

## CASE HISTORY OF A 240 TON/DAY RESOURCE RECOVERY PROJECT: PART II - THE PITTSFIELD, MASSACHUSETTS RESOURCE RECOVERY FACILITY

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### Discussion by

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We are indebted to Llewellyn E. Clark, Ph.D. for keeping us informed of improvements at the Pittsfield Facility after fifteen years of operation. The continued successful operation and evolution of this facility is a testimony to Dr. Clark's dedication and commitment to make the Pittsfield facility perform.

I have been there many times over the fifteen years and found him always to be cooperative in sharing information. (He actually volunteered to be a guinea pig for the EPA dioxin research.) Most recently, I was there to witness combustion of leftover polyurathane flexible foam (automobile seat cushions). He has always looked upon these activities as a learning experience for all involved.

This sense of sharing was the premise on which the ASME Solid Waste Processing Division was founded. Thank you Llew!

### AUTHOR'S REPLY

The manufacturer of the electrostatic precipitators has taken exception to the statement that their performance has not met specifications. The author's understanding was that these units would provide a discharge particulate loading of 0.015 grs per DSCF corrected to 12% CO<sub>2</sub>. The author overlooked the manufacturer's contractual requirement that the guarantee of 0.015 grs per DSCF corrected to 12% CO<sub>2</sub> was to be corrected to 12% CQ *from a minimum of 10% CO<sub>2</sub>*. The results presented to the regulatory agencies must be corrected to 12% CO<sub>2</sub> regardless of the actual CO<sub>2</sub> level, which in this case was lower than normal operations.

The influence of dilution clearly demonstrates the confusion. For example, one unit tested at 0.0121 grs/DSCF while operating at 7% CO<sub>2</sub>. This is customarily corrected to 12% CO<sub>2</sub> by multiplying by the ratio of 12% CO<sub>2</sub> to 7% CQ or  $0.0121 \times 12/7 = 0.0207$  grs/DSCF, the value that would normally be used in reporting a stack discharge particulate concentration. Because this value exceeds the guaranteed 0.015 grs/DSCF the author made the statement that the equipment did not meet design or regulatory specifications. In retrospect, with the manufacturer's condition that the concentration be corrected to 12% CO<sub>2</sub> *from a minimum of 10% CO<sub>2</sub>*, the measured quantity of 0.0121 grs/DSCF should have been multiplied by the ratio of 12% CO<sub>2</sub> over 10% CO<sub>2</sub> or  $0.0121 \times 12/10 = 0.0145$  grs/SCF or 97% of the stipulated condition of 0.015 grs/DSCF; hence the unit met the guaranteed conditions. The manufacturer has no control of CO<sub>2</sub> levels from the source, and no minimum CO<sub>2</sub> levels were stated in the purchaser's specifications. To the manufacturer's credit, the flow through the unit was 7% more than the design value.

The author apologizes for the incorrect statement in the paper and hopes the explanation is clear. The particulate discharge from the other unit tested at 64% of the guaranteed discharge concentration when corrected to 12% CO<sub>2</sub> *from 10% CO<sub>2</sub>* while the flow was 98% of the design.

This experience and explanation may be helpful to others who may be faced with a similar performance specification.