MTCA / SMS Advisory Group & Sediment Workgroup

Meeting Notes

Meeting #4, Monday, March 22nd, 2010

Port of Tacoma Fabulich Center, 09:00 – 15:30 Hrs

March 22nd, 2010 Meeting Synopsis / Summary

This was the fourth MTCA / SMS advisory group meeting. Three topics were previewed and discussed: cleanup levels and risk-related issues, early life stage exposure to chemical carcinogens and updates to lead cleanup levels. A roadmap (path forward) was also vetted. Lastly, updates on previous issues (remedy selection, institutional controls, periodic reviews and sediments) were also provided.

Roadmap / path forward – Ecology circulated a "roadmap" of future events and issues, as well as some information on what's already transpired. Meetings are planned for April, May and June, with a placeholder for one additional make-up (February) meeting. Feedback - workgroup members suggested that Ecology prioritize issues and decide upon the final scope of the rule. It was also recommended that Ecology allow additional time for review of large packets of information and for complex issues, e.g. impact of early life stage exposure on Method A cleanup levels, etc. Several workgroup members had questions about the sediments background issue and when this would be discussed. It was also suggested that Ecology clarify the "homework" assignments (e.g. cleanup scenarios) and provide more details on what exactly is expected from the workgroup members. Lastly, it was suggested that Ecology ground truth proposed revisions against "real world" scenarios and weigh economic impacts.

Cleanup levels and risk – Ecology presented an overview of the proposed changes to the Method A cleanup levels. For ground water, cleanup levels for 8 of the current 32 substances may need to be revised and updated (new scientific information). For soil, several substances need to be revised and updated (e.g. lead, B(a)P, etc.). This is a work in progress, pending review of both the vapor intrusion and early life stage exposure pathways. Resolution of these issues may also impact cleanup levels for other hazardous substances. Feedback – workgroup members asked about how Ecology would address bioaccumulative toxins (e.g. mercury), as well as "emerging" chemicals (e.g. PDBE's / flame retardants). There was also a lot of discussion about how to use new and updated toxicological information. There appeared to be general agreement that IRIS remains the "gold standard". There also appeared to be general agreement that heavy reliance on HEAST was no longer appropriate since EPA does not periodically update those values (MTCA Section 708). Several members acknowledged that updates to IRIS were resource-intensive and often took long periods to complete. There was a general recognition that supplemental information from other sources (e.g. Oak Ridge, Cal EPA, etc.) should be considered. However, several members expressed concerns about the widely varying levels of public and peer

review used by different agencies when developing toxicological values. Lastly, it was requested that Ecology provide the scientific basis for deeming both ethyl benzene and naphthalene as carcinogens.

Early life stage exposure – Ecology provided details about this exposure pathway and whether cleanup standards should be revised to account for childhood susceptibility. Feedback – workgroup members asked about how the age brackets (0-2 yrs, 2-6 yrs, etc.) were derived and how this would impact cleanup levels. There was also a lot of discussion about the cleanup level equations and how you would weight average the risk and exposure for each age bracket. Feedback – some members appeared to support an approach similar to the California EPA (early life stage adjustments for all carcinogens). These members questioned the scientific rationale for EPA's decision to only apply early life stage exposure to 12 mutagenic substances, as opposed to all carcinogens. Other members felt that it was not appropriate for Ecology to adjust all carcinogen cleanup levels for early life stage exposure. Specifically, it was suggested that Ecology default to the 2005 EPA guidance on early life stage. Several members expressed concerns about the practical implications of early life stage upon remedy selection and site cleanups. It was suggested that Ecology bring-in site managers to ground truth this issue and weigh impacts. Workgroup members also asked about background levels (e.g. B(a)P) and whether the proposed early life stage adjustments would drop cleanup levels below background. Lastly, workgroup members asked about the Ecology Science Panel and their position on early life stage exposure. It was explained that the Science Panel had concluded that there is a credible scientific basis for adjusting cleanup levels for early life stage exposure. Lastly, Ecology announced that the early life stage was on the March 25th Science Panel meeting agenda and would be discussed in more detail.

