

Extra Information
9/22/08 #7

Project No. 22-01-01
September 16, 2008

Chief, Records Activity and Management Branch
Agency for Toxic Substances and Disease Registry
1600 Clifton Road, N.E., MS F-09
Atlanta, Georgia 30333

Attn: W.R. Grace & Company, Inc. (Actual Name: W.R. Grace & Co. – Conn.)

Subject: Comments on ATSDR Public Health Assessment for
W.R. Grace Superfund Site
Acton, Middlesex County, Massachusetts
EPA Facility ID: MAD001002252
August 26, 2008

Dear Chief:

On behalf of the Town of Acton and its Board of Selectmen and Board of Health, O'Reilly, Talbot & Okun Associates, Inc. (OTO), has reviewed the Agency for Toxic Substances and Disease Registry (ATSDR) Initial/ Public Comment Release Public Health Assessment (PHA) for the W.R. Grace Superfund Site dated August 26, 2008. In addition, we have reviewed the ATSDR Initial Public Health Risk Assessment for the Site dated September 1992 to understand how ATSDR's opinions may have changed in the intervening 15 years. Based on our review, we offer the following preliminary comments. We note that various entities including the Acton Citizens for Environmental Safety, (ACES) have requested a thirty-day extension of the public comment period, which would afford time for a more thorough review of and more complete comments on the PHA. Accordingly, the Town of Acton reserves the right to make additional comments during the extended public comment period and urges ATSDR to grant that extension.

GENERAL COMMENT:

PURPOSE and HEALTH ISSUES:

- a. The ATSDR PHA (Page 1 and 28) would be more useful to the public if it more directly explained its evaluation and conclusions regarding "future" exposures and whether health effects could occur from these "future" exposures. For the public water supply wells, the PHA evaluated risks based on past analytical data (Assabet One and Two from 1970 to 1978); and the existence of current controls (e.g., treatment process for VOC's on the currently used municipal drinking water wells). The PHA does not evaluate exposure and risks under likely "future" conditions of plume migration, the absence of controls on existing municipal wells, and use of other supply wells (see Specific Comments below).
- b. It would be quite helpful to briefly explain the similarities and differences of the ATSDR PHA and the USEPA Public Health Risk Assessment in evaluating past, current, and future

exposures and risks. The public is confused by what appear to be the duplicative roles of the USEPA and ATSDR and does not immediately appreciate the distinctive expertise each agency brings. Clarification on this point would be beneficial. It would also be helpful to understand to what extent the USEPA has shaped or influenced the conclusions in the PHA, in order for the public to understand whether those conclusions represent ATSDR's independent professional judgment unaffected by USEPA's choice of remedy for the Grace Superfund Facility.

- c. The ATSDR PHA (pages 6 to 20) calculated site specific exposure doses and compared them to health guidelines. The calculated cancer risks are summarized in Table 10 of the PHA. It would be helpful to the public for the PHA to similarly present a summary of the comparison of site specific exposure doses to noncancer health guidelines, such as USEPA Reference Doses (RfDs), and to list the primary noncancer toxic effects.

SPECIFIC COMMENTS:

NORTHEAST PLUME AREA

The ATSDR 1992 Initial PHA (Page 53, Item 4) recommends that "The extent of the area of groundwater capture for the Aquifer Restoration System should be extended to include the area north and east of the Secondary Lagoon". This comment reflected a concern by ATSDR that the "Northeast" contaminant plume was continuing to migrate towards the municipal well field unchecked by mitigating measures.

Additional information developed since the 1992 report has demonstrated conclusively that the Northeast contaminant plume has grown to over a mile in length and is directly impacting several of the Town's public water supply wells.

Despite these more conclusive field data, the updated ATSDR 2008 PHA does not discuss the Northeast plume issue or discuss the earlier ATSDR recommendation. The strongly worded recommendation from the 1992 report is not echoed in the 2008 report and no explanation is offered for this difference, despite the alarming data developed since that time. Clarification of ATSDR's evolving position on this issue would be helpful in allowing the public to better understand ATSDR's perspective.

ATSDR RECOMMENDATIONS REGARDING DRINKING WATER SUPPLY WELLS

ATSDR concludes on Page iv to v of the 2008 PHA, that "ATSDR considers current exposure to VOC's, arsenic, and manganese in the municipal drinking water supply to be of no apparent public health hazard". Based on this conclusion ATSDR recommends (Page v) "continued monitoring of the municipal drinking water wells used by the Acton Water District to ensure that air strippers are adequately removing VOC contamination and that the municipal drinking water supply meets all the requirements of the Safe Drinking Water Act."

ATSDR based its conclusion of no apparent public health hazard from current exposure to the municipal drinking water supply only on the past and current data collected from treated water

from the current public water supply wells. This data indicates that there is no VOC contamination in the municipal drinking water supply due to the treatment process. However, significant VOC contamination attributable to the Grace Superfund Facility remains in the aquifer from which the public water supply wells draw water. The net effect of ATSDR's observation will ultimately be to place on the Acton Water District the burden to protect the public from the polluter's contamination, rather than to place the responsibility on the polluter itself to actively clean up the remaining contamination it has caused to the public drinking water aquifer.. The Town of Acton believes that this approach turns the governing principles of environmental law and science on their head. ATSDR should, at a minimum, evaluate the public health risks associated with drinking *untreated* water from the aquifer given its contaminant load, so that the public has an understanding of the baseline risks associated with the Grace Superfund Facility.

