9. Closing Remarks

At the end of the meeting, Webber asked each reviewer to provide closing comments.

9.1 First Reviewer

This test provided good results. I am pleased with the low air counts from the test and the method, as long as EPA does not refer to them as *de minimis*. The reviewers have had many suggestions for improving the research methodology and the AACM itself. Nevertheless, the test results are good, interesting, and certainly worth proceeding with. I am not endorsing the method because I am not convinced it is endorsable at this point. However, the study has provided good data and we should recognize that. The results are good.

I am going to reference the December 19th, 2003, Office of Inspector General (OIG), Environmental Protection Agency, Significant Modifications Needed to Ensure Success of Fort Worth Asbestos Demolition Method. This started the ball rolling toward where we are today. OIG asked three questions:

1) Is the design and methodology of the Fort Worth Method - Phase II adequate to demonstrate protection of human health and the environment?

The answer was "no."

2) Does the Fort Worth Method - Phase II meet EPA's key Project XL criteria, including superior environmental performance, regulatory flexibility, adequate stakeholder involvement, and transferability to other asbestos demolition projects?

The answer was "no."

3) Has EPA's oversight to date ensured that the Fort Worth - Phase II project will allow EPA to reach valid conclusions on the effectiveness of such demolition techniques for each type of asbestos?

The answer was "no."

Things have changed since then. The Agency has looked at the procedures, changed them, and run other tests. These three fundamental questions are still good guiding principles to future research, and the comments we have made at this workshop have largely fallen within these three categories. Our comments have largely addressed these good guiding principles, and I hope that they will be helpful to the Agency.

9.2 Second Reviewer

I agree. At this stage, the work is not "a be all and end all" or ready to serve as the basis to issue instructions for people to work by. However, with the type of input we have provided, it is

definitely worth continuing to experiment on the system. Once the system is sufficiently refined to work right, it likely will have value and could be used in many places, particularly if the rules are not so rigid that they preclude improvisation.

Berms are one example. Do we tell people how high the berm should be and what it should be made of? How would that be handled in a major city where you cannot dig a berm? Supposing a berm is made out of rubber pieces that are assembled in 10-foot strips and covered with poly. When the job is over, if the berm was properly covered with poly, the contractor could pick up the rubber components and use them on the next project. This approach would work if the requirements specify that the berm must contain the water, but not how to build the berm.

More work should be done to develop the method because there will be places it can be used, save money, and not create pollution problems for either workers or the public.

9.3 Third Reviewer

I would like to provide a few specific comments I have not brought up yet. On page 2 (Introduction) of the report, 4th full paragraph, first sentence, it says: "The RACM is less likely to become friable when the wetting process..." I recommend this be changed to say: "The RACM is less likely to become airborne when the wetting process..." because friability is not the condition of the material. The RACM is less likely to become "airborne" instead of "friable."

Concerning classification of materials in Table 1 of Exhibit 1 on page 6 of the report, the table classifies different materials according to the AHERA (Asbestos Hazard and Emergency Response Act) classification. Under AHERA, "mastic for flooring" and "window caulking" are not "surfacing materials" and should be moved to the "miscellaneous" category.⁴

"Vermiculite insulation," now under "miscellaneous material" should be under "thermal system."

On page 20, Section 3.3.1, EPA uses "RACM" when they should be using "ACM." EPA should replace the first sentence...:

"A comprehensive pre-demolition inspection was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR §763) to identify the type, quantity, location, and condition of RACM in the buildings [§61.145(a)] (Kominsky 2005; Smith Aug 2005)."

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³ Other reviewers commented on this recommendation. A reviewer pointed out that RACM is not going to become airborne. Another reviewer agreed that RACM is less likely to release fibers and suggested the statement be changed to say: "the RACM is less likely to release fibers to the air when the wetting…"

⁴ Webber confirmed this recommendation with the panel.