Lead cleanup levels – Ecology presented information and evaluations that would support lowering the current soil lead cleanup level (Method A tables) from 250 ppm to ~ 100-150 ppm. Ecology provided details on the science for this conclusion (e.g. current thinking on acceptable blood lead levels, integrated exposure uptake and biokinetic (IEUBK) model, etc.). Ecology also summarized some soil lead data (EIM database), as well as some high-level analysis of the potential impact of revising the lead standard. Feedback – some felt that the acceptable blood lead level should be 2 ug/dL and not 10 ug/dL as Ecology has proposed. This prompted some discussion about current child blood lead levels here in the U.S. and abroad. Here in WA, current data indicates that ~ 20% of all children have blood lead levels > 5 ug/dL (DOH data). There was also considerable discussion about the cleanup level tables and the probability vs. blood lead level parameters. Some felt that Ecology should base lead policy decisions on more conservative probability / blood lead level assumptions. However, others mentioned that the EIM soil lead data clearly showed that the proposed revisions would approximately double the size and volume of lead contaminated soil. Ecology asked advisory group members to provide their comments on what they thought were appropriate probability/blood lead assumptions.

Updates – sediments and other MTCA issues. Ecology indicated that very little feedback has been received on draft rule language for the following sections: remedy selection, institutional controls and periodic reviews. Balcony view message (comments received to date) – there seemed to be a preference to keep things as is and to limit substantive revisions. As for the sediments, there was a fair amount of discussion about the status of this workgroup, where they are headed and overall communication between the two groups (MTCA / sediments). Ecology indicated that some of the sediment issues (e.g. background) should be sorted out next month (April). However, several workgroup members expressed concerns about communication and requested that Ecology clarify expectations. Consequently, it was agreed that Ecology would, within the next week or so, provide details on a scope / agenda for the next meeting.

Acronyms

- MTCA – Model Toxics Control Act (Chapter 173-340 WAC)
- SMS – Sediment Management Standards (Chapter 173-304 WAC)
- H-H – human health.
- TEE – terrestrial ecological standards (MTCA Section 7490)
- PMEP – permanent to the maximum extent practicable (MTCA 360)
- RIFS – remedial investigation / feasibility study (MTCA 350-360)
- TCP – Toxics Cleanup Program (Department of Ecology).
- SEPA – State Environmental Policy Act
- APA – Administrative Procedures Act
- TPH – Total Petroleum Hydrocarbons
- GHG – green house gases
- PQL – practical quantitation limit (laboratory)
- PLP – potentially liable party
- ICs - institutional controls (ICs, MTCA Section 440)
- REL – remediation level (MTCA Section 355)
- G.W. – ground water.
- UECA - Uniform Environmental Covenants
- ELE – early life stage exposure
- IRIS – Integrated Risk Information System

Introduction

09:02 Hrs

Ecology – opening remarks. Facilitation Support to Ecology: Tamie Kellog from Kellog consulting, and Jessi Massingale (Floyd|Snider).

- Tamie – facilitation style – important to hear everyone. Need to hear everyone once on the same topic. Please take time to repeat if you are not heard. Please give me the privilege to interrupt if you are not heard. Comment – you need to allow time for rebuttal. That's dialogue – good healthy thing.
- Agenda review – three topics queued-up. Goal is to have good rich dialogue.
- Update the roadmap. Status of your input.

Roadmap

09:08 Hrs

Ecology

Three documents circulated. First is the agenda, second and third are "roadmap" documents. Second stapled document is more comprehensive document. Purpose is to give you perspective / strategy on path forward. Front and center is Method A table (cleanup levels).

- Human-health and background (p. 5, December 18th, 2009).
- Vapor intrusion – broadly discussed. VI workgroup (p. 6).

- **Risk issues related to vapor inhalation.**
- Background cleanup levels – not addressed as a separate topic. Will be rolled-in to all future issues discussions.
- Preview of today's meeting – included in the roadmap.
- Looking ahead – meetings in April, May and June. Plan is to meet with sediment workgroup in June. Need to discuss how to schedule make-up meeting (February, 2010).

