UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Dimock Home Well Data 13 Jan 2012

FROM: Dawn A. Ioven, Toxicologist
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TO: Richard Fetzer, OSC
Eastern Response Branch (3HS31)

I reviewed the data summary provided to me on 6 January 2012 for several private wells in Dimock, PA. My understanding is that these homes are without an alternate water supply, and rely solely on private wells for potable and household water. Of the eight wells included in the summary, four (highlighted in red) contained contaminants at levels of potential concern, as described below.

When reviewing the findings, please keep in mind the following points: 1) The data set on which these conclusions are based was not generated by U.S. EPA, appears to be limited in scope and is of unknown quality. 2) Noteworthy concentrations of chemicals either lacking established toxicity criteria or possessing provisional toxicity values were reported in several wells. These chemicals, especially those that are not naturally-occurring, may merit further consideration as data gaps are filled.

Resident 1

Although manganese (96.5 ug/L) was detected at a level in excess of its Secondary MCL (50 ug/L), this concentration is not expected to pose a significant risk. (Secondary MCLs, in general, are based on aesthetics, such as taste, odor and appearance, rather than health endpoints.) The other chemicals in this well are also not expected to pose a threat at the observed concentrations.

Resident 2

No contaminants were reported at levels of concern.

Resident 3

Sodium (110,000 ug/L) exceeded its Secondary MCL (20,000 ug/L). Sensitive individuals, such as those with hypertension or renal deficits, should be aware of this sodium source and minimize dietary intake, as necessary. Manganese (76 ug/L) exceeded its Secondary MCL (50 ug/L), but does not pose a threat.

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Resident 4

Similar to above (Resident 3), sodium was observed at this residence (82,900 ug/L) in excess of its Secondary MCL (20,000 ug/L). Manganese (628 ug/L) also exceeded its Secondary MCL (50 ug/L); exposure to this concentration would yield a Hazard Quotient of approximately 2.

Resident 5

Manganese (212 ug/L) exceeded its Secondary MCL (50 ug/L), but does not pose a threat.

Resident 6

In addition to exceeding its Secondary MCL (50 ug/L), manganese (669 ug/L) in this well could elicit a Hazard Quotient slightly greater than 2, representing a potential health concern. Further, sodium (131,000 ug/L) exceeded its Secondary MCL (20,000 ug/L), and could represent a noteworthy source of intake for individuals on sodium-restricted diets. No other chemicals were reported at levels of concern.

Resident 7

Manganese (1360 ug/L) was detected at a level that generates a Hazard Quotient of approximately 4. This represents an imminent and substantial threat. Note that two children (including one toddler) reside at this location.

Resident 8

Arsenic (37 ug/L) was observed at a concentration that would pose a long-term cancer risk of 8E-04. This represents an imminent and substantial threat. Additionally, the detected concentration of arsenic exceeds its MCL (10 ug/L). Note that two toddlers reside at this location.

If you have any questions or would like to discuss this further, please let me know.

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