⁵ Two reviewers disagreed, stating that "vermiculate insulation" is really a stand-alone item and does not fit there; it is found in free form in the wall cabinets and is not a thermal system.

....with these sentences:

"A comprehensive pre-demolition inspection was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763) to identify the type, quantity, location and condition of Asbestos-Containing Materials [instead of only RACM] in the buildings (61.145 (a)). Under the EPA-NESHAP 40 CFR 61.145 (a) not only RACM must be identified prior to demolition or renovation but also Category I and Category II Nonfriable Asbestos-Containing Materials."

Webber clarified that the sentence, "The inspection was conducted by a State of Arkansas Department of Environmental Quality (ADEQ) licensed Asbestos Abatement Consultant" should be left in.

These recommendations are presented in Sections 2.2.3 and 2.2.3 of this report.

9.4 Fourth Reviewer

In the report, page 49, under AACM demolition and disposal, it says: "Prior to demolition of the AACM building (#3607), no asbestos-containing materials were removed." Actually, they were. TSI (Thermal System Insulation) was removed under the building. I think the intention there was to remove it before the AACM. This is said other places in the report, and worth clarifying and restating here.⁶

I think that the comments heard here are representative of what constitutes what we call the asbestos control industry consultants, contractors, and the like. We would be foolish not to always look at possible new "mouse traps" with a fair and scientific eye when they come along. However, the history of this industry suggests that, even with the best-laid plans and very professional people putting together well thought-out regulations and guidance documents, we still have an industry fraught with fraud and with people that seem to make sport of finding what they can get away to achieve a better bottom line in their business. If we are going to relax our work practices to allow additional techniques like the AACM, we need to be very careful to craft both the method itself and any other regulation-changing guidance documents, so that we know what we should expect from people when they use this method. Otherwise, we could simply create a bigger compliance problem that could affect public and worker safety, and have environmental impacts. For example, leaving visible emissions on sites could be a problem for building owners, both from a public health and liability perspective. However, overall, I think ORD should proceed with this study and examine as many things as needed to determine whether this method can be conducted in a safe and cost-effective manner.

Bringing people in to peer review this report is admirable. We all appreciate being here, but more work needs to be done in a step-by-step fashion before any rulemaking can be considered.

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⁶ Webber agreed and recommended that immediately before 4.4.2.1, the Agency add a sentence to that paragraph to this effect: "However, there was removal of TSI from the crawl spaces beneath the buildings in 1999 that appears to have left some residual ACM." This can be found in Section 2.3.3 of this report.

9.5 Fifth Reviewer

I appreciate the opportunity to interact with the EPA staff and panel members and review this document. I started out with the recognition that the comparative site had inherent limitations. Since this is a research project, I hope the points made by my colleagues do help EPA in critiquing where you are and where you might want to go in the future. It will be helpful to make available to interested parties detailed information about how you got from "point a" to "point b." For this and future related research projects, it will be very helpful to provide citations for applicable regulations, considering the variety of people who may read the reports. Hopefully, this project can set this kind of example for reports that fall under the auspices of EPA or OSHA and govern activities of people in the field.

9.6 Sixth Reviewer

When the final report comes out, we may wonder: "Did I really write that? That's incredibly comprehensive." Because we worked collaboratively from different perspectives and, through our discussions, reached agreement on so many points, people who read the workshop summary are likely going to think: "Those guys really did their homework and came up with a good product." I have been privileged to work with you. Together we accomplished a lot in the two days we had here.

9.7 EPA Closing Remarks

Wilmoth thanked the reviewers and offered appreciation for their comments. He said EPA would document its response to their input. This document would be published on EPA's website and be made publicly available after the completion of the final report. He emphasized that this is a transparent process and EPA is willing to answer any questions the reviewers may have about the Agency's response. He noted that the Agency may, at times, alter the specific language suggested by the reviewers. If so, the Agency would verify the final wording with the reviewers.