Please see p. 10 of the Roadmap (next steps) which shows the draft rule language timeframe. Ecology is pausing and looking at feedback from the advisory group members and others, and focusing in on the timeframe for draft rule. Initially, Ecology has planned that at the, final advisory group meeting, the June meeting we would walk through the preliminary rule, but now a make-up meeting may be held in lieu of the post postponed February group meeting. Lastly, when asked, the majority of advisory group members were in favor of a makeup meeting (from February).

Comments / Questions from the Advisory Group Members

- ***If we have a topic that doesn't fit within future agendas, then how will that be accommodated? Can we form subgroups?*** Ecology – please provide suggestions and let us know if you feel there's a need to discuss certain issues or have something documented in the meeting minutes.
- ***"Site" definition for cleanup purposes – would like to discuss this.***
- ***Background – will this be specifically discussed? Or, will it be discussed within context of other conversations? Kind of a chicken or the egg type issue. Should get this issue fleshed-out now. Background should be pulled-out as a stand-alone issue.*** Ecology – background is central to the April meeting sediment / HH discussion and brings in site definition.
- ***Discuss background during June sediments / MTCA joint meeting. Make that a key issue.***
- ***Use of interim measures / cleanups need further review discussion.***
- ***Bring in Ecology water quality program. Many of the issues cross program lines.***
- ***Focus on most important issues. List of issues may not be that broad. Some issues may need to get postponed. We need to decide what issues are most important – prioritize.***
- ***Method A discussion – some stakeholders may need more time to review. Fairly complex background material has been circulated. These issues bridge several meetings (April and May). We need sufficient time to review and to provide written comments.***
- ***Roadmap, p. 8 – "homework" – would like your ideas. Written comments – lead cleanup levels – date provided.***
- ***Lead cleanup levels - what exactly do we review? Do we comment on the discussion today or what's in the current rule? How do we structure our comments?*** Ecology - we are receptive to written comments at any time in process, e.g. overall approach, technical issues, etc.
- ***Homework assignment - feedback on cleanup scenarios – can you please clarify? Decisions for large sites are different than smaller sites. In what context? Background? Cleanup levels? How will changes in cleanup levels impact the sites that you are working on?*** Ecology – we have heard questions of how can advisory members can best provide input. Consequently, we added

- ***That's what Ecology is asking for feedback on. More substantive discussions in April / June.***
- ***Vapor intrusion workgroup – this is still a work-in-progress. Interest amongst workgroup members varies.***
- ***Please provide more information on how you will incorporate risk issues (e.g. impact of vapor inhalation on cleanup levels) into the vapor subgroup. This would be interesting.***
- ***Vapor intrusion – Ecology should coordinate with OSHA / WSHA. Risk should be the same no matter what group regulates.***

Comments / Questions from the Audience

- ***Impact of the rule revision – make sure you include, incorporate and assess "real world" type examples and situations. Please evaluate economic impacts. Scope of the rule revision is very broad. Economic impacts need to be closely monitored.***
- ***What is the composition of the vapor intrusion subgroup?*** Ecology - still under review.

Topic 1 – Cleanup Levels and Risk Related Issues

09:46 Hrs

Ecology – PowerPoint presentation.

- Not intended to be broad review of all cleanup levels. Trying to focus on priority pollutants and new information (toxicity, etc.).
- Focus is on Method A cleanup level tables, e.g. lead and B(a)P. Some of the proposed revisions will also impact Method B and C cleanup levels (e.g., early life stage, etc.)
- Today's meeting – hoping to get feedback on how to focus and structure future meetings. Do the proposed changes make sense? Is something missing?
- Process to date – Ecology reviewed EPA databases (IRIS and EPA regional screening tables) for new toxicity values. The new toxicity values were used to calculate updated Method A cleanup levels. Ecology used this information to identify chemical-specific and general issues (e.g., data hierarchy) for advisory group discussion.
- Ground water Method A cleanup level update - 18 of 32 substances will need to be revised; 1 "straight-forward" change (EDB); 8 substances may need to be changed. Petroleum mixtures – under review.

