Early draft of the water PAQ.

Water PAQs

These PAQs were written to provide a comparison of the PAQ concentrations in our community's drinking water and food. These PAQs include concentrations of the drinking water and food in our community on a daily basis.

Since this is the first draft of the ORIA PAQ, we are providing this draft to you, the community, for your review. We request that you let us know if you have any questions or comments on the next draft of the draft you have reviewed.

THANKS FOR PROVIDING US AN opportunity TO REVIEW THE FIRST DRAFT OF THE ORIA PAQ. ORIA does not have

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Document body

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Forwarded by Susan Widen/MG3220/SFPA/04/06/05 11:19 AM

Dear all,

Please make note of the following comments on the ORIA PAQ.

- Focus only on the water and food, not on the exercises.

Thank you.

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Processed

Clear Category

NONE RESPONSIBLE

Comments

| Change Operation | Contributor | NMP | Total Pages | Water PAQ Comments - Focus on Water and Food
|------------------|-------------|-----|-------------|-----------------------------------------------|
| 2018 | 01/22/2009 12:00 PM | 9 | 9 | Date/Time

Description

From

SSW50/DC/NEPA/US

To

SSW50/DC/NEPA/US

Document Log Item
I also put together 3 tables comparing ORLAs PAG concentrations to MCLs and concentrations corresponding to drinking water. I used MCLs and ORLAs data since these are measures EPA utilizes when making decisions about providing bottled water during emergencies involving class A contaminants. I noted that a number of the ORLAs concentrations are thousands to 1 million of the MCLs or 1 to 10. I feel we are over a hundred times higher than the MCLs or 10. If we are over a hundred times higher than the MCLs then we should see an effect of acute exposure. This is not evident from the data we have. So in summary, I understand that different science may have something to do with it since the MCL is based on ICPR methodology; however, the ORLAs are also based on ICPR methodology.

Water PAGs

Chronic effects

Food PAGs

Subchronic effects

It also appears that drinking water at the PAG concentrations for Te-139 and Te-137 may lead to some effects. For acute exposure (not death) above 0.05 Gy (25 rad), that is, vomiting, fever, etc., the acute dose was 1.8 Gy (180 rad) or 1 Gev. For these two radionuclides, an acute dose of 1 Gev is required for a 10% increase in radon levels. Since drinking water at the MCLs and ORLAs concentrations are thousands to 1 million of the MCLs or 10, if we are over a hundred times higher than the MCLs then we should see an effect of acute exposure. This is not evident from the data we have. So in summary, I understand that different science may have something to do with it since the MCL is based on ICPR methodology; however, the ORLAs are also based on ICPR methodology.
**COMMENT FORM**

**Point of Contact (name/phone number/email):** Stuart Walker/USEPA - OSRTI/703-603-8748/walker.stuart@epagov

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<th>Topic</th>
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We have no critical comments on the April 2007 draft. We are making several substantive comments, either new comments or revisions of previous comments due to our ability to evaluate the concentration tables in version 2 of the draft PAGs. We would also suggest you send us a final updated/draft version to see if there are any objections to any of the revised language.

We realize that this issue was decided for the DRS/ID and PAG Federal Register notice, however, we are making this comment because this ORLA document covers a wider scope of responses and actions and this draft of the ORLA document includes radioactive concentrations corresponding to the PAG.

The 500 mrem/yr Drinking Water PAG should be deleted or replaced with EPA's CERCLA Removal Action Level (RAL) concentrations. OSWER Directive 9350.1-12A, Final Guidance on Numeric Removal Action Levels for Contaminated Drinking Water Sites, recommends providing alternative drinking water supplies during CERCLA remedial actions when water is contaminated above a concentration corresponding to the MCL or 1 x 10^-4 cancer risk using EPA's Office of Water methodology (e.g., 70 period of exposure and cancer morbidity), whichever allows the greater concentration. In general, a 500 mrem/yr drinking water PAG would correspond to a risk of 2.61 x 10^-5 cancer mortality risk using 70 period of exposure, suggesting the RAL would allow the public to drink water at concentrations 200 times greater than EPA's guidance for emergency removals. However, for most of the radionuclides, the RAL would be much less than 200 times greater than the MCL. Providing alternative drinking water in the interim phase should be the standard treatment approach. Providing alternative drinking water in the interim phase should be the standard treatment approach.

Also, too much ORLA Drinking Water PAG concentrations it appears that ingestion of the water may result in greater than 25 rad absorbed dose, resulting in subchronic effects such as vomiting and fever.
We realize that this issue was decided for the DHS RDD/IND PAG Federal Register notice, however we are making this comment because this ORIA document covers a wider scope of response actions actions and this draft of the ORIA document includes radionuclide concentrations corresponding to the PAG.

The 500 mrem/yr Food Interception PAG based on FDA DILs should be deleted or replaced with a protective value similar to EPA RAs, such as a 1 x 10^4 concentration over 70 years. In general, a 500
mrem/yr Food Interception PAG would correspond to a risk of 4.23 x 10^-4 cancer mortality risk for each
year of exposure for members of public who would have this contained food shipped to them, a risk
of 2.01 x 10^-4 cancer mortality risk using 70 years of exposure. This could greatly expand the
dose as a result of the WMD incident in this region the public becomes alarmed that radioactive food is
being shipped around the country. Considering the food supply, the food authenticity at the point of
use such a high dose number as a starting point. In addition, FDA DILs only apply in the first year of an
accident, starting with the early phase (see pg. 6-8 of 'Accidental Radioactive Contamination of Human
Food and Animal Feeds: Recommendations for State and Local Agencies', August 13, 1998). In general, a 500
mrem/yr Food Interception PAG would correspond to a risk of 2.01 x 10^-4 cancer mortality risk using 70 periods of
exposure, suggesting the PAG should allow the public to ingest food at concentrations 200 times greater
than EPA's guidance for drinking water during emergency removal. OSRIT's analysis of FDA DILs with
concentrations corresponding to 1 x 10^4 indicator that the DILs are generally tens or hundreds of times
higher than the 10^4 concentrations, and in a few instances thousands of times higher. In a few other
instances, they are actually lower. Please see attached analysis comparing FDA food PAGs to RAL-like
(1 x 10^4) concentrations.

PROCEDURES FOR COMPLETING THE COMMENT FORM

1. In the Page # and Line # columns, insert the relevant page and line number(s) pertaining to the comment.
2. In the Comment Type column, indicate whether the comment is Critical, Substantive, or Administrative in nature. If Critical comments are not incorporated, you will be informed as to the reason for the decision.