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Ref: 8P-W

MEMORANDUM

SUBJECT: Comments on Baseline Human Health Risk Assessment for Libby OU1

FROM: Robert Benson, Ph.D.
Toxicologist, Water Program

TO: Libby Team

I reviewed this draft document. My comments follow.

Section 6.1.3
Add Lockey et al. (1984) to the list of references.

Section 6.2.1
On page 6-6 it would be helpful to discuss the reasoning used to assign the values for active:passive receptors.

Section 6.2.2
I think it would be helpful to add a discussion of the duration of exposure that will be used for the receptors.

Section 6.2.4 and Figure 6-2
I am not convinced that the approach using visible score and concentration in air from ABS sampling is viable. The correlations from a visible inspection of figure 6-2 are very poor. I think it would make more sense to use the 95% UCL for each activity as the exposure point concentration. This is the approach that is used most frequently for the exposure point concentration at a non-asbestos site.

Section 6.3.1
I would be more comfortable if the description of the non-cancer lung lesions followed the nomenclature in Rohs et al. (2007). Add Lockey et al. (1984) to the last paragraph on page 6-13.

Section 6.3.2
Add Sullivan (2007) to the study list for cancer incidence in Libby Workers. None of these studies provide an accurate count of the mesothelioma. Consequently, none can be used to estimate

risk from mesothelioma.

Section 6.4.1

There is some disagreement on "if and how" my work on the RfC should be used. I have confidence that the work is rigorous using the Benchmark Dose calculations from the Marysville cohort. I am working with Terry Schulz to conduct the analysis using the Cox Regression model from the same data set. We need some additional data from the University of Cincinnati to conduct this analysis. However, I do not believe that the results will be widely disparate from the Benchmark Dose approach. If the quantitative assessment using the RfC moves forward, I will provide a description of the RfC derivation for Appendix B.

Section 6.4.2

It makes sense to use the cancer method described in IRIS and the updated approach with revised life span. The revised approach needs a discussion in the draft document. Perhaps this is described in Appendix C which I do not have.

I do not believe the alternative methods (Berman-Crump, Site-specific) should be included in this document. I think you are inviting a significant hostile response that will detract from this assessment and will prevent its use for decision making for OU1.

I did find it interesting that the alternative approaches (presented in Tables 6-11 to 6-13) gave results not greatly different from the IRIS approach.

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