- Soil Method A cleanup levels – 13 – no revision; 1 "straight forward" (EDB); several need to be updated (e.g. naphthalene, ethylbenzene, Cr+6, B(a)P,PCE, TCE, VC) etc. Vapor intrusion, ingestion / dermal and early life stage exposure pathways may also have some impact.

Comments / Questions from the Advisory Group Members

- ***How will Ecology deal with bioaccumulative toxins, e.g. Bellingham Bay mercury? Cleanup level did not account for bioaccumulation. SMS standards require you to account for bioaccumulation. Is this another conversation? How will this issue be dealt with?*** Ecology – we are currently reviewing this issue (it's somewhat complicated) and would also appreciate any feedback you may have.
- ***"Concurrent" soil exposure information – what is that?*** Ecology -This refers to both soil ingestion and dermal (skin absorption). Rule allows for both exposure pathways – ingestion only and ingestion + dermal. Issue is how to simplify. If we collapse to one, then what is impact? Members expressed a range of opinions (always consider, never consider, consider for only selected chemicals). ***Some members noted the large uncertainty and limited data for dermal absorption information.***
- ***Is practical quantitation limit (PQL) defined?*** Ecology - yes, this is defined within MTCA. ***Several members noted that many labs use reporting limit or method detection limit. PQL is outdated term.***
- ***Did Ecology review all of the EPA databases for toxicity etc?*** Ecology – the preliminary review was based on information in IRIS (first choice) and EPA regional screening tables were only used to fill gaps in IRIS). The IRIS tables undergo an extensive public review process. ***Who else does Ecology consult with? Should these groups be identified in MTCA?*** Ecology currently consults with the science panel, EPA, DOH etc.
- ***How will "emerging" chemicals, e.g. PDBEs be dealt with?*** Ecology - you can calculate a Method B cleanup level for any substance, provided you have a toxicity value (e.g., slope factor). Ecology - should we expand the Method A tables for other substances? Are there any noteworthy substances that need to be considered?
- ***How big of a change is needed for Method A table revision?*** Ecology - depends upon the toxicity values.
- ***Lots of cleanup level changes seem to relate to toxicity values changing so the hierarchy for toxicity values seems fundamental.*** Ecology – our recommendation is to use toxicological data that has been peer-reviewed and accepted by EPA. ***Don't pick things out of the middle of some process, e.g. TCE review. The rule is out of date for some current toxicity values.***
- ***Does the Oakridge toxicity data support all chemicals / substances? Is it possible to check data sources?*** Ecology – yes there are chemicals without IRIS cancer slope factors; however, if not in IRIS, then they may be in the Oakridge database.
- ***Use EPA's toxicity review process that's well established and has gone through public peer review, e.g. IRIS. Don't just arbitrarily "pick-up" toxicity values from other sources. Toxicity information tends to be in a state of flux. You have to be really careful about where you draw your values, sources, references, etc.*** Ecology – agreed. There's a lot of good toxicological information from other states, e.g. Cal EPA, NJ, ME, etc. and some of it has been peer reviewed. However, FYI - a lot of this new information has not yet made its way into IRIS.

----------10:31 Hrs – BREAK ----------

----------10:41 Hrs – RECONVENE----------

Comments / Questions from the Advisory Group Members (cont.)

