



PERMIT BOOK

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

JUN 7 2013

Mr. Nico Scheeres
Environmental Solutions Engineer
Worldwide Recycling Equipment Sales, LLC
1414 Riley Industrial Blvd
Moberly, MO 65270

RE: New Source Review Temporary Permit Request - Project Number: 2013-02-002

Installation ID Number: 175-0079

Temporary Permit Number: **062013-002**

Expiration Date: December 1, 2013

Dear Mr. Scheeres:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to test a fluidized bed dryer system at Worldwide Recycling Equipment Sales, LLC, located in Moberly, Missouri. The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location in accordance with Missouri State Rule 10 CSR 10-6.060(3).

Worldwide Recycling Equipment Sales, LLC is reconditioning a fluidized bed dryer system consisting of a bed, baghouse, and condenser. The system is being tested before transfer to a client. Cement kiln dust will be loaded into the unit using a hopper and auger. The kiln dust will be fluidized using the baghouse airflow. Burner heat is indirectly applied to the dust at the bed. The heated kiln dust is drawn into the baghouse. Post-baghouse, heated air passes through a drying condenser to remove moisture, and the air is recycled to the bed. Kiln dust removed by the baghouse is augered to a stockpile. The maximum capacity of the system is 10 tons of dust per hour. Approximately 40 tons of dust will be on site. Maximum natural gas heat input is 8.15 million British thermal units per hour (MMBtu/hr).

Potential emissions from the dust transfer and baghouse load-out were calculated using the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.4 *Aggregate Handling and Storage Piles*, November 2006. Wind speed of 10 miles per hour and moisture content of 0.1 percent were selected. Potential emissions from the fluidized bed dryer

were calculated using the controlled cement silo pneumatic receiving emission factors in AP-42 Section 11.12, *Concrete Batching*, June 2006. Potential emissions from stockpile wind erosion were calculated using a document from the *Western Regional Air Partnership Fugitive Dust Handbook*, Chapter 9, *Storage Pile Wind Erosion*, September 7, 2006, which sites an EPA developed alternative method. Potential emissions from natural gas combustion were calculated using emission factors from AP-42 Section 1.4, *Natural Gas Combustion*, July 1998, Source Classification Code (SCC) 1-02-006-03 for industrial boilers less than 10 MMBtu/hr heat input. Haul road emissions were assumed insignificant as approximately only 40 tons of dust will be on site.

Potential emissions of the project are based upon 480 hours of testing operation, and are provided in Table 1.

Table 1: Emissions Summary (tons per year)

Pollutant	De Minimis Level	Potential Emissions of the Project
PM	25.0	1.98
PM ₁₀	15.0	0.95
PM _{2.5}	10.0	0.16
SO _x	40.0	0.001
NO _x	40.0	0.19
VOC	40.0	0.01
CO	100.0	0.16
HAPs	10.0 / 25.0	0.004
GHG (mass)	0 / 100.0 / 250.0	230.13
GHG (CO ₂ e)	75,000 / 100,000	231.52

Worldwide Recycling Equipment Sales, LLC shall meet the following conditions,

- Operation shall not exceed 480 hours.
- The baghouse shall be operated at all testing times.
- Daily records of operating hours and verification of baghouse operation with pressure drop shall be kept.

The dryer system is not a boiler and is not subject to any New Source Performance Standard under 40 CFR 60 or Maximum Achievable Control Technology under 40 CFR 63 while operating under this permit at this site. No operating permit is required.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.045 *Open Burning Requirements*, 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.165 *Restriction of Emission of Odors*, and 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*.

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A copy of this letter should be kept at the installation and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please do not hesitate to contact David Little at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in cursive script that reads "Kyra L. Moore". The signature is written in black ink and is positioned above the printed name and title.

Kyra L. Moore
Director

KLM:dll

c: PAMS File: 2013-02-002
Northeast Regional Office