BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	**)**	
	)	
CLEAN-UP	**)**	**R09-19**
AMENDMENTS TO 35 ILL.	**)**	**(Rulemaking - Air)**
ADM. CODE PART 243	**)**	
	)	

NOTICE

TO: John Therriault, Assistant Clerk
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PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the MOTION TO FILE INSTANTER THE TESTIMONY OF ROBERT KALEEL AND REVISED TECHNICAL SUPPORT DOCUMENT FOR THE HEARING IN RULEMAKING R09-19, SET FOR MARCH 10, 2009, TESTIMONY OF ROBERT KALEEL and REVISED TECHNICAL SUPPORT DOCUMENT FOR R09-19 of the Illinois Environmental Protection Agency a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: _____/s/_____
Charles E. Matoesian
Assistant Counsel
Division of Legal Counsel

DATED: March 3, 2009
1021 North Grand Avenue East
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THIS FILING IS SUBMITTED ON RECYCLED PAPER

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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CLEAN-UP	**)**	**R09-19**
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MOTION TO FILE INSTANTER THE TESTIMONY OF ROBERT KALEEL AND REVISED TECHNICAL SUPPORT DOCUMENT FOR THE HEARING IN RULEMAKING R09-19, SET FOR MARCH 10, 2009

NOW COMES the Proponent, the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY ("Illinois EPA" or "Agency"), by its attorney, and pursuant to 35 Ill. Adm. Code 101.502 and 102.402, moves that the Hearing Officer allow for the filing instanter of pre-filed testimony of Robert Kaleel and a revised Technical Support Document in the above mentioned matter.

On November 25, 2008, the Illinois EPA filed a proposal with the Illinois Pollution Control Board ("Board") to amend Part 243, entitled "Clean-up Amendments to 35 Ill. Adm. Code Part 243." In motions filed on January 20, 2009 the Agency moved that the Board reschedule its hearing set for February 3, 2009 and allow amendments to 35 Ill. Adm. Code Part 243 ("Part 243"), to update the existing proposal to incorporate a new federal air quality standard for lead. The changes proposed included: further amending Section 243.126 to replace the existing standard for lead with a new one and amending Section 243.108, Incorporations by Reference, to update the citation to the Code of Federal Regulations containing the new lead standard.

The Board having agreed so, a new hearing was set for March 10, 2009, with pre-filed testimony due to be filed no later than February, 24, 2009. Due to unforeseen

circumstances, the Agency failed to pre-file its testimony in this matter by the due date. As this failure was accidental, the Agency asks leave of the Hearing Officer to file such testimony now and allow a revised Technical Support Document to be filed which would more fully support the testimony.

WHEREFORE, for the reasons set forth above, the Illinois EPA moves that the Hearing Officer allow this motion and pray that it be allowed to pre-file instanter the testimony of Robert Kaleel and an amended Technical Support Document in this matter.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/
Charles E. Matoesian
Assistant Counsel
Division of Legal Counsel

DATED: March 3, 2009

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TESTIMONY OF ROBERT KALEEL

My name is Robert Kaleel. I am the Manager of the Air Quality Planning Section in the Bureau of Air at the Illinois Environmental Protection Agency (Illinois EPA). I have a Bachelor of Science degree in meteorology from Northern Illinois University. I have worked at the Illinois EPA for more than twenty-eight years, and have been in my present position since 2004. Prior to that, I was the Manager of the Air Quality Modeling Unit in the Air Quality Planning Section, a position that I held for more than fifteen years. I have also worked as a private consultant as a specialist in air quality modeling.

As Manager of the Air Quality Planning Section, my responsibilities include oversight of staff that provides technical support for regulatory initiatives needed to address air quality issues in Illinois, including the regulatory proposal before the Board at this hearing. The Air Quality Planning Section also provides technical support to the Bureau of Air's permitting and enforcement functions, and is responsible for maintaining the Bureau's emission inventory system, including Annual Emission Reports. I have been closely involved with the development of Illinois' State Implementation Plans to address the $PM_{2.5}$ and ozone nonattainment areas in Illinois.

