

John Mousa

From: Anderson, Paul [Paul.Anderson@arcadis-us.com]
Sent: Thursday, May 27, 2010 2:35 PM
To: Miller.Scott@epamail.epa.gov; Brouman, Mitch (Pittsburgh) NA
Cc: Jane M. Patacity (jane.patacity@hanson.biz); Kelsey.Helton@dep.state.fl.us; John Mousa; Koporec.Kevin@epamail.epa.gov; HUTTONRH@gru.com; pcline@ufl.edu; Council, Greg; Weaver, Alissa; Donna.Kopach@hanson.biz
Subject: RE: May 2010 update of Gainesville on-Site Human Health Risk Assessment (text, tables and figures)
Attachments: Gainesville HHRA 26may2010 text, tables, and figures.pdf

Dear Scott:

Attached to this email please find a revised "Evaluation of Potential Theoretical On-Site Human Health Risks Associated with Soils and Sediments at the Koppers Inc. Wood-Treating Facility in Gainesville, Florida" (HHRA). The revisions have been made in response to your email of May 21, 2010 to Mitchell Brouman and me. Please note the revised HHRA is dated May 26, 2010 and the previous draft was dated May 2010. This email contains the text, tables and figures of the revised HHRA. A will send a second email shortly with the revised appendices.

Your May 21 email forwarded an email from Kevin Koporec that raised six potential issues related to the May 2010 HHRA. Responses to each of the general comments listed in Kevin's email are described below and have been addressed in the attached May 26, 2010 HHRA.

1.) Kevin's comment refers to USEPA's comment letter of July 2009 that requested that discussion of potential risks associated with alternative dioxin slope factors be presented only in the uncertainty section of the HHRA and asked that those discussions be moved from sections 4 and 5 of the May 2010 HHRA to Section 6.0 (Uncertainty Assessment).

I wanted to first to point out that the discussion of alternative slope factors contained in Section 4.2 and 5.2 is the same as was presented in the August 2009 HHRA, which was modified from the January 2009 HHRA in response to USEPA's July 2009 comments. Those sections of the May 2010 report are essentially identical to the August 2009 report. Given that USEPA had no comments on the August 2009 version of the HHRA, we were surprised that USEPA was requesting additional modifications to text we believed was acceptable. Nevertheless, in response to the comment in Kevin's email, most of the text from Section 4.2 has been moved to Section 6.2. Additionally, the text in Section 5.2 has been modified so that it does not refer to the results of the alternative CSF analysis presented in Section 6.

As we discussed on the phone on Monday, the only section in which results of the alternate CSF is presented is Section 6.2. As a result, the rest of the changes requested by Kevin's first comment (e.g., changes to Tables 5.7-5.10) are not necessary. Those tables do not present the results of the alternate TCDD CSF evaluation.

2.) On page 3-12 we have added clarifying text to indicate that 100 mg/day is equal to the high theoretical default soil ingestion rate for hypothetical future outdoor workers required by USEPA for Superfund risk assessments. We added the same qualifying text (i.e., "required by USEPA for Superfund risk assessments") for the 50 mg/day assumed for hypothetical future indoor workers.

3.) As we discussed on the phone, contrary to the comment in Kevin's email, the hypothetical future scenario in which a hypothetical future on-Site worker contacts drainage ditch sediments is discussed in the HHRA on page 3-2 and on page 3-14. We also added the following text on page 3-12 to clarify the theoretical rate of sediment ingestion for the hypothetical

future worker contacting DD sediments: "When contacting DD sediments, hypothetical future on-Site indoor and outdoor workers are conservatively assumed to have a theoretical soil ingestion of 100 mg/day, equal to the high theoretical default soil ingestion rate required for commercial/industrial workers by USEPA for Superfund risk assessments."

4.) As discussed on the phone, the theoretical FI term for the hypothetical future recreational user has been changed to 1.0 and the theoretical exposure frequency has been changed to 50 days per year, with discussion added to section 3.4.9 on page 3-19 to indicate the combined theoretical FI and theoretical exposure frequency equate to a hypothetical future recreational user being on the site for about two hours a day for 4-5 days a week.

5.) As with the comments about alternate cancer slope factors, we would like to point out that the RAF discussion 3.4.12 was presented in the August 2009 HHRA, which was modified from the January 2009 HHRA in response to USEPA's July 2009 comments, and about which USEPA did not have additional comment. Thus, we were surprised that USEPA was requesting additional modifications to text we believed was acceptable. Nevertheless, we have added some additional text to emphasize that the primary goal of RAFs is to account for the effects of different environmental matrices on the theoretical absorption of constituents of potential concern.

6.) As required by the comment in the email, the theoretical soil ingestion rates for the hypothetical future young child and adult recreational user have been changed to be consistent with the USEPA defaults for residents, even though the hypothetical future use of the site would be for recreational use, and not residential.

Please call or email at your convenience if you have additional questions or concerns.

