UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
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MEMORANDUM

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FROM: Mindy Mohr
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SUBJECT: East Helena Lead SIP Attainment Demonstration

We have recently received documentation for the East Helena Lead SIP proposed control strategy and attainment demonstration, dated November 18, 1992. Copies of these documents are enclosed with this memorandum. As a result of our review of these materials, several SIP policy questions which affect the attainment demonstration have surfaced. Specifically, we would appreciate your input on the following issues, so that we may provide formal comments to the State:

1. Stack Merger Issues

As discussed in the control strategy document, Asarco proposes to construct a new baghouse and 200-foot stack (source 21P) as part of their dross plant and blast furnace ventilation project. The drossing building will be enclosed and ventilated, so that former fugitive emissions (which escaped through the roof monitor) will now go through the new baghouse to stack 21P. The four dross kettle vents (currently uncontrolled) will be eliminated, and these emissions vented through the new baghouse and stack 21P. In addition, fugitive emissions from the blast furnace feed floor (source 9V), the blast furnace tapping platform (source 10V), and the 47 feeder bin vent (source 8Vk) will be controlled with the new baghouse, and vented through stack 21P. Asarco has also proposed to eliminate an 18 foot stack (source 9P) and exhaust these emissions from the sinter storage baghouse through the new stack 21P (i.e. bypassing the new baghouse and just using the taller stack.) To summarize, Asarco will be merging several formerly-uncontrolled sources and controlling them with a baghouse,

which exhausts to this new, 200-foot stack; in addition, they will be merging an already-controlled source (sinter storage baghouse exhaust 9P) into this new [taller] stack. Please note that this new, 200-foot stack is less than the de minimis good engineering practice (GEP) stack height of 65 meters.

This strategy raises the issue of prohibited dispersion techniques. Under this proposal, several uncontrolled sources are being merged and controlled, and an already-controlled source (9P) is being merged with these streams after the new baghouse. The definition of dispersion technique at 40 CFR Part 51.100(hh)(1) includes "increasing final exhaust plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack." Asarco's proposed strategy will result in stack merging, as well as stack height increases (for source 9P, as well as for the dross kettle vents). However, 51.100(hh)(2)(ii)(B) discusses exemptions from the definition of prohibited dispersion techniques, and indicates that this definition does not include cases where, after July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant.

We note that the sources going to the new stack 21P do not currently have federally-enforceable permit limits; thus, their currently-allowable emissions can only be based on their potential to emit, which was determined during the design value modeling for East Helena. Under the proposed control strategy, their potential to emit will be reduced as a result of new, federally-enforceable permit conditions incorporating the new control strategies. The October 28, 1985 EPA memorandum entitled "Implementation of Stack Height Regulations - Exceptions from Restrictions on Credit for Merged Stacks" indicates that, where there were no federally-enforceable emission limits prior to merging of gas streams, there must be no increase in actual emissions of any pollutant. Moreover, it is incumbent on the State to demonstrate that there was a logical relationship between the merging of existing gas streams and the installation of controls. This memorandum also indicates that sources not covered by this criteria for exemption may still qualify for exemption if they can show that the merging was conducted for sound economic or engineering reasons (such as the existing stack was of a height less than that regarded as GEP, thereby causing downwash problems).

Since stack 9P was only 18 feet tall, considerably less than the 65 meter de minimis GEP stack height, it is likely that

the exemption from merging for this source may be valid on the basis of sound engineering reasons. When considering the other streams being merged into the new stack 21P, if each stream being merged is examined independently, it appears that there is a decrease in actual emissions for each previously-uncontrolled stream, since they are now being controlled by a baghouse. However, there are no additional controls (or decrease in actual emissions) for sinter storage baghouse exhaust 9P; this source is merely being merged to vent to the taller stack. However, if all of the sources going to the new stack, 21P, are considered cumulatively, there is a net decrease in actual emissions. In addition, plantwide, there will be a net reduction in allowable lead emissions, if post-SIP allowable lead emissions are compared to the pre-SIP potential to emit.

The exemption language of 51.100(hh)(2)(ii)(B) does not indicate whether the net reduction in allowable emissions must be associated with each gas stream involved in the merger, or just a plantwide reduction in allowable emissions. We have located a July 1985 document entitled "Response to Comments on the November 9, 1984, Proposed Stack Height Rules" (a portion of which is enclosed), which addresses the exemption for merged gas streams and indicates that "EPA believes that as long as at least one gas stream is being controlled, the motivation for the stack is not likely to be governed by a desire for dispersion credit." This appears to indicate that the merging of streams to stack 21P may be exempt from the definition of dispersion techniques. In addition, it may be argued that the venting of source 9P to stack 21P was done for sound engineering reasons, considering that the original stack for 9P was only 18 feet tall. Therefore, the Region would tend to believe that the merging of the various streams going to stack 21P may be exempt from the definition of prohibited dispersion techniques, and that these merged streams may get credit for the full, 200 feet of stack height. We would appreciate your indicating whether you concur with this position.