The purpose of my testimony is to explain the purpose of this proposal, which will amend 35 Ill. Adm. Code Part 243 ("Part 243") to update Illinois' air quality standards to reflect several revisions of the National Ambient Air Quality Standards ("NAAQS") promulgated by the U. S. Environmental Protection Agency ("U.S. EPA").

Specifically, the amendments reflect revised NAAQS for ozone, particulate matter, and lead. The 8-hour ozone standard is set forth in the Federal Register, *National Ambient Air Quality Standards for Ozone,* 73 Fed. Reg. 16436 (March 27, 2008). The

ambient air quality standard for ozone is 0.075 ppm daily maximum 8-hour concentration, and is based on the fourth-highest daily 8-hour value recorded during a calendar year and measured by a reference or equivalent method as described in 40 CFR Part 50, Section 50.1 (2003) and the newly created Interpretation of the NAAQS for O_3, 40 CFR Appendix P, 73 Fed. Reg. 16436 (March 27, 2008).

Concerning particulate matter, several postings in the Federal Register reflect changes to the NAAQS for PM_{10} and $PM_{2.5}$. On July 18, 1997, U.S. EPA lowered the annual arithmetic mean concentration to 15 micrograms per cubic meter (62 Fed. Reg. 38652). More recently, in *The National Ambient Air Quality Standards for Particulate Matter*, 73 Fed. Reg. 61144 (October 17, 2006), a maximum 24-hour concentration of 35 micrograms per cubic meter was established. This was to be calculated at the 98th percentile value, as determined by 40 CFR Part 50, Appendix N. U.S. EPA also updated Appendix L of 40 CFR Part 50, which describes the reference method used for the determination of fine particulate matter as $PM_{2.5}$ in the atmosphere. Appendix N, meanwhile, was further updated in *Interpretation of the National Ambient Air Quality Standards for PM 2.5*, 40 CFR Part 50, Appendix N, 73 Fed. Reg. 1497 (January 9, 2008).

The NAAQS for PM_{10} was amended on October 17, 2006. U.S. EPA revoked the annual PM_{10} standard which had been calculated as the annual arithmetic mean concentration of 50 micrograms per cubic meter. The daily PM_{10} standard was left unchanged at a maximum 24-hour concentration of 150 micrograms per cubic meter, not to be exceeded more than once per year. U.S. EPA further amended Appendix K of 40 CFR Part 50, which described the interpretation of the NAAQS for particulate matter.

This proposal also amends the Illinois rules to reflect the new NAAQS for lead. This new standard is set forth in the Federal Register, *National Ambient Air Quality Standards for Lead*, 73 Fed. Reg. 66964 (November 12, 2008). The ambient air quality standard for lead is 0.15 micrograms per cubic meter, as determined as a maximum rolling three month average evaluated over a three year period and measured by the atomic absorbtion spectrometry or equivalent method as described in 40 CFR 50 Appendices G and Q.

This amendment does not impose new requirements on emission sources in Illinois, although the Illinois EPA recognizes that sources throughout the state may be affected eventually. Illinois must first determine if all areas of the state are meeting these standards. If it is determined that new requirements are needed to attain these standards in Illinois, such measures will be addressed in future rulemakings.

Revised Technical Support Document to Part 243: Air Quality Standards

Purpose

The Clean Air Act (CAA) requires that the U.S. Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants that have been deemed harmful to public health and the environment. The six criteria pollutants are ozone, particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead. The CAA also requires that U.S. EPA review, on a periodic basis, new scientific evidence about the effects of these pollutants on public health and welfare and to revise the standards as appropriate. On October 17, 2006 (effective December 18, 2006), U.S. EPA revised the NAAQS for particulate matter, reducing the 24-hour standard for fine particles less than 2.5 microns in diameter ($PM_{2.5}$) from 65 micrograms per cubic meter to 35 micrograms per cubic meter. On March 12, 2008, U.S. EPA strengthened the NAAQS for ozone, reducing the 8-hour average standard from 0.08 parts per million to 0.075 parts per million. In the Federal Register of November 12, 2008, (signed October 15, 2008, effective January 12, 2009), U.S. EPA revised the NAAQS for lead, reducing the numerical value from 1.5 to 0.15 micrograms per cubic meter, and changing the form of the standard to a rolling 3 month average, never to be exceeded.