- ***Request – please post PowerPoint slide on Ecology web page (issues associated with decisions on updating Method A tables).***
- ***Is it really more protective to have a lower cleanup level? If current cleanup level is really low, then what's the impact to switching to an even lower standard? Ecology needs to weigh this carefully. Implementation, practicability, and workability of the program need to be checked.***
- ***How should Ecology select toxicity values if they are not in EPA IRIS database? IRIS updates may take years. How do you close a site if new / updated toxicity information is available? A reasonable approach is needed.***
- ***EPA Dec-03 OSWER directives provides a toxicity review hierarchy – has Ecology considered this?***
- ***If toxicity value has been peer-reviewed, then Ecology should incorporate most stringent value.***
- ***What is the scientific basis for deeming ethylbenzene and naphthalene as carcinogens? Do you (Ecology) have detailed references and sources? Yes, that information is available, e.g. IARC, NTP, etc.*** **(**Action item* Ecology will provide science basis for naphthalene etc carcinogen classification)**
- ***If toxicity information hierarchy is "opened-up", then more definition should be considered. Ecology needs to approach this issue with caution and provide defined rules / boundaries.***
- ***MTCA Method A tables – what's the question? Please clarify. How will the proposed changes be vetted? How do you scientifically quantify change? What defines significant?*** Ecology – we aren't really looking for a number or "delta" that is "significant" enough to update the tables. However, we are looking at the new toxicological information, how it would impact cleanup level changes as well as weighing how much stock to put in the changes.
- ***If the toxicity value is not in EPA IRIS, then information from other sources will probably not be there and you are likely to not get consensus. Current MTCA rule language should probably be reviewed (toxicity hierarchy).***
- ***Vapor intrusion workgroup – will "risk" issues be considered? Please clarify.*** Ecology - the vapor intrusion guidance document includes soil and ground water "screening levels". Before these levels can be finalized, we will need to check several other issues. Here are the issues we will be checking: a) EPA cancer risk guidelines, b) toxicity data hierarchy, c) early life stage adjustments and d) recent EPA inhalation risk guidance.
- ***Toxicity data certainty – this is a fundamental issue. The bar has been set very high in the past, e.g. IRIS and HEAST. However, this has put Ecology in a good position to defend regulations. If you lower the bar, then it may create more problems than it solves. MTCA is a very restrictive rule already – this is one of the toughest cleanup rules in the county. Therefore, lowering cleanup levels on lower quality toxicity data may create problems.***

- ***How or what information will Ecology use to justify cleanup standard revisions? Will Ecology convey or provide this information / review process to workgroup members?*** Ecology – it isn't a "one size fits all" process. Some of these cleanup level changes are easier than others. For

example, the early life stage impacts on cleanup levels are much more complex. It would be helpful if you (external group) would provide comments on what is important, realistic / doable. **Action item – for the April meeting, Ecology will provide details on which cleanup levels are being changed*.

- Announcement - Ecology wants to form a risk group that includes issue not specific to just vapor intrusion, but larger risk issues. We hope to form this group and provide an update during the April advisory group meeting.

Audience Comments / Questions

- ***Certainty is a key changes and process credibility. You need to be in a good position to defend the regulation. If we lower the "bar" of certainty, then we allow a risk. There are approximately 6,000 cleanup sites. We could route 70% of sites through cleanup program; however, we have to be able to justify the economic impact. MTCA is currently a restrictive rule in parts; risk levels, exposure scenarios, etc. It isn't like the chemicals are not currently regulated. Consequently, for incorporating new toxicity data, we need to be careful on the choice of studies and ensure they are peer reviewed.***

- ***Changes to B(a)P may impact TPH cleanup levels, e.g. heavy fuel oil, etc. Petroleum is obviously a big ticket contaminant. You need to be careful about how you proceed.*** Ecology – agreed. FYI – we are checking and weighing possible impacts of petroleum (TPH) cleanup level revisions.

Topic 2- Early Life Exposure (ELE) to Chemical Carcinogens

11:15 Hrs

Craig McCormack – PowerPoint presentation.

- B(a)P used as an example. Reflects toxicity of other chemicals.
- Key issue - should Ecology update MTCA rule to better protect children?
- Current MTCA regulation does not account for child susceptibility.
- Early life stage exposure may manifest itself in later life stages (adolescence / adult).
- example, sedatives and other drugs (e.g. Ritalin) have different impacts on children and adults.
- Children represent 30% of US population.
- EPA Regions 3,6,9 account for children's susceptibility; ORNL, NTP.
- Why B(a)P as a "marker" for early life stage susceptibility? Fairly straight-forward change. If you account of concurrent exposure and early life stage, then ~ 10-fold reduction.
- What is soil background for B(a)P? ~ 3.3 ppm.
- Adjusting cleanup levels for ELE and all carcinogens is under consideration.

