Reply Reply to all Forward Close Help

From: Ken Feathers [kenneth.feathers@po.state.ct.us] Sent: Fri 8/1/2003 10:52 AM

To: AndereggE@hqamc-exchg.army.mil; Wes Laparl

Cc:

Subject: SAEP Remedial objectives and Alternatives

Attachments:

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Hi-
The below comments are relative to the revised objectives and alternatives list. I apologize for the disjoint nature but this gets them out before I go off for a week.

NAPL section should, at least in alternatives, distinguish these are LNAPL remedies. Should probably also incorporate specific mention of DNAPL remedies- DEP could probably consider MNA a remedial alternative for isolated ganglia, in the broad sense, after the "prudent" statement is accepted (EPA may have issues with the projected time to remedy for this that we may need to be sensitive to)

Soil section -
-RSRs require that remediation criteria be residential for DEC unless there is an ELUR of some sort
-Objective probably shoul be reworded to more generally indicate objective is to prevent potential receptor contact with soil exceeding applicable RSR DEC values
-Alternatives is where the options get presented and applicable value is determined, with placement of an IC ELUR as one remedial alternative, that will couple with the other actions proposed for the site, and serve to limit the amount of soil requiring cover/disposal. Similarly, remediation only needs to address the top 4 feet, instead of 15 feet if a "No-Dig" ELUR is placed as a remedial alternative along with shallow soil remedy or soil cover placement (Is the soil from 4 to 15 a data gap or fully chracterized?- does it matter if you reasonably presume that the soil is polluted in implementation of a sitewide ELUR?)
-How does partial demolition relate to soils remedy? note that DEC soils under ELUR IDd buildings are inaccessible and this is inherently breached when demolition occurs.
-For the recreational lands RSR RES criteria may be addressed with a alternate exposure risk evaluation and an ELUR limiting to recreation.
-These are essentially a semantic tweak to the italcisized statement in soil alternatives.

I think the description of soil alternatives can be made clearer. Since soil is one of the main issues at the site this should be probably be expanded as suggested above.

Another soil approach- separately list alternatives for PMC and DEC compliance
note that currently only one alternative is id'd for PMC soils-are any of the areas suitable for an in-situ stabilization instead of removal? I think you are right to not look at impermeable caps for this site.

soil vapor -
-the objective for soil vapor is not preventing direct contact with soil vapor but preventing unacceptable impact on indoor air spaces. the specific soil vapor target numbers are not a goal so much as a tool to achieve the indoor air target numbers.
-expand the discussion of engineering controls to note some types (subslab, slabtop, indoor ventilation)
-would you consider a mix of demolition and controls depending on how the building is constructed and sited relative to the sources and vapor exceedances, (eg, building corner over plume, more cost effective to subslab vent corner than demolish whole thing) That concept is not clear here.
-How will recreation area be determined in compliance prior to demolition if such is needed for transfer? the

standard approach would be to demolish the structures and prohibit further construction of enlosed structures

groundwater-
-see soil vapor objective discussion for first objective
-Offsite migration criteria where army is the source must be residential (possibly IC if adjacent property has an IC ELUR that notes this source, or the army is willing to pay owner to place one).
-remedy should specify that groundwater collection is plume control objective not pump and treat, or are you proposing to pump from the Cr/VO hotspots to jumpstart/shorten MNA?
-need to acknowledge that bioslurping may address groundwater objectives as well in areas where used.

sediment- need remedial alternatives such as local removal of polluted sedimtne with elevated metals

Submect to finalization of EcoRisk review, you should also plan on at least spot removal of grossly polluted sediment in the tidal flat for reasons similar to that for outfall 008

The organization here by media is one possible alternative. Since there are multiple identified environmental problem areas (chapter 11 RI) and multiple exposure pathways/receptors these may form alternative bases for organizing the discussion. I don't know what to recommend but all three perspectives should be addressed in the final statement. (I hope that this is just a flaw in presentation rather than a failure to acknowledge applicability of the concept of a potential complex remedy)

What gets lost right now in the presentation is the interplay between the various media in remedy selection- best example is that soil vapor, groundwater both must address the shared indoor air pathway

Another presentation gap is that for different receptor/exposure paths different remedies or mixes of remedy may apply, such as soils for recreational vs IC land or groundwater for migration to flats (haz waste area) vs indoor air impacts. Point- a single remedy may not be best for every area with the problem and we should be flexible to select an optimized mix of remedies to meet the objectives.

would some sort of matrix allow presentation of this more clearly? if a matrix is developed for exposure path and media it could be separately applied to each chapter 11 problem area to incorporate the shifting basis for optimizing the remedy mix. then some sort of integration might be needed with sitewide issues such as resDEC

You should also think about what additional data is needed to implement any of these remedies, and if the information is really a data gap in the RI or an information gathering element of the remedial design. To a degree, some of this is how much uncertainty can you accept in making a remedy selection - for example to what detail must the exact volume and location of DEC IC polluted soil be delineated to allow Army, for any specific broad area delineated in Chapter 11, to decide between removal and soil cover, as opposed to designing and costing either to the last cubic yard or dollar before it is selected.

in the case of removal, sidewall confirmation would be expected and regardless of how many samples pre-construction you will encounter surprises. At some point it may be more cost-effective to say we know enough to decide on removal as a remedy and will further characterize on the fly as we implement, accepting the resultant as-build cost uncertainty in tradeoff for saving the additional time and money of further characterization

Kenneth Feathers
Supervising Sanitary Engineer
Remediation Section
Bureau of Waste Management
Connecticut Department of Environmental Protection
79 Elm Street

Hartford, CT 06106

860-424-3770