB”) relief in air operating permits. Final Opinion and Order, PCB R 23-18 (July 20, 2023); CITGO Petition for an Adjusted Standard, AS

26-1, P-6, P-8 (September 10, 2025) (hereinafter “Petition”). Under the provisions in Part 201, a source was able to request, in its air operating permit application, permission to continue operating during a malfunction or breakdown and permission to violate air standards or limitations during startup. First Notice Opinion and Order, PCB 23-18 (De. 15, 2022) (citing 35 Ill. Adm. Code 201.261). If a source was granted such permission in its issued permit, compliance with the SMB provisions in the permit would be a prima facie defense to an enforcement action alleging a violation of Section 20.149. *Id.* (citing 35 Ill. Adm. Code 201.265). The SMB provisions in Part 201 were adopted in 1972 in the same rulemaking that adopted new regulations for control of CO emissions, including the CO standard in Section 216.121 (then Rule 206(a)), as well as standards for sulfur dioxide, nitrogen oxides, hydrocarbons, and particulate matter. Final Order and Opinion, PCB R 71-23 at 1, 4-305 (April 23, 1972). The SMB provisions in Part 201 were adopted at the same time as the initial air standards because the Board recognized that sources may be unable to comply with general air limitations and standards during periods of SMB. *See id.* (recognizing that “[n]o machine works perfectly all the time” and “startup conditions may result in less than optimum emission control”); Petition at P-8. In R 23-18, the Board removed and amended the SMB provisions in Part 201 due to a series of actions at the federal level that had found *broad* startup, shutdown, and malfunction (“SSM”) exemption provisions to be inconsistent with the requirements of the Clean Air Act. See Petition at P-10 to P-11 for detail on the federal actions.

The Board opened a sub-docket rulemaking, R 23-18(A), to consider alternative emissions limitations (“AEL”) proposals relating to the removal of the SMB provisions. Several proposed AELs were adopted in R 23-18(A) which would apply during times of SMB or shutdown for specific emission units in lieu of the generally applicable emission standard or

limit. Final Opinion and Order, *In the Matter of: Amendments to 35 Ill. Adm. Code 201, 202, and 212*, R 23-18(A) (Aug. 22, 2024). In R 23-18(A), the Illinois Environmental Regulatory Group (“IERG”) filed an AEL proposal concerning the CO standard in Section 216.121 applicable to fuel combustion emission sources. *See* IERG’s Proposal for Regulations of General Applicability, PCB R 23-18(A) (Aug. 7, 2023). The Board did not adopt IERG’s proposed AEL in PCB R 23-18(A) as it was not narrowly tailored to specific emission units at specific sources and IERG did not provide the site-specific technical support requested by the Illinois Environmental Protection Agency (“Illinois EPA”). Second Notice Opinion and Order, PCB R 23-18(A) at 136 (July 11, 2024).

Due to the regulatory action described above, CITGO is now unable to avail itself of the prior broad SMB provisions in Part 201 for those fuel combustion emission sources for which relief was previously obtained and is unable to apply for the broad SMB relief provided by those prior provisions in the future. As such, CITGO pursued the current adjusted standard proposal to pursue a site-specific AEL, which is narrowly tailored to certain boilers and process heaters at the Lemont Refinery. *See* Petition, AS 26-1 at P-14, P-15 and P-59, P-60, P-68 (Sept. 10, 2025).

II. REQUESTED RELIEF AND EMISSION UNITS AT ISSUE

CITGO requests an AEL from the CO standard in 35 Ill. Adm. Code 216.121 applicable to fuel combustion emission sources. Section 216.121 prohibits emissions of CO from any fuel combustion emission source with actual heat input greater than 10 mmbtu/hr to exceed 200 ppm, corrected to 50 percent excess air. 35 Ill. Adm. Code 216.121. The 200 ppm CO standard currently applies at all times, including startup and shutdown periods of the fuel combustion emission units. As explained below and in more detail in the Petition and Technical Support Document (“TSD”), CITGO will likely be unable to achieve the CO emission standard

throughout the entirety of each startup and shutdown event of the fuel combustion emission sources at issue. Therefore, CITGO proposes an adjusted standard which consists of an AEL during periods of startup and shutdown of the fuel combustion emission sources.

