

Remedial Standards Stakeholder Committee

Meeting summary for May 13, 2014 with external stakeholders

1pm in Public Hearing Room (PHR) of 401 East State Street

Attendees: see attached list

T. Sugihara (TS) welcomed the audience of 24 external stakeholders plus 1 additional external stakeholder via Go-To-Meeting as well as 16 Department personnel/associated personnel.

TS asked for comments on the April 15, 2014 meeting summary which had been sent out to all via email. There were none and the meeting summary will be posted online as final and will also serve as the review of the previous meeting.

TS indicated the agenda for today's meeting would be: Status of Issues Undergoing Review (presented by TS); The Migration to Ground Water (MGW) Pathway (presented by Swati Toppin (ST) and Paul Sanders (PS)); and The Extractable Petroleum Hydrocarbon (EPH) Proposed Standard (presented by David Barskey (DB) and John Ruhl (JR)). TS stressed that the pathway presentations would emphasize how to calculate the final standards rather than what values the standards will be.

TS indicated the proposed standards have not been formally calculated. This is in part because of imminent change in the exposure assumptions. Once these changes are formally made as indicated by their use in the MidAtlantic Risk Assessment Tables and when the Department has determined there will be no additional significant inputs or changes, the proposed standards will be provided to you. The current plan is to provide you with the associated supporting information as well. It is likely that the meeting following the vapor intrusion pathway and the dioxin standard proposal presentations on June 10, 2014 will be dedicated to that purpose.

In response to inquiries made, TS indicated that free product will not be part of the EPH presentation. Free product is part of the EPH protocol but is not a standard in the sense intended by the Brown Field and Contaminated Sites Act. The Department considers free product to be a compliance issues similar to sheen, ecological risk assessment, and contingency sampling.

TS provided a current summary of the Status of Issues Undergoing Department Review. These are the 5 issues which had been identified in the previous meeting as topics that Department would be reevaluating based on inquiries made by the external stakeholders.

1. Total approach for related chemicals – still under review. While external stakeholder concern focused on polychlorinated biphenyls, the Department is currently seeking to establish a more comprehensive position that will address all the instances where the “total” approach is used.

2. Subchronic toxicity use for an ingestion-dermal pathway standard for a noncancer health endpoint and residential exposure scenario – the Department will continue its current approach. The Department did an assessment of its position. Because of a number of factors, which included that the subchronic toxicity data are not available for all standards; that the Department was more comfortable with the rigorous review that the IRIS chronic toxicity had gone through; and that the Department found its approach consistent with the USEPA reasonable maximum exposure approach (RME), the Department will not be changing its original approach.
3. Mutagenicity – still under review. The Department is evaluating the specific impact of potential standard changes on polynuclear aromatic hydrocarbons (PAH) remediation; assessing how the USEPA is using mutagenicity; and planning to internally review this issue with upper management prior to announcing a final position.
4. Interconnection of the inhalation pathway and the vapor intrusion pathway – these are distinct efforts to address specific situations. The vapor intrusion (VI) pathway focuses on the indoor environment and employs a model where the contamination originates in ground water and culminates in a direct vapor measurement of sub-slab and indoor environments. The inhalation pathway assesses both volatile and particulate forms of contamination in outdoor air that originate from a soil source. Both are consistent with the USEPA approaches (which would include RME).
5. Updated exposure factors use – Department will follow the USEPA Superfund Program lead. The anticipated exposure factor changes as well as frequently asked questions and other relevant documentation were either provided either as a handout or via the relevant URL links.

Questions were raised that identified the following topics or concerns:

1. Rather than evaluate the inhalation of ambient air via the inhalation pathway, should a soil concentration of a contaminant trigger a vapor intrusion investigation? Doing so would eliminate the need for establishing inhalation standards ?

The suggestion will be evaluated by the Department. TS indicated that potentially part of this could be an aspect of the vapor intrusion presentation scheduled for the next meeting.

2. A question was posed regarding the persistence of volatile organic contaminants (VOCs) being a basis for flexibility of site specific exposure assessments.