Discussion Summary - Children's Susceptibility to Carcinogens

Ecology presented information on children's susceptibility to carcinogens. Ecology responded to various questions:

- age adjustment factors,
- different age bins that define different life-stages for susceptibility to carcinogens, and
- application of age adjustment factors for those carcinogens that operate via a mutagenic mode of action or for all carcinogens.

Areas where there was recognition of technical issues and/or agreement:

- Children are not miniature adults – distinguishing characteristics.
- Children's susceptibility.
- Life-stage approach to risk assessment.
- Advisory Group did not recommend additional factors for Ecology to evaluate in considering children's susceptibility to carcinogens.

Areas discussed where there was either disagreement and/or concerns expressed:

- Application of age adjustment factors to account for children's susceptibility to some or all carcinogens – concerns expressed were not science based.
- Concerns expressed about the application of the age adjustment factors focused on the implications for cleanup, site definition, liability, and "workability" of MTCA to perform cleanups quickly, efficiently, and bring sites to closure.

Feedback from workgroup members:

- Reaffirm Science Panel's technical position

**Action - report back to advisory group on Science Panel's final findings on this issue.*

Comments / Questions from Advisory Group Members

- ***What media does ELE apply to? All media (soil, ground water, etc.).***
- ***The ELE age "buckets" (e.g. 0-2 yrs, 2-6 yrs, etc.) – how were those derived?*** Ecology - these age groupings are consistent with other national models (e.g. EPA, etc.). The same body weight is used for <2 and 2-6 yrs age groups; however, Ecology's Science Panel is reviewing the body weight issue in more detail..
- ***Is the cancer risk for each age group summed? What are the mechanics of this?*** Ecology - you would weigh the risk for each pathway and then multiply by toxicity (handout example).
- ***Why not a separate equation for inhalation, e.g. soil VOCs (TCE)?*** Ecology – inhalation exposure may be evaluated under "concurrent" exposure (soil ingestion, dermal skin (contact) and inhalation). However, for non-volatile substances (e.g. B(a)P), the inhalation exposure pathway has little to no impact on cleanup levels. However, for other volatile chemicals (e.g. TCE), there

would likely be more impact on cleanup levels. Ecology is currently weighing and assessing possible impacts of inhalation exposure on cleanup levels. You can get into certain levels of complexity when you do this, e.g. mutagenic mode of action, etc.

- ***Are you recommending that all carcinogenic cleanup levels be adjusted for ELE?*** Ecology - EPA has only adjusted cleanup levels for some (mutagenic mode of action, which is ~ 12 substances). Cal EPA has applied ELE to all carcinogenic cleanup levels. **Important - Ecology has not made a decision on this.*
- ***Ingestion and dermal policy decision – a lot of uncertainty about dermal absorption. Same issue for ELE. If you "pile on" adjustments, then you may end-up with all cleanup levels below background / PQLs. If there is uncertainty, then you should not adjust.***
- ***For the 0-2 yr age group, is the age adjustment 10 times the cancer potency factor (ADAF parameter)?***(Ecology - Yes.
- ***Is the current B(a)P soil cleanup level at or below background?*** Ecology - yes***. If yes, then why lower for ELE? Does this make sense?*** Ecology - for B(a)P yes; however, for others, not true – adjusting for ELE does not take you below background.
- ***If ELE adjustment is implemented, then Ecology should clarify which cleanup levels / substances drop below background.***
- ***Ecology's science panel – are they reviewing ELE?*** Yes. ***What's the decision?*** Ecology - the Ecology science panel's preliminary conclusion / recommendation is that yes, Ecology should implement the ELE adjustment for all carcinogen cleanup levels. Additional science panel discussion / review this Thursday (March 25th, 2010). However, again, no decision has been made.

