

Mr. Aaron W. Miller
Environmental Manager of Primary Smelting
Doe Run Company
881 Main Street
Herculaneum, MO 63048

Dear Mr. Miller:

A critical element of the “2007 Revision of the State Implementation Plan (SIP) for the Herculaneum Lead Nonattainment Area” is assuring that the enclosure and ventilation of the Sinter, Blast Furnace, and Refinery Buildings are effective at controlling lead emissions from the ongoing activities that occur inside these buildings. All of these buildings are subject to building integrity inspections and automated door closure assurances as part of this SIP revision. The plan also relies on improvements made to the ventilation systems in these buildings. In the Sinter Building additional ventilation was added with the installation of the Sinter Machine Wheel Tunnel ventilation project. In the Blast Furnace, existing ventilation flows were redirected to dirtier areas in the building and the hood on the front of the furnace was improved. Other improvements in the Blast Furnace building included the installation of automatic tuyere flow controllers and the relocation of the Blast Furnace to a location closer to the ventilation source. Based on these considerations, the dispersion modeling study used to demonstrate attainment of the standard assumed that fugitive emissions from the Sinter, Blast Furnace, and Refinery buildings would be controlled by 94, 97, and 90 percent, respectively.

When drafting the consent judgment it proved difficult to write direct conditions that made these reductions in building fugitive emissions enforceable. Regular building inspections and automatic door closure devices provided part of the assurance that building fugitives were being controlled, but this did not address building ventilation rates. To make sure that the ventilation rates were properly addressed, Section 2.A.20. of the consent judgment was drafted, which relied on the concept of a ventilation study. At the time this was drafted, the concept was to develop some relationship between flows and fan amperages, leading to the establishment of minimum fan amperages. Again, the goal of this exercise was to assure that the assumed control efficiencies would be met.

Section 2.A.20. of the consent judgment reads:

On or before July 1, 2007, Doe Run shall submit a work plan to MDNR for a building ventilation study for the Sinter Building, Blast Furnace Building, and Refinery Building. The work plan is subject to approval by MDNR. The work plan shall identify building openings, ventilation sources that are typically operated at continuous rates, ventilation sources where rates can be varied, and a procedure for measuring inflow into the buildings. The goal of this effort shall be to develop a mathematical relationship between inflow rates and process and hygiene fan amperages, and to establish minimum fan amperages that assure that particles emitted within the building are being appropriately captured by the ventilation systems. Within 90 days of approval of the work plan by MDNR, Doe Run shall complete the ventilation study. Within 60 days of completion of the study, Doe Run shall summarize the findings and report these to MDNR. Upon approval of the study and its findings, the minimum fan amperages identified in the study shall become enforceable conditions of this Consent Judgment. If the parties are unable to agree regarding the findings of the study, the matter shall be submitted for dispute resolution pursuant to paragraph E below.

Doe Run supplied a work plan by the July 1, 2007, deadline, but the ventilation study itself could not be conducted prior to the completion and shakedown of all of the control systems. On June 2 and 3, 2008, representatives of the U.S. Environmental Protection Agency (EPA), Region VII and Missouri Department of Natural Resources visited the smelter for the purpose of reviewing the ventilation issues. During the visit we learned that Doe Run had installed flow meters in certain locations. We also learned that the ventilation rates from each of the ventilation systems are relatively steady, and do not vary much over time. For the purpose of demonstrating ventilation rates, direct measurement of flow is superior to the surrogate method of recording fan amperages. Because fan amperages do not vary, it does not make sense to develop a “mathematical relationship between inflow rates andfan amperages.” Instead of developing this relationship, we will require that Doe Run log fan amperages as an indicator that the fans are operating, and note when the amperages falls below 95 percent of a “set point” alarm.

The findings of the study are to become enforceable conditions of the Consent Judgment. EPA and the department conferred and drafted a set of conditions that will provide assurance that ventilation assumed in the attainment demonstration modeling is properly maintained. The attached document “Doe Run Herculaneum, Building Ventilation Requirements, Consent Judgment Provision 2.A.20., and the associated “Standard Operating Procedure (SOP) For Building In-Flow Testing utilizing Hand-Held Anemometers” will serve as the conditions under which the Department of Natural Resources Air Pollution Control Program will enforce provision 2.A.20. of the consent judgment. These documents require that Doe Run establish the baseline fan amperages and flow rates by September 15, 2008, so the amendment to the plan submittal can be put on public notice thirty days prior to a public hearing before the Missouri Air

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Conservation Commission on October 30, 2008, with an adoption hearing scheduled for December 4, 2008. This would allow for a formal revision to the submittal by the end of 2008. EPA is planning to move forward very soon with a conditional approval of the plan, but has indicated that they will withhold full approval until this final element is submitted.

The monitoring data for the second quarter of 2008 is well below the existing National Ambient Air Quality Standard for lead. The department is pleased with this result, and it is very important to the department that this success continues. If you have any questions, please do not hesitate to me at the department's Air Pollution Control Program at P.O. Box 176, Jefferson City, MO 65102 or by phone at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

James L. Kavanaugh
Director

JK:jrl

c: Mr. Joshua A. Tapp, Chief, EPA Region VII

Enclosure