Best Regards,

Paul Anderson

Paul D. Anderson | Vice President/Principal Scientist | paul.anderson@arcadis-us.com ARCADIS U.S., Inc. | 2 Executive Drive, Suite 303 | Chelmsford, MA, 01824 T. 978-937-9999 (ext. 304) | M. 978-551-7860 | F. 978-937-7555 www.arcadis-us.com ARCADIS, Imagine the result Please consider the environment before printing this email.

-----Original Message-----

From: Miller.Scott@epamail.epa.gov [mailto:Miller.Scott@epamail.epa.gov]
Sent: Friday, May 21, 2010 3:39 PM
To: Brounman, Mitch (Pittsburgh) NA; Anderson, Paul
Subject: Fw: May 2010 update of Gainesville on-Site Human Health Risk Assessment

FYI
Scott Miller
Remedial Project Manager
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----- Forwarded by Scott Miller/R4/USEPA/US on 05/21/2010 03:38 PM -----

From: Kevin Koporec/R4/USEPA/US

To: Glenn Adams/R4/USEPA/US@EPA
Cc: Scott Miller/R4/USEPA/US@EPA, David Keefer/R4/USEPA/US@EPA
Date: 05/20/2010 05:40 PM
Subject: Re: May 2010 update of Gainesville on-Site Human Health Risk Assessment

Glenn, From our discussion this afternoon and my delving into the HHRA and FS a bit further, I need to add additional input.

The items I have pointed out below about the FI term and the soil ingestion rate has a 4-fold to 8-fold effect on the deterministic risk to the recreational receptors. This correction will cause the cancer risk for the recreational receptor, now just within our risk range at $9E-5$, to go to about $5E-4$ or higher (over our risk range).

I also want to note that the statements in the HHRA about the refined risks based on running the MEE model are acceptable, are based on using the alternative slope factors for dioxin that we have NOT approved. I see that some of this incorrect language about risks being within EPA's acceptable risk range is also included in the FS.

Based on these issues with the risk assessment, I do not see that we (TSS) can approve the document.

Kevin

Kevin Koporec
Superfund Support Branch
U.S.EPA Region 4
ph404/562-8644

From: Kevin Koporec/R4/USEPA/US
To: Scott Miller/R4/USEPA/US@EPA
Cc: Glenn Adams/R4/USEPA/US@EPA
Date: 05/18/2010 06:09 PM
Subject: Re: May 2010 update of Gainesville on-Site Human Health Risk Assessment

Scott, I have done a quick review of the revised (May 2010) HHRA with

my focus on the items from comments EPA previously submitted (July 2009) on the January 29, 2009 draft HHRA.

Here are the primary outstanding issues that I see:

** Cancer slope factor and calculated risks from dioxin (EPA comment #1).

We asked in our comments that all use of and discussion of the alternative slope factors for dioxin (and the risks calculated from them) be presented ONLY in the Uncertainty section of the HHRA (Section 6 in HHRA). However, these alternative slope factors for dioxin, and the risks calculated from them are still presented in the other sections of HHRA, such as the toxicity assessment (Section 4.2), risk characterization (5.2, 5.8, and Tables 5.7, 5.8, 5.9, 5.10). The MEE model uses alternative slopes for dioxin, so all of the MEE should be in Section 6 (or in Appendix).

** Soil ingestion rate for workers (EPA comment #3).

The table (3-3) has the correct values of 100 mg/d (outdoor worker) and 50 mg/d (indoor worker). The 100 mg/d value needs to be clearly stated in the text (Section 3.4.1) as the Superfund HHRA default for outdoor workers (currently not mentioned in text). The discussion in the text of the 50 mg/d value should be clarified as the Superfund HHRA default for indoor workers.

** Additional comment on exposure parameters for the onsite worker in the drainage ditch (Table 3-3).

This receptor does not appear to be specifically discussed in the text.

Work in a drainage ditch could constitute a contact-intensive activity (?); hence a soil ingestion rate of 330 mg/d might seem appropriate.

Discussion should included in the text to justify the ingestion rate and the exposure frequency.

** Use of Fraction Ingested (FI) term (EPA comment #5).

The FI for the receptors in the previous draft HHRA have been revised per our comments. However, FI values for newly added receptors,

recreational users, are now presented as 0.25. As previously commented on for the other receptors, FI values of less than 1 can be used for different parts of the site, but the total FI for the site for each receptor should add up to 1. This applies to the young child recreational user, older child recreational user, and adult recreational user (Table 3-4). If the site is being considered as a single exposure area for these receptors, the FIs should be 1.

** Relative Absorption Factors (EPA comment #7).

The text (Section 3.4.12) still refers to difference between humans and test animals as a basis for adjustment. As previously commented on, this factor is already accounted for in the toxicity value. Please ensure that this factor is not used in the RAFs, and revise the text as such.

** Additional comment on exposure parameters for newly added receptors

-- young child recreational user, older child recreational user, and adult recreational user (Table 3-4).

The soil ingestion rate should be equal to the residential values, 200 mg/d for young child, and 100 mg/d for the adult (100 is correctly listed for older child). I assume the exposure frequency of 150 d/y is

based on information from this area (?).

Kevin Koporec
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