

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
STANDARDS AND LIMITATIONS FOR	)	R14-19
CERTAIN SOURCES OF LEAD:	)	(Rulemaking-Air)
PROPOSED 35 ILL. ADM. CODE 226	)	

NOTICE

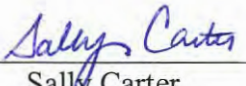
To: John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601-3218

SEE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the TESTIMONY OF RORY DAVIS of the Illinois Environmental Protection Agency, copies of which are herewith served upon you.

Respectfully submitted

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: 
Sally Carter
Assistant Counsel
Division of Legal Counsel

DATED: December 26, 2013

1021 N. Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
(217)782-5544

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
STANDARDS AND LIMITATIONS FOR	)	R 14-19
CERTAIN SOURCES OF LEAD:	)	(Rulemaking – Air)
PROPOSED 35 ILL. ADM. CODE 226	)	

TESTIMONY OF RORY DAVIS

My name is Rory Davis. I am an Environmental Protection Engineer in the Air Quality Planning Section, Air Pollution Control Division of the Illinois Environmental Protection Agency's ("Illinois EPA" or "Agency") Bureau of Air. I have been employed by the Agency in the Air Quality Planning Section for eight years. I have a Bachelor of Science degree in Computational Physics as well as a Bachelor of Science degree in Mathematics from Illinois State University. I also have a Masters degree in Engineering from the University of Illinois at Chicago. My graduate studies consisted of an interdisciplinary program involving coursework from the Chemical Engineering and Mechanical Engineering fields with a concentration on Environmental Engineering, and I am a licensed Professional Engineer in Illinois in the Environmental Engineering discipline. In my current position with the Agency, my duties include providing technical support for regulatory proposals. Among my duties, I co-wrote the technical support document ("TSD") and the proposed regulatory language for this rulemaking. I have done likewise for previous rulemakings involving various other types of industrial activities.

I am here to provide testimony and to answer questions regarding the proposed regulation for limiting emissions of lead from nonferrous metal production facilities in lead nonattainment

areas. A more extensive discussion of this proposed rulemaking can be found in the TSD and Statement of Reasons, but I will also summarize briefly here.

Proposed Regulation for Limiting Emissions of Lead from Certain Sources of Lead

Illinois EPA has proposed a new regulation, Part 226 of Title 35 of the Illinois Administrative Code (“IAC”), titled “Standards and Limitations for Certain Sources of Lead.” The regulation has been proposed to address two areas of Illinois that have been designated as nonattainment for the 2008 National Ambient Air Quality Standard (“NAAQS”) for lead and affects two specific sources in these areas. There is one affected source in the lead nonattainment area (“NAA”) in the Chicago area, a brass and bronze foundry operated by H. Kramer and Co. Brass and Bronze Foundry (“H. Kramer”). There is also an affected source in the Granite City Lead NAA, a manufacturer of lead products operated by Mayco Industries LLC (“Mayco”). Both affected sources are nonferrous metal production facilities that use lead in alloys and products produced at those facilities.

Analysis by the Agency determined that these two sources were culpable for exceedances of the NAAQS at lead monitoring stations near their facilities. Further analysis, including preliminary air quality dispersion modeling, determined that each of the affected sources was capable of causing violations of the NAAQS outside of the property boundaries of the sources in the absence of any other sources of lead in the area or background lead concentrations.

After determining the culpability of the two affected sources, the Agency contacted both sources to make them aware of the Agency's intention to pursue a rulemaking to limit lead emissions at the sources. There was ongoing communication between the Agency and the affected sources throughout the rule drafting process in order to obtain the most accurate information regarding the operations at these sources and the physical properties of the source locations. This communication was valuable to the Agency in drafting the proposed limits and other standards that could feasibly and reasonably be achieved at these sources, and in ensuring that the proposed regulation would bring the area into attainment of the NAAQS for lead in both NAAs after the proposed regulation's adoption.