In any event, ATSDR's conclusion does not adequately address public health hazards associated with future exposures to the municipal drinking water supply for the following reasons.

- a. The ATSDR conclusion does not consider potential future risks, were the treatment process for VOC's at the supply wells to be temporarily shutdown or otherwise become ineffective;
- b. The ATSDR conclusion does not consider potential future risks were arsenic and manganese concentrations to increase at the supply wells without adequate treatment process in place;
- c. The ATSDR conclusion does not consider potential future risks arising from the Town of Acton's possible use of additional new supply well(s) located in or near area(s) where groundwater contamination is higher than that currently measured in the treated municipal drinking water supply; and
- d. The ATSDR report appears to overlook possible future drinking water exposures arising from the use of the aquifer within the six geographic plume areas identified in the Remedial Investigation (RI) for Operable Unit-3 (OU-3), particularly in the Northeast Plume Area.

ATSDR RECOMMENDATIONS REGARDING IRRIGATION WELLS

On the issue of private irrigation wells the ATSDR 2008 PHA concludes in part that:

“Six private irrigation wells have been identified in the vicinity of the W.R. Grace site that are used for non-drinking water purposes”... “Based on the concentrations reported for the VOC contaminated private well and toxicological evaluations, adverse health are effects are not expected to occur. *Therefore, ATSDR concludes that exposure to groundwater from private irrigation wells for non-drinking water uses poses no apparent public health hazard.*” (Note – emphasis shown is as per the original).

ATSDR bases this conclusion on data collected from the six cited irrigation wells, one of which is now permanently closed (this information was missing from the PHA). We have the following comments on this portion of the PHA.

- a. The ATSDR PHA report should seek to reconcile its conclusion regarding no potential hazard from irrigation wells with the position of EPA, which indicates that there is a risk from the use of irrigation wells.
- b. The ATSDR should clarify that its irrigation well conclusions only pertain to “current” risks and that ATSDR’s report does not consider other possible wells or changing concentrations or types of contaminants.
- c. The ATSDR report recommends (Page v), “that the five remaining active private irrigation wells that are used for nondrinking purposes be monitored periodically by W.R. Grace to determine whether levels of contaminants are of public health significance.” This recommendation, along with specific sampling frequencies, analytes, and levels of public health significance should be reconciled with the EPA’s Long-term Monitoring Program as part of the Proposed Cleanup Plan.
- d. The ATSDR report (Page v) recommends “that no new private wells be installed in the vicinity of the groundwater plume near the W.R. Grace Site”. However, there are no discussions or calculations presented in the report text supporting this conclusion. While it could be argued that installing no new wells is an obvious course of action, this would appear to contradict the report text which concludes there is no apparent public health hazard from the use of irrigations wells. A reader might reasonably ask why limit new wells, if there is no risk, and why allow the existing wells, if there is a risk? This apparent contradiction may be confusing to the public.

Comment on ATSDR PHA – 1,4-Dioxane

In 2006, 1,4-dioxane was detected in groundwater samples proximate to the W.R. Grace landfill and the BOC Gases property. The detected concentrations of 1,4-dioxane ranged from non-detect (2 ug/L was the detection limit) to a maximum of 36 ug/L in landfill well # LF-06C. Please note that the MassDEP has issued a drinking water guideline for 1,4-dioxane of 3 ug/L. The USEPA has not yet issued drinking water standards for 1,4-dioxane.

In September 2007, 1,4-dioxane was detected in monitoring well AR-30D at a concentration of 4.4 ug/L. Well AR-30D is located directly adjacent to the Acton School Street Christofferson municipal drinking water supply well. The Acton Water District (AWD) has been conducting regular monitoring for this unregulated compound at all Assabet and School Street wells for the past 2 years. The laboratory can detect a Practical Quantitation Limit (PQL) of 0.2 ug/L, and also flags detections between the PQL and Minimum Detection Limit (MDL). The AWD has consistently seen levels of 1,4-dioxane in most of these wells around 0.2 ug/L or just below.

The ATSDR PHA has evaluated only those compounds (VOCs, arsenic, and manganese) that were detected in the Assabet Supply Wells in 1970 to 1978 to evaluate “past” exposures. Current controls on the Supply Wells (i.e., treatment of VOCs) are considered by ATSDR to address “current” exposures.

Given the potential toxicity of 1,4-dioxane, its low rate of natural degradation, its potentially rapid movement in the aquifer system, and the absence of treatment processes on the AWD wells capable of removing 1,4-dioxane from raw water, the ATDSR PHA is deficient for failing to address the potential public health hazard associated with current and future exposures to 1,4-dioxane.

Thank you for the opportunity to provide comments on this document. If you have any questions, please contact one of us.

Sincerely,
O'Reilly, Talbot & Okun Associates, Inc.

Debra M. Listernick, Sr. Risk Assessor

James D. Okun, Principal