Khatri, Paresh, Env. Health

From: Santos.Carmen@epamail.epa.gov
Sent: Monday, July 19, 2010 4:27 PM
To: Amy.GoldbergDay@arcadis-us.com; Ron.Goloubow@arcadis-us.com
Cc: Wilson.Patrick@epamail.epa.gov; Khatri, Paresh, Env. Health
Subject: PCBs: Aspire Site, Oakland - Human Health Risk Assessment Approach

Hello, Ron and Amy:

Attached below are Dr. Wilson's comments on the risk evaluation approach that Amy sent to us for review regarding the Aspire site in Oakland. Please let us know if you have any questions concerning the attached comments.

I take this opportunity to clarify that USEPA R9 will only be involved with the PCBs at the site and not the other contaminants (e.g., lead, arsenic) also present at the site. Our interest in the risk evaluation is that it be conducted in a technically sound manner and that such evaluation clearly and accurately demonstrates that residual PCB concentrations in soils at the Aspire site do not increase the cumulative health risk for the site.
We have conferred with the Alameda County Department of Environmental Health on the above matter and have agreed that USEPA will only be involved with the PCB cleanup at the Aspire site. However, the health risk evaluation will serve USEPA Region 9 and ACDEH purposes.

In addition, we are interested in a non-mitigated and mitigated risk evaluation for PCBs as well as the cumulative health risk for the site based on both options for PCBs and the other contaminants.

Thank you for your courtesies and please call me if you have any questions concerning this message.

Sincerely,
Carmen

Carmen D. Santos, Project Manager
RCRA Corrective Action Office
Waste Management Division
USEPA Region 9
415.972.3360
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----- Forwarded by Carmen Santos/R9/USEPA/US on 07/19/2010 04:03 PM -----

From: Patrick Wilson/R9/USEPA/US
To: Carmen Santos/R9/USEPA/US@EPA
Date: 07/16/2010 01:50 PM
Subject: Re: Fw: Aspire Oakland - Human Health Risk Assessment approach

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Good Afternoon Carmen....

I've examined the brief proposal that the consultant's for Aspire have provided regarding risk analysis at the former Pacific Motors Site in Alameda County. The proposal is largely consistent with the notes that I took from our most recent teleconference (17 June 2010) with the respondent. The proposal, albeit brief, reflects and captures many of the essential or outstanding elements that were proposed in the teleconference with respect to the site's post-removal risk assessment.

Consistent with our recommendations from the conference call, Aspire is proposing to assess and ensure that concentrations of lead in soil do not exceed the recently proposed California Human Health Screening Level (CHHSL) for lead as recommended by Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA). Because of this approach, we recommend that Aspire model blood lead levels in humans by application of the DTSC Lead Spread uptake model.

Thank you for the opportunity to review Aspire's most recent submittal. Please feel free to contact me directly with additional questions or concerns - and feel free to have Aspire's toxicological support consultant contact me directly should she have additional questions.

From: Carmen Santos/R9/USEPA/US
To: Patrick Wilson/R9/USEPA/US@EPA
Date: 07/14/2010 03:53 PM
Subject: Fw: Aspire Oakland - Human Health Risk Assessment approach

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Hello, Patrick:

Have you had a chance to review the message from Amy Goldberg asking which model to use for lead and our thoughts on the risk assessment approach for the site? Please let me know when we could get back to Amy. Thank you.

Cheers,
Carmen

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----- Forwarded by Carmen Santos/R9/USEPA/US on 07/14/2010 03:48 PM -----
From: "Goldberg Day, Amy" <Amy.GoldbergDay@arcadis-us.com>
To: Carmen Santos/R9/USEPA/US@EPA
Cc: Patrick Wilson/R9/USEPA/US@EPA
Date: 07/14/2010 03:03 PM
Subject: FW: Aspire Oakland - Human Health Risk Assessment approach

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I originally sent this June 22nd, and again on July 7th. Hopefully, this one will be received.

Amy

-----Original Message-----
From: Goldberg Day, Amy
Sent: Wednesday, July 07, 2010 1:20 PM
To: wilson.patrick@epamail.gov
Cc: santos.carmen@epamail.gov; Ron.Goloubow@arcadus-us.com
Subject: RE: Aspire Oakland - Human Health Risk Assessment approach

I just wanted to follow through on the e-mail originally sent June 22nd. Please contact me if you have concerns or questions on the risk methodology. Also, I was wondering if a decision has been made concerning which lead model to use. I am familiar with both, so I could easily run both models.