Because the notes are unclear, the Department will revisit this issue at the next meeting.

3. Inquiry was made if the updated exposure factor list provided is the same one released by EPA last week?

Yes it is.

4. Inquiry was made about posing questions regarding material covered in past meetings.

The “Status of Issues” presentation was to inform the external stakeholders of the Department’s deliberation on topics the Department had indicated it would reevaluate. Effectively, this means for other topics not identified for reassessment that the information provided in previous meetings constituted the Department’s position and consequently, the Department considered the matter closed.

However, because this was the first time this had come up, the inquiry would be allowed this time. The specific inquiry concerned the C Carcinogen Policy and why the Department did not choose to follow the USEPA approach on this topic. The primary reason was to maintain consistency with the other programs in the Department who had agreed on the approach in question as part of the previous 2008 Remediation Standards effort.

ST and PS gave the presentation on the Migration to Ground Water (MGW) Pathway. The proposed standards will consist of two sets of values, soil standards (which are based on the soil water partition equation) and leachate standards (which are based on the ground water quality standards (GWQS) and a dilution attention factor (DAF)). How these values are to be calculated, to include the equations and the relevant inputs which include chemical and physical factors, was described.

Questions were raised that identified the following topics or concerns:

1. Inquiry was made about the use of interim specific GWQS, which are not promulgated and have not been commented on by the external stakeholders. Will they be promulgated for this effort?

No. Under the current regulations, any interim specific standard becomes the default standard, and we intend to continue that policy.

2. Inquiry was made about what valence state of metal contaminants is the USEPA using?

In general, to be conservative USEPA uses the K_d for the most mobile species. The USEPA uses the Minteq model to derive these K_d s and does this for a wide range of pHs. The Department selected for use a pH of 5.3 which is based on a median approach for measured values in NJ.

3. Inquiry was made about providing standards where 2 foot or multiple intervals of 2 feet buffer zones are used to produce tables of standards.

That was discussed but a 2 foot interval would not make a big difference in the resulting number. We used what we thought would be more practical for most sites knowing nothing more than contaminant concentration. You always have the option to go for an ARS if more site-specific information is available.

You are asking about multiple depths. We could have a table with multiple depths – 2', 4', 6', 8' and 10' for example, and someone would still say 9' was relevant to their site and we did not have a table relevant to them. Also depth to water table is not the only parameter that would make a difference- soil type would make a difference too. Then we'd have to have multiple soil types and the table would become very complicated. However we can consider it.

4. Will MGW be promulgated as standards for the first time?

Yes, the numbers will be in the proposed rule.

5. Will there be an Order of Magnitude review?

Yes, but it's not straight forward when complicated calculations are done with alternative methods.

6. A question was asked about the occurrence of invalid Kd values when conducting the SPLP test for volatiles, and it's potential cause being linked to the invalid assumptions of infinite/constant mass in the USEPA partition equation.

We do not believe your sampling is correct if you come up with a negative Kd, since that should not occur (A negative Kd results because the total concentrations in the two soil samples taken for total and SPLP samples do not match, or because of volatile loss during sample handling or processing).

There is no inherent assumption of infinite/constant mass in the USEPA partition equation, since there is no time variable in the equation that predicts concentrations in the soil as a function of time. The Department is not assuming infinite/constant mass, or that contamination will remain in the soil forever or for any particular length of time. We are simply using the equation to look at concentrations that are currently in the soil and their potential impact to ground water. The USEPA Soil Screening Guidance description of the equation is somewhat misleading in this regard.

7. It was posed that it is incorrect to assume ideal behavior for contaminants in soil; all consultants have sites where IGW values are exceeded for 15 years, but the contamination has never been measured in GW. Can we make this situation better by using empirical data, otherwise our sites remain open with monitoring forever?

You would expect VO's to impact GW quickly, but many contaminants are slower, e.g. Cadmium. We talked about an option based on the age of the site, but have not incorporated that yet.