There is also another stack height/merger issue for the portion of the control strategy dealing with the acid dust handling and conveying system. As part of this strategy, the discharge point for the acid dust bin baghouse stack, source 17P (a horizontal vent from the side of a building, approximately 50 feet above the ground), will be eliminated and the baghouse exhaust will be vented to the taller (121 meter) sinter D&L baghouse stack (source 7P). Again, there is no additional control planned for 17P; this baghouse exhaust is merely being merged with another stream currently venting to stack 7P. We note that stack 7P was constructed prior to December 31, 1970, and is above the de minimis GEP stack height of 65 meters. This stack is currently

grandfathered from meeting the 40 CFR Part 51.118 stack height provisions. Therefore, this portion of the control strategy appears to be an issue of "tying in" source 17P to a grandfathered stack, which is above de minimis GEP stack height. We believe that the merger itself may be eligible for exemption based upon sound engineering reasons for raising a horizontal baghouse exhaust at 50 feet elevation to a taller stack (or, possibly exempt from merging restrictions due to the plantwide reduction in allowable emissions, as questioned above); the remaining issue is whether source 17P should be credited for the full (above GEP) 121 meter stack height after tying in to stack 7P.

The stack height provisions indicate at 51.118(b) that the stack height requirements do not apply to dispersion techniques implemented on or before December 31, 1970 (with exceptions for new sources, and reconstructed or modified sources). Obviously, this dispersion technique (tying in source 17P to stack 7P) was not implemented by that date. In addition, the July 8, 1985 preamble to the final stack height rules (see 50 FR 27895) indicates that "... for sources constructed after December 31, 1970, with emissions ducted into grandfathered stacks of greater than GEP height and for sources constructed before that date but for which major modifications or reconstruction have been carried out subsequently, EPA proposed to limit stack height credit to only so much of the actual stack height that conforms to GEP. Sources constructed prior to December 31, 1970, for which modifications are carried out that are not classified as "major" under 40 CFR 51.18(j)(i), 51.24(6)(2)(i), and 51.21(6)(2)(i) would be allowed to retain full credit for their existing stack heights." At this time, we do not have information as to when source 17P was constructed; however, it appears that, since the tying in to stack 7P was not implemented by December 31, 1970, the 121 meters was not the existing stack height for source 17P; thus, the stack height credit should only be limited to that which conforms to GEP (65 meters, unless proven otherwise). We would appreciate your indicating whether you concur with this position that the merger is creditible, but that the full 121 meter stack height is not.

2. Process Weight Restrictions/Emission Limit Averaging Times

Asarco has proposed several process weight limits, on a quarterly basis, for several fugitive (volume) sources. (Asarco's stack sources will be limited to maximum lead emission rates on a lb/hr basis; we will require that these be verified by stack testing.) Available guidance, such as the draft Lead Guideline, indicates that the emission limits should be based on the quarterly NAAQS, and state appropriate averaging times. Does this mean that quarterly

process weight limits are adequate for these fugitive sources? Or for enforceability, should we require three-month emission limits and process weight limits, calculated on a one-month rolling basis?

3. Time of Day Restrictions

Asarco has also proposed time of day restrictions, since dispersion modeling has indicated that meteorological conditions during the night shift significantly affect ambient concentrations. This raises the issue of whether these restrictions fall under the definition of prohibited intermittent control systems, at 51.100(nn). In the past, smelters have operated intermittent control systems using weather forecasts and real time meteorological data. If the current forecast or weather data indicated adverse dispersion conditions, then the facility would temporarily curtail emissions. Asarco's proposal, however, is based on historical meteorological data, and the proposed time of day restrictions on emissions (process weight limits) would be specified as permanent permit conditions. Thus, Asarco's proposal seems to closely parallel cut-back asphalt type rules for Ozone SIPs, in which emissions are linked to historical seasonal average temperatures. The unique part of this proposal seems to be that short term (8 hour average) limits on operations (and thus emissions) are being used to meet a long term (quarterly average) NAAQS. The Region believes that enforceable time of day restrictions, based on historical meteorological data, would not constitute intermittent control systems, and should be acceptable. We would appreciate your indicating whether you concur with this postition.

In order to enable the State to submit the East Helena Lead SIP by the statutory due date of July 6, 1993, we would like to provide final comments to the State by early February. Therefore, we would appreciate your response to these issues by January 25, 1993, if at all possible. Please contact Mindy at (303) 294-7539 or Kevin at (303) 293-0955 for discussion of these issues.

Enclosures (3)