



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

JUL - 6 2005

FILED³

JUL 11 2005

Missouri Public Service Commission
PO Box 360
Jefferson City, MO 65102-0360

**Missouri Public
Service Commission**

re: KCPL Case No. EO-2005-0329
Kendall Hale's Testimony

I am writing on behalf of the Missouri Department of Natural Resources to provide some follow-up information requested by the Commissioners during the testimony of Kendall Hale, PE. Mr. Hale testified on Monday, June 27, about KCPL's air permit application that the Department is currently reviewing. Commission members asked Mr. Hale a number of questions about Exhibit #45, which is a 3-page document prepared by KCPL that includes a number of charts, including emission limits and annual emissions.

During Mr. Hale's testimony, Commissioner Gaw asked about a mercury calculation, which Mr. Hale has since undertaken and explained in the enclosed document. Commissioner Clayton later asked Mr. Hale to include the federal limits for those compounds that have such limits. That information is included on the enclosure as well.

I understand that this additional information is pretty technical and may not be easy to understand. For that reason, the Department is willing to make Mr. Hale available for further questioning.

Please let me know if you need anything else from the Department. I have sent copies of this letter and enclosure to all of the parties of record.

Sincerely,

AIR AND LAND PROTECTION DIVISION

A handwritten signature in black ink, reading "Kara L. Valentine".

Kara L. Valentine
Legal Counsel
Missouri Department of Natural Resources

Enclosure

c: Kendall Hale, MDNR
Anita Randolph, MDNR
All parties of record

	Iatan I	Iatan II	Federal *
SO ₂	0.10 lb/mmBtu	0.09 lb/mmBtu	1.20 lb/mmBtu
NO _x	0.10 lb/mmBtu	0.08 lb/mmBtu	0.50 lb/mmBtu
PM ₁₀	0.025 lb/mmBtu	0.025 lb/mmBtu	0.03 lb/mmBtu **
Mercury	39 x 10 ⁻⁶ lb/Gross MWH	39 x 10 ⁻⁶ lb/Gross MWH	42 x 10 ⁻⁶ lb/Gross MWH
CO	0.20 lb/mmBtu	0.16 lb/mmBtu	N/A
VOCs	0.0036 lb/mmBtu	0.0036 lb/mmBtu	N/A

SO₂ – Sulfur dioxide

NO_x – Nitrogen oxides

PM₁₀ – Particulate matter less than 10 microns in diameter

CO – Carbon monoxide

VOC – Volatile organic compounds

lb/mmBtu – pounds of pollutant per million British Thermal Unit (Btu) of heat input

lb/Gross MWH – pounds of pollutant per gross megawatt hour

* Federal limitations are found 40 CFR Part 60 Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*.

** Federal limit is actually for particulate matter (PM) and not PM₁₀. The difference being that PM₁₀ is a subset of PM and thus PM emissions are expected to be higher than PM₁₀. However, the majority of PM emissions from a coal fired boiler would be expected to be fine enough that they would be classified as PM₁₀ also.

Mercury Emission rates for Iatan II

Column A	Column B	Column C	Column D	Column E
Federal Limitation	42 x 10 ⁻⁶ lb/MWH	4.38 x 10 ⁻⁶ lb/mmBtu	298.9 lbs/yr	310.4 lbs/yr
KCPL Proposed Limitation	39 x 10 ⁻⁶ lb/MWH	4.06 x 10 ⁻⁶ lb/mmBtu	277.6 lbs/yr	288.3 lbs/yr

Column A - Federal limitations are found 40 CFR Part 60 Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*. The KCPL proposed limitation is the mercury emission rate that KCPL proposed in their application.

Column B – The emission rates in units of pounds of mercury emitted per gross megawatt hour. KCPL has proposed this limit for both Iatan I and II

Column C – The emission rates in units of pounds of mercury emitted per million British Thermal Unit (mmBtu) of heat input. This is the same emission rate as in Column B, simply in different units. This limit would apply for both Iatan I and II.

Column D – The amount of mercury that would be emitting from the Iatan I boiler (after the retrofit) assuming continuous operations (8,760 hours per year) and a constant heat input of 7,800 mmBtu/hr.

Column E – The amount of mercury that would be emitted from the Iatan II boiler assuming continuous operations (8,760 hours per year) and a constant heat input of 8,100 mmBtu/hr.