

Appendix F

Responses to Comments on Proposed Lead Boundary Recommendation

**COMMENTS AND RESPONSES ON
PROPOSED LEAD DESIGNATION AND BOUNDARY RECOMMENDATION
FOR THE 2008 LEAD NATIONAL AMBIENT AIR QUALITY STANDARD IN
MISSOURI**

AND

RECOMMENDATION FOR ADOPTION

On October 29, 2009, the Missouri Air Conservation Commission held a public hearing concerning a proposed recommendation to the U.S. Environmental Protection Agency (EPA) regarding the lead boundary designation recommendation for Missouri under the 2008 Lead National Ambient Air Quality Standard. The following is a summary of comments received and the Missouri Department of Natural Resources' corresponding responses. Any changes to the proposed state implementation plan are identified in the responses to the comments.

The Missouri Department of Natural Resources' Air Pollution Control Program recommends the commission adopt the plan action as amended. If the commission adopts this recommendation, it will be the department's intention to submit this recommendation to the U.S. Environmental Protection Agency.

SUMMARY OF COMMENTS: The Missouri Department of Natural Resources' Air Pollution Control Program received comments from seven (7) sources: the Jefferson County Executive, Crystal City Administrator, Mayor of Festus, Mayor of Pevely, Interdisciplinary Environmental Clinic at Washington University School of Law, and two private citizens.

COMMENT #1: The mayors of Festus and Pevely, the Crystal City Administrator, and a private citizen all provided comments concerning their strong disagreement with the proposed inclusion of the areas outside the Herculaneum city limits into the Herculaneum Lead Nonattainment Area. They were particularly concerned about the potential negative impact to property values that might result from a nonattainment designation.

RESPONSE AND EXPLANATION OF CHANGE: The department appreciates comments from the community leaders and private citizen. The department realizes that the residents of the area are concerned that a nonattainment designation could potentially affect their property values. The department's primary concern is to protect the public's health and the environment from pollutants that are considered harmful, as required by the Clean Air Act; however, the extent of the current lead monitoring network is within one-half (½) mile of the process buildings at Doe Run, inside the Herculaneum city limits. The revised monitoring network (to begin sampling in January 2010) has been expanded to include sites outside the Herculaneum city limits in areas up to one and one-half (1½) miles from the process buildings. The limited geographic extent of the current network makes it very difficult to prescribe areas that do not meet the standard beyond the monitoring network. Therefore, the department is proposing the nonattainment boundary for the 2008 standard remain as the Herculaneum city limits, which is the current nonattainment area boundary for the 1978 standard. The department is still concerned that the areas initially recommended for nonattainment may not meet the 2008

standard, which could potentially affect the health of the citizens within those areas. The department will change the recommendation for these areas from nonattainment to unclassifiable until data from the new monitoring network is available. As a result of these comments, the lead boundary recommendation documents have been changed to reflect the removal of portions of Crystal City, Festus, and Pevely from inclusion in the proposed lead nonattainment area boundary and the placement into an unclassifiable area.

COMMENT #2: The Jefferson County Executive provided several comments on the 2008 lead designation. A private citizen concurred with the County Executive comments. The Jefferson County Executive's first comment was that the monitoring data clearly shows that the exceedances in the lead standard occur immediately adjacent to the source. He noted that there are no monitoring sites currently in operation outside of the Herculaneum city limits, nor west of U.S. Highway 61/67 within the city limits. He believes that there is no evidence that lead emissions migrate west of U.S. Highway 61/67 and that the data show the monitors located furthest from the facility, but within the city limits, are in compliance with the standard. He feels that the designation of areas outside the Herculaneum city limits and west of Highway 61/67 has no basis in fact and is inappropriate. The Jefferson County Executive says that designating portions of Crystal City, Festus, and Pevely as nonattainment for lead without the science to support it would place an unfair burden on the current homeowners and mislead potential homebuyers into the erroneous belief that living inside a nonattainment area would place their families in jeopardy. He states that this is wrong and would certainly damage the communities. The private citizen added that he believes the department's boundary recommendations were based on models and conjecture, rather than hard monitoring data.

RESPONSE AND EXPLANATION OF CHANGE: While exceedances of the 1978 standard are confined to areas in close proximity to the smelter, there is evidence to suggest exceedances of the 2008 standard occur at a minimum distance of one half mile from the smelting process buildings. Monitoring data (Appendix D of Technical Support Document) shows that exceedances of the 2008 lead standard are and have been occurring inside the Herculaneum city limits at even the monitoring sites most distant from the facility (e.g. Sherman site). The lead monitoring network was contracted in October 2005 when several sites that were well below the 1978 standard were discontinued. However, these sites, located inside the Herculaneum city limits, did monitor concentrations exceeding or very near the 2008 standard at times in the past. For example, the Golf Course monitor, located west of U.S. Highway 61/67 within the Herculaneum city limits, exceeded the 2008 standard for each of the four monitoring periods from January to April 2005. Since these historic monitors have all exceeded the 2008 standard, these areas must be included in the recommended nonattainment area for the 2008 standard.