Hope you are doing well.

Sincerely,

Amy Goldberg Day | Principal Toxicologist | Amy.GoldbergDay@arcadis-us.com
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ARCADIS, Imagine the result

-----Original Message-----
From: Goldberg Day, Amy
Sent: Tuesday, June 22, 2010 4:08 PM
To: wilson.patrick@epamail.gov
Cc: santos.carmen@epamail.gov; Ron.Goloubow@arcadus-us.com
Subject: Aspire Oakland - Human Health Risk Assessment approach

Per Arcadis' discussion with Carmen Santos on June 22, 2010, Arcadis is forwarding the following methodology to perform the post-excavation human health risk assessment. Arcadis would appreciate receiving EPA's comments on the information in this e-mail. It is our hope to produce a HHRA to the EPA satisfaction with minimal comments. First, Arcadis is providing some background information.

* A Conceptual Site Model (CSM) was included in the Corrective Action Plan, dated July 17, 2009. The CSM presented complete exposure pathways to the identified receptors.

* Following the CSM, Risk Based Cleanup Goals were calculated for each identified chemical of potential concern (COPCs). The input parameters, calculations and results were also presented in the Corrective Action Plan.

* In January 2010, Arcadis provided the post excavation HHRA methodology for soil to the EPA.

* A soil vapor extraction system is currently operating on site. The vapor intrusion pathway will be evaluated after the SVE remediation and confirmation soil gas sampling are completed. The HHRA discussed in this e-mail only considers the soil exposure pathway. At the appropriate time, a similar approach will be performed to calculate potential health risks associated with the vapor intrusion pathway.

The HHRA methodology included the following:

* Calculate the ninety-five percent upper confidence limit (95% UCL) of the mean for each COPC in soil using the EPA software ProUCL.

* The 95% UCL will be used to represent the exposure point concentration (EPC).

* Analytical results for soil remaining in place (after the excavation activities are completed) will be used in the statistical evaluation.

* Confirmation soil sampling results will be included in the 95% UCL

calculations.

* Data generated from the initial soil characterization that remains in place will also be included in the 95% UCL calculation.

* Soil reporting limits will be used as proxy concentrations for samples that did not contain contaminate s above the laboratory reporting limit(s).

* Ratios will be calculated comparing the 95% UCL to the calculated risk based cleanup goals.

* The ratios will be summed as follows:

Comparisons will be performed as follows for carcinogenic compounds:

$$\text{RiskEPC} = \text{EPCsoil} \times \frac{\text{TRisk}}{\text{CUG}}$$

Where:

RiskEPC = estimated risk for COPC (target = 10-6)
EPCsoil = exposure point concentration for soil
TRisk = target risk used for the CUP calculation (10-6)
CUP = cleanup goal presented for the COPCs in CAP

The risk based cleanup will be considered complete when the sum of the RiskEPC equals 1 x 10-6.

Comparisons will be performed as follows for non-carcinogenic compounds:

$$\text{HazardEPC} = \frac{\text{EPCsoil}}{\text{CUG}}$$

Where:

HazardEPC = estimated risk for Site (target = 1)
EPCsoil = exposure point concentration for soil
CUP = cleanup goal presented for the COPCs in CAP

The metals arsenic and lead will be evaluated by comparing their respective EPCs to the established clean up goals. Arsenic's goal is based on naturally occurring background concentrations and lead is based on the residential California Human Health Screening Level OEHHA 2009.

A spatial evaluation will be performed for COPCs with estimated risks above the target. Based on preliminary calculations, PCBs estimated risk will be approximately 3 x 10-6. To mitigate this estimated risk, TSCA type cap is proposed to be installed in portions of the site where PCB concentrations are greater than the 0.13 milligrams per kilogram (mg/kg) risk based cleanup goal. A map is attached presented these locations.

Please feel free to contact me if you have questions or comments concerning this e-mail

We look forward to your input.

Sincerely,

Amy Goldberg Day
Principal Toxicologist
ARCADIS US

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