---------- LUNCH BREAK – 12:01 Hrs ----------

---------- RECONVENE – 12:33 Hrs ----------

- ***Has ELE been applied to non-carcinogens, e.g. endocrine disruptors?*** Ecology – no. The current methodologies focus on carcinogenic risks.
- ***Ecology should avoid mixing and matching toxicity factors from various sources. Ecology should only apply ELE to the 12 mutagenic substances.***
- ***WA DOH supports ELE adjustments. Science has been vetted fairly well.***
- ***Has Ecology considered 1 x 10-5 cancer risk for individual carcinogens?*** Not yet.
- ***Cal EPA vs. U.S. EPA – different policy choices were made about ELE. Has Ecology reviewed these issues?*** Yes. Cal EPA made different policy choices than EPA.
- ***This (ELE) is a big issue; however, didn't seem to be totally on the radar screen when we started. Glad to see it's being vetted now.***
- ***If you adjust and lower cleanup levels for ELE, then how will this impact remedy selection? Is this a re-opener? Is Ecology bringing in site managers to evaluate the impact of possible cleanup level revisions?***

Audience Comments / Questions

- ***Second the motion for Ecology bring-in site managers and evaluate "real world" impacts. Also, Ecology needs to evaluate background and impact of ELE adjustments.***
- ***Ecology should defer to EPA on ELE, in particularly the 2005 guidance. ELE should only apply to the 12 mutagenic substances. If the science changes, then Ecology can deal with this in future rule revisions. Of the 12 mutagenic substances, there are only 3 that have an impact, e.g. B(a)P.***
- ***Rebuttal – scientific "credibility" (e.g. ELE) goes back and forth with EPA. It goes both ways.***

Topic 3 – Updates to Lead Cleanup Levels

13:00 Hrs

Dave Bradley – PowerPoint Presentation (Available on Ecology Website)

Comments / Questions from Advisory Members

- ***Ecology should define acceptable blood lead levels as less than 2 ug/dL and not 10 ug/dL.***
- ***Should Ecology revise the soil lead standard?*** There were a wide range opinions. When making this decisions, members recommended that Ecology consider new scientific information on both exposure and toxicity and implementation impacts.
- ***What are typical blood lead levels for children?*** Average levels are typically ~ 2 ug/dL. Blood lead levels (children) have declined in the U.S. "Perfect" data is not available.
  WA DOH stated that blood lead monitoring indicates that ~ 20% of children are > 5 ug/dL.
- ***What probability was used for '91 soil Pb cleanup level***? Ecology used a 1% value to establish the 1991 soil cleanup level (The EPA Superfund typically uses 5% when using the IEUBK model to establish site-specific cleanup levels). The Cal EPA used a 10% probability value when developing their soil screening guidelines. This is a policy choice.
- ***What are the green-shaded squares (lead cleanup level table; left column is blood lead from 1-10%; right columns are lead soil cleanup levels with 1, 5 and 10% probability) on the PowerPoint slide?*** These are just examples of what the cleanup level might be and the policy choices that need to be made.
- ***What are typical background soil Pb concentrations?*** Puget Sound is ~ 24 ppm; statewide is 17-24 ppm (90^{th} percentile).
- ***Is Ecology "locked-in" to these numbers, e.g. 1,2,5 and 10 ug/dL blood lead levels?*** At this point, Ecology is not locked in on particular numbers. We recognize this is a big issue and want to get feedback from the advisory group. ***Ecology should be more conservative. What can be done? How clean is clean? Models are models – hard to say what's right and wrong. When evaluating cleanup level changes, Ecology should opt for and err on the conservative side.***
- ***What do ATSDR publications say about lead?*** Ecology - ASTDR used 10 ug/dL, but has acknowledged there are health risks at lower levels.