The Illinois Environmental Protection Agency (Illinois EPA) is proposing to amend Part 243 of Title 35 of the Illinois Administrative Code to update Illinois' air quality standards consistent with those adopted by the U.S. EPA. The Illinois EPA is also proposing to amend Part 243 to establish an annual $PM_{2.5}$ standard of 15 micrograms per cubic meter, consistent with the Federal standard established on July 18, 1997, and to revoke the annual standard of 50 micrograms per cubic meter for PM_{10} (particulate matter less than 10 microns in diameter), consistent with the Federal standards as revised on October 17, 2006.

Background

The CAA established two types of national air quality standards: primary standards and secondary standards. Primary standards are limits for protecting public health, including the health of "sensitive" populations (such as asthmatics, children, and the elderly). Secondary standards establish limits to protect the welfare of the public, which includes protection against decreased visibility, damage to buildings, crops, animals and vegetation. As mentioned previously, the CAA established air quality standards for six criteria pollutants: ozone, particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead. The proposed revisions to Part 243 address the recent revisions by U.S. EPA of the national air quality standards for ozone, particulate matter, and lead.

Ozone, as it exists at ground level in the atmosphere, has been linked to health effects associated with the lungs and respiratory systems. Specifically, it can cause reduced lung function, irritated airways, a higher frequency of asthma attacks, inflammation and damage to the lining of the lungs, and a higher risk of respiratory infections. This can result in greater medication use, absences from school, and more frequent doctor visits. In addition, ground-level ozone can have

detrimental effects on public welfare. Elevated ozone levels can decrease forest growth and crop yields, greatly damage the leaves of trees and other plants (which would ruin the appearance of urban vegetation, national parks, and recreation areas), and increase the susceptibility of sensitive plants to diseases, insects, other pollutants, and severe weather.

Ozone is not emitted into the ambient air, but rather is produced in the atmosphere through a complex series of chemical reactions involving nitrogen oxides (NO_x) and volatile organic material (VOM) emitted by both man-made and natural emission sources. Significant sources of NO_x and VOM include a range of industrial processes, motorized vehicles (both on- and off-road), and the use of chemical solvents.

Particulate matter (PM) is a complex mixture of particles and liquid droplets that are suspended in the atmosphere. Exposure to such matter has been linked to several significant health problems. Short-term exposure to particulate matter (in hours or days) can aggravate the lungs and cause asthma attacks, acute bronchitis, and could even raise the risk of respiratory infections, heart attacks, and heart arrhythmias. Other symptoms include irritation of the eyes, nose, and throat, shortness of breath, and chest pains. Long-term exposure to high particulate levels can lead to the development of chronic bronchitis and reduced lung function, and premature death from heart and lung disease. Welfare effects include reduced visibility and soiling of property.

Particulate matter is emitted from a wide range of emission sources, include fuel combustion, high temperature industrial processes, tire and brake wear, and resuspension of dust from roads and farm fields. Particulate matter can also be the result of chemical reactions occurring in the atmosphere, involving gaseous pollutants, such as sulfur dioxide, nitrogen oxides, ammonia, and organic compounds.

U.S. EPA has established NAAQS for two categories of particulate matter based on the size of the particles. Coarse particulate matter, also known as PM_{10}, is defined as particles that are less than 10 micrometers in diameter. The PM_{10} NAAQS were originally established in 1987. However, effective December 17, 2006, U.S. EPA revoked the annual standard for PM_{10} as more recent health studies attributed adverse long term health effects to fine particulate matter ($PM_{2.5}$). U.S. EPA has retained the existing 24-hour PM_{10} standard of 150 micrometers. In 1997, U.S. EPA established the fine particulate matter standard, or $PM_{2.5}$, to address the adverse health impacts associated with fine particles that were not adequately controlled by the previous PM_{10} standards. On October 17, 2006, U.S. EPA strengthened the 24-hour fine particle standard based on continuing research on health effects of particulate matter.

Lead is a portion of total suspended particulate (TSP), and is either inhaled, or ingested once the lead has settled onto a surface. Once in the body, lead is rapidly absorbed into the bloodstream and results in a broad range of health effects. Effects in children include effects on the developing nervous system including the brain, damage to red blood cells, and a weakened immune system. The effects on adults include increased blood pressure, cardiovascular disease, and decreased kidney function.

