From: **KarenD Johnson/R3/USEPA/US**
Sent: 12/12/2011 9:16:00 AM

To: Victoria Binetti/R3/USEPA/US@EPA
CC:
Subject: Re: Fw: new table

My guess is the Health Advisories were calculated before these were re-calculated, and may need updated since these have been. I'm not sure who develops the 1 day 10 day criteria in OW. I realize Arsenic is a problem, but the others probably will not be and Dawn is looking at both sodium and chloride levels now as well..

.Karen D. Johnson, Chief
Ground Water & Enforcement Branch

From: Victoria Binetti/R3/USEPA/US
To: KarenD Johnson/R3/USEPA/US@EPA
Date: 12/12/2011 09:11 AM
Subject: Fw: new table

Victoria P. Binetti
Associate Director, Drinking Water & Source Water Protection
Water Protection Division
US Environmental Protection Agency, Region III

Phone: 215-814-5757
Fax: 215-814-2302
Cell: 215-514-8857

----- Forwarded by Victoria Binetti/R3/USEPA/US on 12/12/2011 09:11 AM -----

From: "Daniels, Lisa" <ldaniels@pa.gov>
To: Linda Boornazian/R3/USEPA/US@EPA, Victoria Binetti/R3/USEPA/US@EPA
Cc: "Heffner, Kelly" <kheffner@pa.gov>, "Adams, Duke" <ranadams@pa.gov>, "Devaney, Michele" <mdevaney@pa.gov>
Date: 12/12/2011 09:04 AM
Subject: RE: new table

Linda and Vicky,

Thank you for the information regarding the updated risk assessment tables as they relate to the Dimock private well situation. I have some questions about how EPA is using the tables to determine "immediate health threats to users" – which I believe is the benchmark for taking action as per your emergency powers authority under the SDWA.

PADEP has done quite a bit of work determining/compiling acute (i.e., immediate) health risk levels for contaminants and water treatment chemicals. These acute risk levels are used to determine when a water supply warning (i.e., boil water advisory, do not consume notice, do not use notice) is needed. For contaminants, PADEP uses EPA's published Health Advisories (one-day and ten-day health advisories) as per the *2011 Edition of the Drinking Water Standards and Health Advisories (EPA 820-R-11-002)*. In fact, the use of these HAs (as acute risk levels) were recommended to us by EPA Region 3 staffers. Please note, the one-day and ten-day health advisories are protective of a 10-kg child. For water treatment chemicals, PADEP is working with NSF and other states to determine and compile acute risk levels for chemical overfeed situations.

For the metals of interest in Dimock (Arsenic, Manganese, Iron and Aluminum), here is the acute risk level information that we have:

 DIM0059077

- Arsenic (MCL = 0.010 mg/L or 10 ug/L):
  - As per EPA's 2011 HA guidance, no one-day or ten-day HAs are provided.
  - The following acute risk levels were provided to MD this year by EPA for a MHP contamination case – acute risk levels for infants = 55 ug/L, for adults = 175 ug/L, with death occurring at 675 ug/L.
- Manganese (Secondary MCL = 0.05 mg/L or 50 ug/L):
  - As per EPA's 2011 HA guidance, one-day and ten-day HAs = 1 mg/L (1,000 ug/L)
- Iron (Secondary MCL = 0.3 mg/L or 300 ug/L):
  - As per EPA's HA guidance, no one-day or ten-day HAs are provided.
  - As per NSF's assessment of acute risk levels for Ferric Chloride, the "Do Not Consume" limit for Iron = 60 mg/L (60,000 ug/L)
- Aluminum (Secondary MCL = 0.2 mg/L or 200 ug/L)
  - As per EPA's HA guidance, no one-day or ten-day HAs are provided.
  - As per NSF's assessment of acute risk levels for Aluminum Sulfate and Polyaluminum Chloride, the "Do Not Consume" limit for Aluminum = 100 mg/L (100,000 ug/L)

It is unclear to me whether the numbers that you provided in the updated risk assessment tables are for acute or chronic health effects. Here are the numbers from the tables for the metals of concern:

- Arsenic = 4.7 ug/L
- Manganese = 380 ug/L
- Iron = 11,000 ug/L
- Aluminum = 16,000 ug/L

Based on the information that we have, I suspect the numbers from the tables are for chronic health effects. Chronic health effects levels do not pose immediate health threats to users and would most likely not meet EPA's benchmark for taking emergency action. I would also have a hard time understanding how EPA could say that an Arsenic level below the current MCL represents an "immediate health threat to users".

I would appreciate being kept in the loop regarding how EPA intends to use the updated risk assessment tables for private water supplies. Your decisions may impact how we apply MCLs and Health Advisories to PWSs.

Thank you – Lisa

Lisa D. Daniels | Acting Director
Bureau of Water Standards and Facility Regulation
Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street | Harrisburg, PA 17101
Phone: 717.787.5017 | Fax: 717.772.3249
www.depweb.state.pa.us

Notice: On **Friday, July 29th**, the commonwealth will be adding @pa.gov as the primary email domain for all state employees. For example: ldaniels@state.pa.us will now be ldaniels@pa.gov . The email addresses ending in @state.pa.us will continue to function so that emails will never be interrupted. We appreciate your cooperation as we take a small step to increase the usability and consistency of the commonwealth's online communications.

From: Boornazian.Linda@epamail.epa.gov [mailto:Boornazian.Linda@epamail.epa.gov]
Sent: Friday, December 09, 2011 3:31 PM
To: Daniels, Lisa
Subject: new table

http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

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Linda Boornazian
Deputy Division Director, Water Protection Division, EPA Region 3
1650 Arch St (mail code:3WP00)
Philadelphia, PA, 19103
13th Floor, Room 121
Phone: 215--814-5423
or 215-814-2300
Fax: 215-814-2301[attachment "EPA HAs 2011.pdf" deleted by KarenD Johnson/R3/USEPA/US]