In addition to the historic monitoring data that shows violations of the 2008 standard west of U.S. Highway 61/67, it is important to note that the 1978 National Ambient Air Quality Standard boundary is the city limits of Herculaneum. This nonattainment area will exist until the monitoring data supports redesignation to attainment under the 1978 standard and other Clean Air Act requirements are met. Currently, there is insufficient monitoring data below the standard to warrant this redesignation. Therefore, even if the department chose to exclude portions of Herculaneum from the 2008 boundary, this area would still be nonattainment under the 1978 standard. Further, designated areas must be defined in legal terms and not as west of Highway 61/67.

The department used EPA's guidance provided in the final rule on the 2008 lead standard to develop its recommendations. The presumptive boundary is the county perimeter containing the monitored violation(s). In order to expand or contract this area, the guidance recommends the use of qualitative analysis, interpolation/extrapolation of monitoring data, and dispersion modeling for making the recommendation. Modeling analysis used by the department to make the previous recommendations is the best available information from the facility regarding current operations under the 2007 state implementation plan (SIP) along with on-site meteorological data. These analyses should not be dismissed as conjecture or unsound science. Dispersion models are designed to predict concentrations at all areas of interest, including unmonitored areas, and are utilized for the development of control strategies at maximum emission rates. They are based on the best science available and are updated frequently by EPA. The outputs from these models are corroborated by available monitored data for SIP purposes. Given the guidance from EPA, the department is compelled to use all available and relevant information for the purpose of recommending nonattainment boundaries including both monitored and modeled data.

Based on the modeling analyses and monitored data extrapolation, areas outside the city limits of Herculaneum may violate the 2008 standard. However, there is no definitive evidence that can confirm this finding. As a result of comments, the department is designating many of the sections previously included in the recommendation outside the Herculaneum city limits as unclassifiable until additional data can be collected to verify the attainment status of these areas.

EPA promulgated the 2008 lead standard since health studies evidence shows that serious health effects occur at much lower levels of lead in the blood than was recognized as harmful when the 1978 standard was established. With this strong evidence that there is no safe level for lead in the blood, those living in an area that is not in attainment of the 2008 lead standard would be at a higher risk for the health effects from lead.

COMMENT #3: The Interdisciplinary Environmental Clinic at Washington University in St. Louis, on behalf of the Missouri Coalition for the Environment supports the department's recommendation to expand the Herculaneum nonattainment area for lead. The Lead Designation and Boundary Recommendation and technical Support Document clearly indicate that the existing Herculaneum nonattainment boundary is insufficient to define the nonattainment area for the 2008 standard. The Interdisciplinary Environmental Clinic states that this determination is well supported by air dispersion modeling performed by the department.

RESPONSE: The department appreciates the support of the Interdisciplinary Environmental Clinic and concurs that there is evidence to support the expansion of the nonattainment area beyond the current boundary denoted by the city limits of Herculaneum. This conclusion was based on available modeling and historic monitoring data for the areas around Herculaneum. However, based on the lack of definitive evidence (e.g. monitored violations) to support nonattainment area expansion at this time, the department has determined that areas to the north and south of the Herculaneum city limits will be recommended for an unclassifiable designation. Additional monitored data interpolation of current (through June 2009) and historic data was conducted to further define the areas of potential violation of the 2008 standard. The expansion of the lead monitoring network in Herculaneum will help determine if the expansion of the area

will be necessary to address additional violation of the 2008 lead air quality standard. The department did not make any changes to the recommendation as a result of this comment.

COMMENT #4: A private citizen commented that the department and EPA have not applied due diligence to the contamination of soil, air, and water in the Herculaneum area. Further, the department should apply measures beyond fines and warnings to combat company noncompliance with all applicable environmental requirements.

RESPONSE: This comment appears to primarily address EPA and the department's Hazardous Waste Program requirements for Doe Run to conduct soil sampling and remediate soil contamination in residential yards around the smelter's operations over the past few years. This is not within the statutory authority of the Air Pollution Control Program and can not be addressed with this air boundary designation recommendation. To be clear, the department's Air Pollution Control Program has worked closely with EPA and Doe Run to address violations of the 1978 lead air quality standard. The latest 2007 SIP efforts, along with the impact of all previously required controls, have reduced concentrations below the 1978 standard for the last six (6) quarters. The department's authority under the Missouri Clean Air Law requires the department to enforce the air quality standards while trying to achieve the maximum employment and economic development of Missouri. The department has required significant air emission reductions at the Doe Run smelter in Herculaneum. These efforts will continue and additional reductions to achieve compliance with the air quality will be developed to bring the Herculaneum area into attainment following the statutory authority given the department. No changes were made to the recommendation as a result of this comment.