Lead is emitted in some manufacturing processes, particularly primary and secondary lead smelters, but also from iron and steel foundries, copper smelting, boilers, waste incinerators,

glass manufacturing, and cement manufacturing. Lead is also still used as an additive in general aviation fuel.

U.S. EPA is requiring that the lead monitoring networks operated by the states be redesigned to assess compliance with the new standard. At a minimum, monitors must be placed in areas with sources of lead emissions of at least one ton per year. U.S. EPA will also require a monitor to be operated in each urban area that has a population of greater than 500,000 in order to gather information on the general population's exposure to lead. The U.S. EPA Regional Administrator may waive the source-oriented monitoring requirement if the state can demonstrate that emissions from the source will not cause maximum airborne lead concentrations of greater than 50 percent of the revised standard, or 0.075 micrograms per cubic meter.

Implementation of Revised Air Quality Standards

Following promulgation of a new or revised air quality standard, the CAA requires the Governor of each state to recommend initial designations of the attainment status for all areas in the state. Areas can be classified as nonattainment (does not meet, or contributes to a nearby area that does not meet the NAAQS), attainment (meets the NAAQS), or unclassifiable (cannot be classified based on available data).

If a state identifies, through ambient monitoring, that an area fails to meet the NAAQS, the CAA requires a state with areas that fail to meet the NAAQS to develop a State Implementation Plan (SIP) describing how the state will attain and maintain the NAAQS. SIPs must include control strategies or measures to reduce emissions of the criteria pollutant, or its precursors, as needed to attain the standards within timeframes prescribed by the CAA. Also, the SIP must include a program to enforce the measures specified. The state adopts the SIP only after reasonable notice and public involvement, such as a public hearing. The SIP is then sent to U.S. EPA for approval or disapproval.

Subsequent to the 1997 NAAQS revisions, the counties of Cook, DuPage, Kane, Lake, McHenry, Will, and Aux Sable and Goose Lake Townships in Grundy County, and Oswego Township in Kendall County in the Chicago area have been designated as nonattainment for both the ozone and $PM_{2.5}$ standards. In the Metro-East area, the counties of Madison, Monroe, St. Clair, and Jersey have been designated as nonattainment for the ozone standard, and the counties of Madison, Monroe, St. Clair, and Baldwin Township in Randolph County are designated as nonattainment for $PM_{2.5}$. The Illinois EPA is still in the process of developing Illinois' SIP to ensure attainment and maintenance of the NAAQS established in 1997.

Nonattainment area boundaries have not yet been established pursuant to the 2006 and 2008 $PM_{2.5}$ and ozone NAAQS revisions, but based on ambient monitoring data, it is expected that the same areas listed above will be designated as nonattainment for one or both of the standards. Nonattainment area boundaries have not yet been established pursuant to the 2008 lead NAAQS revision. A first round of designations based on available monitoring data is due in October 2009, while additional designations based on the expanded monitoring network will come no later than January 2012.

The Illinois EPA considers the technical feasibility and cost effectiveness of emission controls before control measures are included in the SIP. Specific control measures must be adopted by the Illinois Pollution Control Board through a State process that provides for the consideration of alternate measures through a public process. Although the control measures adopted through the SIP process may invoke significant costs on emission sources, it is important to note that the proposed revisions to Part 243 do not impose new requirements or impose new costs to the regulated community.

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STATE OF ILLINOIS)
) **SS**
COUNTY OF SANGAMON)

CERTIFICATE OF SERVICE

I, the undersigned, an attorney, state that I have served electronically the attached MOTION TO FILE INSTANTER THE TESTIMONY OF ROBERT KALEEL AND REVISED TECHNICAL SUPPORT DOCUMENT FOR THE HEARING IN RULEMAKING R09-19, SET FOR MARCH 10, 2009, TESTIMONY OF ROBERT KALEEL and REVISED TECHNICAL SUPPORT DOCUMENT FOR R09-19, upon the following persons:

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ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY,

/s/
Charles E. Matoesian
Assistant Counsel
Division of Legal Counsel

Dated: March 3, 2009

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