From:	ANDERSON Jim M
To:	Lori Cora/R10/USEPA/US@EPA
Cc:	Chip Humphrey/R10/USEPA/US@EPA; Eric Blischke/R10/USEPA/US@EPA; Kristine Koch/R10/USEPA/US@EPA; BURKHOLDER Kurt
Subject:	RE: State ARARs- chemical specific
Date:	09/14/2009 12:52 PM

Lori,

Let me present a little background before answering your question. State Cleanup Rules (OAR 340-122) define hot spots differently for different media. For **groundwater or surface water**, a hot spot is contamination that **both** poses a significant adverse effect on the beneficial water use **&** for which treatment is reasonably likely to restore or protect such beneficial uses within a reasonable time. We typically use DEQ's 7/98 "*Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites*" to determine the current & reasonably likely future beneficial water uses. Our hierarchical approach for establishing what criteria to use for a particular beneficial water use that has been significantly affected includes current or reasonably likely future exceedances of:

1) Applicable or relevant federal, state, or local water quality standards, criteria, or guidance;

2) Acceptable risk levels; &

3) Available, published, peer-reviewed scientific information.

The threshold criterion of unacceptable baseline risk is necessary for a hot spot in **media other than water** (e.g., soil, sediment, debris, NAPL, etc) to exist. An illustrating example of this criterion would be that we would not necessarily consider deeply buried, heavily contaminated soil to be a hot spot if that contamination didn't pose unacceptable risk because…, for instance…, there was no exposure pathway linking the contamination to a receptor. For the purpose of characterizing **sediment** hot spots, the definition of sediments also includes associated pore water. **Sediment** hot spots can result from contamination that is: 1) highly concentrated; 2) highly mobile; or 3) not reliably containable…, as described below:

1) <u>Highly concentrated</u>-

-<u>Human exposures</u>- (100)x(risk-based concentration for

carcinogens) or (10)x(risk-based concentration for non-carcinogens)

-Ecological exposures- (10)x(the acceptable risk level for of individual ecological receptors or populations of ecological receptors)

2) Highly mobile- If contaminants are likely to leach out of sediment & move into surface water at concentrations that cause a significant adverse effect on the beneficial use of the surface water.

3) Not reliably contained- The FS determines whether a sediment hot spot can be reliably contained. In most cases, DEQ anticipates that any contamination that is “not reliably contained” will likely result in either a “highly mobile” or “highly concentrated” hot spot. Thus, this criterion should seldom affect the outcome of the hot spot determination.

XXXXXXXXXXXXXXXXXX

So, the answer to your question of whether I agree with your summary is “no”. I think a more appropriate summary would be:

Oregon Cleanup Rules require the treatment (which includes excavation/dredging & off-site disposal) of hot spots of contamination to the extent feasible (OAR 340-122-0090(4)). "To the extent feasible" generally means applying a higher threshold for evaluating the reasonableness of the costs of treating hot spots of contamination (OAR 340-122-085(5)).

For contaminated **groundwater or surface water**…, in which a significant adverse effect on existing or reasonably likely future beneficial uses has been identified…, the FS should evaluate treatment to concentrations that ensure such significant adverse effects will not occur (OAR 340-122-085(5)). For contaminated **sediment**, the FS should 1st evaluate the extent to which the contamination can be reliably contained. 2nd, the FS should evaluate the feasibility of treatment (applying a preference thru a higher threshold for cost reasonableness) to a point where the concentration or condition making the hazardous substance a hot spot would no longer occur.

XXXXXXXXXXXXXXXXXX

As a final note..., I’m not exactly sure whether DEQ’s hot spot

rules should be considered an chemical-specific or action-specific ARAR. The rule could be considered a chemical-specific ARAR because it based on risk-based criteria limiting the concentration of an individual hazardous substance. The rule could also be considered an action-specific ARAR because it considers technology-based requirements for remediation of hazardous substances posing elevated risk.

Hope this helps.

Jim

-----Original Message-----
From: Cora.Lori@epamail.epa.gov [mailto:Cora.Lori@epamail.epa.gov]
Sent: Thursday, September 10, 2009 2:50 PM
To: ANDERSON Jim M
Cc: Humphrey.Chip@epamail.epa.gov; Blischke.Eric@epamail.epa.gov; Koch.Kristine@epamail.epa.gov
Subject: State ARARs- chemical specific

Hi, Jim. I know that EPA hasn't gotten back with you on the state's

proposed ARARs list yet. But since the LWG wants to talk about chemical

specific ARARs in different media soon, I want to get clarity on how the

State implements its hot spot regulations. Basically, if there is a

standard that sets a particular action level or cleanup standard for a

chemical it generally falls into a chemical specific ARAR category. It

seems the hot spot regulations straddle this line a bit. Do you view

those regs. requiring a specific level of cleanup? See my summary of

what I think the basic requirement under your regulation is. Do you

agree?

if contaminant concentrations fall within the definition of “hot spot”

set forth in subpart 01115(32), treatment of contaminated media to

levels below such risk levels needs to be evaluated in the feasibility

study

Thanks.

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