The proposed AEL, if adopted, would require CITGO to comply with either the 200 ppm CO standard in Section 216.121 or the proposed AEL during periods of startup and shutdown of the fuel combustion emission units with rated heat input greater than 10 mmbtu/hr equipped with a CO and oxygen continuous emissions monitoring system (“CEMS”). The proposed AEL consist of the requirements applicable to fuel combustion emission sources during startup and shutdown in the federal boiler and process heater regulation applicable to major sources: the National Emission Standards for Hazardous Air Pollutants (“NESHAP”) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters at 40 CFR Part 63, Subpart DDDDD. Petition at P-17. The NESHAP Subpart DDDDD requirements proposed to be incorporated by reference in the proposed AEL are explained in more detail in the Petition. *See* Petition at P-17 – P-26. In sum, during startup and shutdown, CITGO will be required to burn clean fuel, operate the CEMS, collect monitoring data and maintain records. Petition at P-19 – P-20. CITGO complies with these requirements as it operates the CEMS at all times, including periods of startup and shutdown, and collects the required monitoring data and maintains the required records. Additionally, CITGO burns refinery gas in the boilers and process heaters, which is a clean fuel under NESHAP Subpart DDDDD. The terms “startup” and “shutdown” are defined in the proposed adjusted standard – the definitions of “startup” and “shutdown” applicable to NESHAP Subpart DDDDD are incorporated into the proposed adjusted standard.

Commentors raised the question of which equipment the proposed adjusted standard would apply to at the Lemont Refinery. The AEL, if adopted, would be applicable to fuel

combustion emission sources at the Lemont Refinery with actual heat input greater than 10 mmbtu/hr equipped with a CEMS for CO and oxygen. Seven (7) boilers and process heaters are equipped with CO and oxygen CEMS. *Id.* A list of the specific emission units that the adjusted standard, if adopted, would currently apply to are listed below along with the nominal planned startup frequency of each unit:

Emission Unit Number	Description	Nominal Planned Startup Frequency
109B-62	Steam Methane Reformer heater	Once every 5-10 years, plus other outages to perform repairs
111B-1A	Crude Atmospheric heater	Once every 5 years
111B-1B	Crude Atmospheric heater	Once every 5 years
111B-2	Crude Vacuum heater	Once every 5 years
430B-1	Auxiliary Boiler	Required every 2 years, plus following other outages to perform repairs
430B-24	South Boiler	Required every 2 years, plus following other outages to perform repairs
431B-25	North Boiler	Required every 2 years, plus following other outages to perform repairs

Petition at P-68.

Per the above and as explained in detail in the Petition and TSD, the requested relief concerns CO emission from select boilers and process heaters at the Lemont Refinery. Numerous comments addressed matters that are not relevant to the requested relief and therefore should be considered outside the scope of this proceeding (e.g., Gas and Car Wash on 97th and Lemont and concerns about air pollution from truck traffic, mentions of impact on private wells and water safety, etc.).

III. TECHNICAL JUSTIFICATION FOR REQUESTED RELIEF

Elevated CO during startup of fuel combustion emission sources occurs because the fuel combustion emission source's firebox temperature is inherently not at the autoignition temperature of CO. P-15. This is because during startup, a key thermodynamic property of CO

likely has not been reached. The firebox temperature likely ‘has not approached or achieved the CO autoignition temperature of 1128 °F (609 °C).’ Petition at P-46. As for shutdown, sometimes shutdowns need to be gradual and fuel gas flow is slowly reduced during those scenarios, as opposed to the fuel gas flow being instantly cut off. *Id.* During that time, instability of the fuel gas flows can occur within the firebox that causes inconsistent temperature regions within the firebox, resulting in elevated CO emissions. *Id.*

While bringing a fuel combustion device up to temperature, “CITGO is not aware of technical means to control excess CO during these startup periods other than to follow standard startup procedures to achieve good fuel combustion and normal operating conditions as quickly as possible....”. Petition at P-61. There are no known control technology or other alternative operational standards to assist in controlling CO emissions of fuel combustion emission sources during startup or to aid in controlling CO emission in gradual shutdown of fuel combustion emission sources. *Id.* The TSD attached to the Petition provides additional detail on the technical reasons why CITGO cannot guarantee compliance with the CO standard in Section 216.121 for the select fuel combustion emission units at issue during all startup and shutdown events. Moreover, in its Recommendation filed in this proceeding, Illinois EPA explained that it is also “unaware of any control technologies or operational limitations that could limit CO emissions during startup or shutdown periods with decreased combustion temperature to below the standard in Section 216.121.” Illinois EPA’s Recommendation, AS 26-1, at 7 (Oct. 27, 2025).