Previously, there were no numerical limits for lead emissions at these sources. Lead emissions at the sources were controlled to the extent that particulate matter was controlled. The proposed rule would set specific numeric limits for lead emissions in units of grains per dry standard cubic foot of exhaust gas from each stack emission point at each affected source. The proposed rule would also limit fugitive lead emissions through work practice requirements for cleaning, maintenance, and material handling, as well as requiring air pollution control equipment to minimize fugitive emissions from the most significant sources of fugitive emissions at each source.

In addition to the emission limits and equipment requirements, the proposed rule ensures ongoing compliance by requiring recordkeeping, equipment inspection, operational monitoring, periodic emissions testing, a fugitive dust plan, a continuous parametric monitoring plan and a control device monitoring plan.

Adequacy of the Proposed Regulation

The Illinois EPA has concluded that the proposed regulation is sufficient to limit emissions of lead from the two affected sources. The NAAQS for lead will be achieved at all locations outside the property boundaries of the affected sources.

Communication between Illinois EPA and the affected sources provided the Agency with a detailed working knowledge of the physical properties of the sources, including locations and dimensions of buildings, as well as locations, heights, and emission concentrations of potential lead emission release points. This information is important in air quality modeling to determine the contribution of various operations to lead concentrations in the surrounding ambient air, and subsequently to ensure that proposed control strategies will be adequate in attaining the NAAQS after the proposed rule is adopted. The proposed rule reflects a level of control for lead emissions from stack and fugitive emission points that is adequate to attain and maintain the NAAQS for lead in both designated lead NAAs in Illinois.

The proposed rule, if adopted, will be the basis of State Implementation Plan ("SIP") revisions that will be submitted to USEPA to address the two lead NAAs in the state. Copies of the proposed rule have been shared with USEPA, as well as the supporting modeling data and results of the dispersion modeling. USEPA indicated preliminary agreement with the proposal, modeling results, and underlying modeling inputs.

Technical Feasibility of Proposed Control Strategies

The emission control strategies at both affected sources involve limiting stack emissions of lead from all operations as well as control equipment and work practices to limit fugitive lead emissions. The pollution control equipment that would be required to meet the proposed stack emission limits involves, in most cases, capture systems ducted to fabric filters. This type of control equipment is well known and widely utilized for the control of all types of particulate emissions. In the cases of both affected sources, new and additional control equipment has been installed or will soon be under construction for the control of lead emissions at the time of this rulemaking.

Fugitive emissions are emissions that escape emission capture systems and can end up being emitted through doors, windows, or openings in buildings, or end up settling inside buildings or on the surrounding grounds, only to be emitted later when they are disturbed by wind or cleaning operations. Fugitive emissions in the proposed rule are addressed by work practice requirements such as those for cleaning and material handling, and by operating the most significant sources of fugitive emissions inside total enclosures under negative pressure. For operations under total enclosure, any air flow through openings in the building or enclosure must be inward, and any gas streams exiting the enclosure must be controlled and meet the limits for stack emissions in the proposed rule. Total enclosures under negative pressure are a well known and widely utilized control technique for the control of particulate emissions and for emissions of volatile organic material.

Economic Impacts

The anticipated changes in equipment and operations necessary to comply with the proposed regulation at each of the affected sources can be made in an economically reasonable manner. Communication between the Illinois EPA and the affected sources regarding operations and modeling inputs for those sources also resulted in understanding between the Agency and the sources of possible control strategies. The most significant indication that the proposed rule can be completed in an economically reasonable manner is that both affected sources have agreed that these changes can be made in order to limit lead emissions, and both sources have begun to implement the necessary changes for compliance at the time of this rulemaking.