There are so many variables that affect contaminant movement from soil to groundwater; we have attempted to codify that with one set of standards. If there were only one variable, we could offer an option, but that is not the case.

JR and DB gave the presentation on the Extractable Petroleum Hydrocarbon Standard which is ingestion-dermal pathway based. A non-cancer standard for number 2 fuel oil and diesel as well as a calculator to determine the health based non-cancer standard for less volatile petroleum hydrocarbon compounds (PHCs) will be proposed. How this is calculated in both cases was described. Included in the description were the relevant equations as well as the Department study that was used to develop the number 2 fuel oil/diesel residential and non-residential exposure scenario values.

Questions were raised that identified the following topics or concerns:

1. Why not do what Massachusetts does and develop standards for individual fractions?

The 2012 state survey by the Association of Environmental Health and Sciences Foundation indicated the various states use different approaches to address EPH. It was determined that this was the best approach for New Jersey.

2. The statistical strength of the study which established the proposed standards for number 2 fuel oil/diesel was questioned and a suggestion was made to use the in-house data to enlarge the database.

While small, the data are believed to be representative. As currently received, the number 2 fuel oil/diesel data are not in a format that could be used to increase the database. Nonetheless, the statistics are extremely tight which adds credence to the data validity and the resulting values generated from them.

3. As a general point about procedure, is it possible, once we are done with DEP presentations to have technical sessions to thrash out the science questions we have?

That same issue was raised by the LSRPA in an email received earlier today. The matter is under consideration. Information identifying specific concerns and detailing the process is requested.

4. What is the compelling reason to regulate the “soup” of PHC contamination a standard when all the bad components of PHCs already have standards? Why regulate PHC also as one compound?

The Spill Act lists PHC as a hazardous substance, so we must clean it up. The question becomes then, to what level do we clean it up? Should we make it non detect, calculate a health based number, use a screening level?? Since the cleanup number is 5,100 mg/kg today, and that’s the number we’ve been using, it makes sense to make that our standard.

5. The need for a standard for underground homeowner tanks, the unregulated community, and the personnel involved is understood, but why can’t we use a site-specific calculation or ARS process for the others?

The Category 2 approach covers these other contaminants, and the purpose of the proposed calculator is to provide sample-specific values.

6. Is an ARS for number 2 fuel oil available? On a fraction by fraction basis?

You can calculate an ARS for number 2 fuel oil, but not on a fraction by fraction basis.

7. What is the timeframe to implement the standard for EPH?

There will be a phase-in process. Under consideration is the process that applies to the Technical Requirements which allows a 6 month period. However, since the to be proposed EPH standard is a essentially a value that’s already been in use for a number of years, phase-in is not anticipated to be an issue.

Meeting adjourned at 2:58 PM and GoTo Meeting connection ended. Next meeting Tuesday, June 10, 2014 at 1:00 PM in the Public Hearing Room of 401 East State Street, Trenton, New Jersey.

5/13/2014 External Stakeholder Meeting Attendees:

LSRPA

Caryn Barnes
Lisa Campe
Nick DeRose
Scott Drew

Rodger Ferguson
Kevin Long
Carrie McGowan
Steve Posten
Lisa Voyce

AEG

Theodoros Toskos
Niall Henshaw

Environmental/EJ

Joann Held

RIN

Steve Chranowski
Rayna Laiosa
Ashley Bell
Maria Kouris

CIANJ

Rose DeLorenzo
Peter Jaran
Jennifer Solewski

NJBIA

Sara Bluhm
George Tyler

NJBA

Neil Rivers
Elizabeth George-Cheniara

Fuel Merchants NJ

John Donohue

NJDEP and Associated Personnel

Teruo Sugihara
Barry Frasco

Swati Toppin
Diane Groth
John Ruhl
Linda Cullen
Allan Motter
Paul Sanders
Anne Hayton
Kathleen Kunze
Kevin Schick
Nancy Hamill
David Haymes
David Barskey
Yin Zhou

Michael Gonshor, Impact to Ground Water Guidance Committee