IV. IMPACT OF REQUESTED RELIEF

Commentors stated that they are concerned about the impact of the adjusted standard on the environment and public health. As explained in detail in the Petition and TSD, there will be no measurable negative impact to the environment or health if the proposed adjusted standard is

adopted. CITGO's consultant, Trinity Consultants, conducted dispersion modeling of the worst-case startup and shutdown scenarios for the boilers and process heaters equipped with a CO and oxygen CEMS to confirm no significant ambient impact results from the CO emissions at issue. *See* Petition at P-49 to P-54. The dispersion modeling utilized U.S. EPA models that are typically applied to criteria pollutants (e.g., carbon monoxide). Petition at P-110 – P-129. Worst-case conditions were established to ensure the modeling results would be overly conservative.

The dispersion modeling of worst-case scenarios demonstrated that CO emissions during startup and shutdown of the fuel combustion emission sources at issue have an insignificant impact to air quality and do not exceed either CO National Ambient Air Quality Standards (“NAAQS”). Petition at P-51 to P-54. NAAQS were established to ensure adequate protection of public health. *See* 40 CFR 50.2(b) (“National primary ambient air quality standards define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety, to protect the public health. National secondary ambient air quality standards define levels of air quality which the Administrator judges necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant...”) Modeled ambient CO concentrations from the worst-case startup emissions scenarios were 26.8% and 13.9% of the 1-hour average and 8-hour average Significant Impact Levels for CO, respectively. *Id.* at P-51, P-52. The worst-case startup emission scenarios resulted in modeled ambient concentrations below the 1-hour and 8-hour average CO NAAQS at 8.6% and 14.8%, respectively. *Id.* at P-52, P-53.

In its Recommendation, Illinois EPA stated that “[t]he Agency agrees that CITGO provided with its Petition sufficient information regarding the specific emissions impacts of the SMB events including worst-case quantification, modeling, and information related to modeling including the data inputs and considers this sufficient evidence that operation under the proposed

adjusted standard will not result in air quality impacts that are harmful or violate federal air quality standards” and that U.S. EPA agreed with that conclusion. *Id.* The Petition adequately demonstrates that the adjusted standard would not adversely impact the environment or public health.

V. NOTICE

Commentors stated that notice of the filing of the Petition was inadequate. The Board’s adjusted standard regulations requires that the petitioner, within 14 days after filing the petition, publish “notice of the filing of the petition by advertisement in a newspaper of general circulation in the area likely to be affected by the petitioner’s activity that is the subject of the adjusted standard proceeding.” 35 Ill. Adm. Code 104.408(a); 415 ILCS 5/28.1. CITGO caused publication of notice of the filing of its Petition pursuant to Section 104.408 in *The Herald News* on September 13, 2025. Proof of Notice of Petition, AS 26-1 (Sept. 24, 2025).

The Herald News’ area of circulation is far reaching and includes Lemont, Romeoville, Lockport, Bolingbrook, and numerous additional surrounding areas in Will and Cook Counties.¹ The Lemont Refinery is located at 135th Street and New Avenue in DuPage Township, Will County, Illinois. Petition at P-13. Neighboring communities include Lemont, Romeoville, Bolingbrook, Lockport Heights and Lockport, Illinois, each of which are within the area of circulation of *The Herald News*. CITGO chose to publish notice in *The Herald News* because of its wide circulation in order to provide notice to the largest number of persons that may be affected by the relief requested and/or may have an interest in the proceeding. The Board’s regulations do not require a petitioner to publish in multiple newspapers. *See* 35 Ill. Adm. Code 104.408. CITGO sufficiently met its burden to publish notice as required by the Board’s rules.

¹ See <https://www.shawlocal.com/the-herald-news/>.

On October 2, 2025, the Board entered an Order accepting the Petition and finding that CITGO met the notice requirements. Order of the Board, AS 26-1, at 1 (Oct. 2, 2025) (“The Board finds that the petition and notice meet the requirements of Section 28.1 of the Act and Sections 104.408 and 104.410 of the Board procedural rules and accepts the petition for an adjusted standard.”). On April 2, 2026, the Board entered an Order which provided additional explanation supporting that CITGO met the required notice requirements. Order, AS 26-1 (April 2, 2026). In the Order, the Board explained that it “has found in multiple cases that publication of notice in *The Herald-News* for adjusted standard petitions for facilities in Will County does satisfy the requirements of Section 28.1 of the Act and 104.408 of the Board’s rules.” Order at 2. Notice was properly provided in this proceeding.

VI. CONCLUSION

CITGO appreciates the Board’s consideration of the requested relief and the commentors’ interest in this proceeding. CITGO requests that the Board accept its Response to Comments and enter an Order granting Petitioner’s Adjusted Standard.

Respectfully submitted,

CITGO PETROLEUM
CORPORATION

Dated: July 10, 2026

By: /s/ Melissa S. Brown
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