- ***Several members supported the use of the soil only exposure model because people are only responsible for their release, as opposed to releases from someone else. IEUBK accounts for g.w. and other media – this may not be relevant at all sites.***
- ***If soil lead cleanup level is 50 ppm, then what's the impact?*** Ecology – for eastern WA lead-arsenic school cleanup sites, the final "verdict" was no cleanup for 3 sites. However, if the soil lead cleanup levels is decreased to 150 ppm (or lower) then this would impact some sites – some that are "clean" now would fail. Ecology estimates if the soil lead cleanup level is changes, then that would result in a 10% increase in the number of sites needing cleanup, with similar impact in smelter areas (e.g. Asarco Tacoma smelter plume footprint).
- ***Other substances tend to drive cleanups at other sites (as opposed to lead). Doesn't seem like the proposed changes for lead are that significant. Are proposed changes a big deal? Just asking the question.*** Ecology – based on EIM (Ecology database) review, arsenic would continue to be the "driver" for soil contaminated with lead-arsenic. However, we haven't looked at other chemicals, e.g. PCBs etc., We are just now looking into both lead and arsenic. We also recognize there are situations (e.g., roadside lead, etc.) where impacts are greater.
- ***When will a sensitivity analysis be done? (Ecology – we are working on it now, probably before the April meeting.)***

Comments / Questions from the Audience

- ***Ecology database (EIM) handout (Table 3-5) – we appreciate Ecology presenting this data. However, if you review this data (the curve) and you reduce soil lead to 150 ppm, then area / volume will double. Ecology isn't quite there yet – need to check this further.***

---------- 14:03 Hrs – BREAK ----------

---------- 14:15 Hrs – RECONVENE ----------

Update – Remedy Selection, Institutional Controls and Periodic Reviews

14:17 hrs

Pete Kmet, Ecology – review of previous feedback.

- Very few comments submitted – need more. Please review and comment.
- In general, what Ecology's heard is "less is more". Keep the changes to a minimum.
- How do we pay for periodic reviews? Comments to date expressed concerns about an upfront payment. It was suggested we build these review costs into our overhead rate.
- RI / FS – some concern about expedited site assessment and whether that should even be mentioned in the regulation.
- Some concern about changing the TEE language in the remedial investigation section and whether that would automatically trigger full-blown TEE evaluations. Ecology noted this is not

Sediment Workgroup Update

14:25 hrs

Dave Bradley – brief PowerPoint presentation.

- Ecological risk – evaluating options for a narrative standard.
- Freshwater standards – work in progress.
- Human-health / background – exploring options 1 & 2. How would this be implemented? What's the definition of a site? What about recontamination? March 16th meeting – some "real life" examples reviewed.

Questions / Comments

- ***How are topics from sediments workgroup coming back to MTCA workgroup?***
- ***When will the sediment issues be resolved? Shooting for April as the target for sorting out sediment issues.***
- ***What's the status of DMMP?*** Ecology - DMMP is in "hiatus" because key players (e.g. Ecology Director) are occupied with budget issues in Olympia. They may meet later this week to regroup.
- ***What about interim actions? What's being done? Reality – sediment cleanups require a combination of multiple actions over time.***
- ***Will the MTCA group be receiving a report from the sediments group? Is April a precursor only or is it something else? Please clarify.***
- ***Does the sediments group address human-health and risk assessment issues?***
- ***Will example "scenarios" be sent out ahead of time for review? How will these theoretical sites and concepts be conveyed to the MTCA workgroup?***
- ***What do you want from MTCA group for next meeting, it isn't clear? What should be come prepared to talk about? These are complicated issues. Not up to speed on all issues; therefore, concerned about how effective group members can be.*** Ecology – these topics are ongoing, so you'll have homework assignments over next several next months. Also, FYI - homework assignments for the next meeting (April 26th): lead cleanup levels and site scenarios.

Action item – Ecology will get back to the workgroup within the next week or so about a scope for the next meeting.

- ***Will the sediment work group be ready to inform a discussion of HH/background at next MTCA workgroup meeting 4/26?*** Ecology – they are further along with discussions and no answers just yet. FYI – the sediments workgroup has discussed the impact of adjusting fish consumption levels (risk based levels below background) and the overall decision framework, including statistics, background, etc.

- ***"Homework" assignment – fish consumption rates, Method updates and toxicity values and MTCA framework / exposure pathways.***
- ***Please provide more than a week for review of large packets of material.***
- ***Open the windows and provide a microphone.***

----------END Meeting – 15:00 Hrs ----------

Thank You Everyone!