In the case of H. Kramer, the source is operating under a consent decree, and is required by that agreement to upgrade pollution control equipment for some of its operations. The proposed rule sets numerical limits on stack emissions for lead from emission points that are consistent with the level of control anticipated with these new control devices. The proposed rule also requires the aforementioned fugitive emission control measures that the source has agreed can be implemented in an economically reasonable manner.

In the case of Mayco, changes at the source will include new emission control equipment for some operations, changes to the ducting of existing equipment, the creation of a total enclosure to be controlled by an existing baghouse, and the movement of various units to be operated in the enclosure. Mayco has applied for a construction permit in order to implement these changes.

Dispersion modeling was performed based on these changes to ensure that the requirements of the rule would be adequate to attain the NAAQS. In communications regarding modeling and permitting, the sources have agreed that the necessary changes can be made in an economically reasonable manner.

Emission Reductions

Employing conservative estimates, Illinois EPA calculates that the proposed regulation would reduce lead emissions by greater than 50% at each source. These estimates include stack and fugitive emissions from the sources, and compare maximum allowable emissions at each source under the proposed rule to actual reported emissions from the sources. It is unlikely that either source would emit the maximum allowable emissions during all hours of a given year, and so these estimates are likely an underestimate of actual lead emission reductions. Using these assumptions, Illinois EPA estimates that the proposed rule would result in emission reductions of 100 pounds of lead per year from the H. Kramer source and 485 pounds of lead per year from the Mayco source. It should be noted that these worst-case assumptions were also used in the dispersion modeling scenarios that will be used to demonstrate compliance with the lead NAAQS in both NAAs.

Conclusion

Illinois EPA, in its analysis of the two lead NAAs in Illinois and in the process of drafting the proposed regulation, has made efforts to ensure that the proposed regulation is adequate to

address the nonattainment issues in both areas of the state. The standards and emission reduction measures in the proposed regulation will result in significant reductions of lead emissions and reflect reductions necessary, using conservative assumptions, to demonstrate attainment of the NAAQS for lead. Cooperation and communication between Illinois EPA and the affected sources while Illinois EPA was in the drafting process led to a detailed understanding of the sources by the Agency and a proposed regulation that addresses the nonattainment issues in a technically feasible and economically reasonable manner. The proposed regulation will be the basis of SIP revisions submitted for approval to USEPA as required by the Clean Air Act to address the two lead NAAs.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
STANDARDS AND LIMITATIONS FOR	)	R14-19
CERTAIN SOURCES OF LEAD:	)	(Rulemaking-Air)
PROPOSED 35 ILL. ADM. CODE 226	)	

CERTIFICATE OF SERVICE

I, the undersigned, an attorney, state that I have served electronically the attached TESTIMONY OF RORY DAVIS upon the following person on December 26, 2013:

John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601-3218

and further state that I have served a copy of the foregoing TESTIMONY OF RORY DAVIS upon the attached service list by depositing said documents in the United States mail, postage prepaid, in Springfield, Illinois on December 26, 2013.

SEE ATTACHED SERVICE LIST

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: Sally Carter
Sally Carter
Assistant Counsel
Division of Legal Counsel

DATED: December 26, 2013

1021 N. Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276
(217)782-5544

Service List R14-19

Chad Kruse
Hearing Officer
Illinois Pollution Control Board
100 W. Randolph St., Suite 11-500
Chicago, IL 60601

Office of Legal Counsel
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702

Matthew Dunn, Chief
Division of Environmental Enforcement
Office of the Attorney General
500 South Second Street
Springfield, IL 62706

Joyce Morales – Caramella
Mayco Industries, Inc.
18 West Oxmoor Road
Birmingham, AL 35209

Mark A. Bilut
Todd Wiener
McDermott Will & Emery LLP
227 West Monroe Street, Suite 4700
Chicago, IL 60606

Keith Harley
Chicago Legal Clinic, Inc.
211 West Wacker, Suite 750
Chicago, IL 60606

Alec Davis
IERG
215 East Adams Street
Springfield, IL 62701