

**OLIN CHEMICAL SUPERFUND SITE
WILMINGTON, MASSACHUSETTS
NOVEMBER 30, 2011 PUBLIC MEETING
QUESTIONS AND ANSWERS**

The following questions were asked at the November 30, 2011 Public Meeting held at the Wilmington Middle School. The questions are being formally presented so that the answers are available to a wider audience. While the answers to the questions are generally presented as the responder stated during the meeting, some liberty has been taken to expand the response to provide a clearer and fuller answer to the question raised. The comments from the evening have been grouped by comment type and some similar questions have been combined to facilitate responses.

I. PRIVATE WELL ISSUES

1. Q: Why aren't all residents with NDMA detected in their wells being provided bottled water? Why are our families being allowed to be slowly poisoned?

A: (Response by EPA). There are no federal or state drinking water standards for the detected chemical of n-nitrosodimethylamine or NDMA. Detected concentrations of NDMA are low and estimated exposure risk is within the EPA's excess lifetime cancer risk range. If detected concentrations were higher, EPA would have clear regulatory authority to require Olin to act. EPA understands that any concentration of this chemical in a residential supply well is of concern and persistence of low concentrations of NDMA in supply wells over time may lead to action. (Please see slide number 34 in the attached slide show presented at the November 30, 2011 Public Meeting).

2. Q: The level of NDMA in our well is 31 ng/l, but EPA can't act until it reaches 42 ng/l?

A: (Response by EPA). EPA understands that any level of NDMA detected in your drinking water well is concerning. The 31 ng/L is within the EPA's excess lifetime cancer risk range. EPA is on weak regulatory footing to require Olin to tie residents into public water when concentrations result in exposures within this risk range. If detected levels go above 42 ng/l, then EPA would be on solid footing to require action. EPA is continuing to have Olin sample the residential wells on a quarterly basis to monitor any change or increase in contamination.

3. Q: When does EPA expect to make a decision on providing alternate water to residents?

A: (Response by EPA). Last year, EPA required Olin to provide two families with bottled water as a temporary and prudent measure to eliminate ingestion of NDMA. This decision was made due primarily to the persistence of detected NDMA rather than the actual detected concentrations which remained within the EPA's cancer risk range. EPA will require Olin to continue to sample area supply wells. EPA has also required that Olin conduct a study to evaluate permanent options for clean drinking water. Such options are expected to include

connection to the municipal supply line or installation of portable treatment units. This study, referred to as an Engineering Evaluation/Cost Analysis (EE/CA), will develop and screen viable alternatives so that EPA will have an option in place for clean drinking water should a decision be made that unacceptable exposure is occurring. The decision on implementation of the EE/CA alternatives will be made separately. That level has not yet been reached.

4. Q: What is the timeframe on the Engineering Evaluation/ Cost Analysis (EE/CA)?

A: (Response by EPA). The EE/CA Work Plan prepared by Olin was just approved by EPA. The actual EE/CA Report should be available for public review in approximately 3-6 months. The decision by EPA on implementation of the EE/CA alternatives will be made separately following public input.

5. Q: Why should I have to pay for bottled water or to tie-in?

A: (Response by EPA). EPA cannot require Olin to tie in residents at this time based on current levels of NDMA in the drinking water wells. If concentrations increase or persist to the point where EPA can require action, Olin will be required to provide bottled water or fund a permanent solution such as connection to the municipal water supply or installation of a treatment system. The specific solution will be the conclusion of the EE/CA process. While EPA regulations would require Olin to maintain any type of treatment systems, there are no regulations that would require Olin to pay future municipal water bills.

6. Q: I heard that Olin had connected homes along Main Street into the municipal water supply due to private well contamination. Why can't the existing homes with private well contamination be tied into town water?

A: (Response by EPA, Olin and Town of Wilmington). Several homes along Main Street were tied in to the municipal water system by Olin in 2002 or 2003 prior to EPA's involvement at the site. These tie-ins involved individual settlements between property owners and Olin, and are not public. EPA does not know the details of those wells or the agreements. At present, the NDMA levels in the drinking water supply wells currently being sampled are below levels needed for EPA to require Olin to take action. Persistence of chemicals in wells over time is what will drive action as far as getting those homes tied in to the public water supply.

7. Q: When is Olin going to provide permanent potable water to residents? What prevents Olin from tying in residential homes now? We want to be connected to the municipal water line now. (This question was repeated by several members of the audience, as well as local and state officials.).

A: (Response by Olin).

8. Q: Can homeowners get a grant to hook into town water?

A: (Response by EPA). EPA is not aware of any grants for private homeowners to tie into public water supplies.

9. **Q: I have a private well along Wildwood Street, southeast of the Athletic area where there's been flooding. Are the private wells in this area at risk from overflow? Could NDMA be in wells located on Wildwood Street?**

A: (Response by EPA). EPA has no reason to believe that contamination has spread into that area based on monitoring results from monitoring wells located closer to contamination from Olin's property. EPA will continue to expand or contract the area of well monitoring based on sampling results.

II. DAPL RELATED ISSUES

1. **Q: Why is EPA testing the deepest DAPL pool?**

A: (Response by EPA). DAPL refers to dense-aqueous phased liquid which has pooled in bedrock depressions beneath the study area for the Olin Superfund site. DAPL contains the highest concentrations of some site-related chemicals and has unique physical properties that make it difficult to physically extract. EPA is requiring Olin to conduct a DAPL pilot pump test. The test is being conducted within a DAPL pool within the study area to determine the effective pumping rate and to ensure that pumping does not cause further migration of chemicals into overlying groundwater. While it is not necessary to conduct this pump test in the "deepest" part of the pool, DAPL needs to be of sufficient thickness necessary to ensure an adequate test. The information will be used to help determine a permanent remedy.

2. **Q: Regarding the DAPL pilot pump test, how many times will you fill the tank and will you need to sample private wells more frequently during the testing period?**

A: (Response by EPA). A picture of the actual receiving tank that has been delivered to the site was displayed at the Public Meeting (Please see slide number 29 in the attached slide show presented at the November 30, 2011 Public Meeting). It holds approximately 50,000 gallons. The optimum pumping rate will be determined based on specific site conditions. However, the initial test plans to be run for one year and pump the contaminated groundwater at between 0.5 and 2.5 gallons/ minute (gpm). It is not anticipated to be run continuously over this year period. Based on this anticipated volume and low flow rates, the tank could be filled once or twice a month and the contents disposed of offsite. The contaminated water will be pumped out of the tank and into a truck for offsite disposal by a licensed hazardous waste transporter.

Based on the DAPL pilot pump test itself, there are no plans to sample the private wells on a more frequent basis. The residential wells are currently being sampled on a quarterly basis. Multi-level groundwater monitoring wells directly surrounding the pilot test location have been installed and will be sampled for groundwater contaminants and any impacts. This is intended to provide assurance that the pumping is not creating negative impacts to groundwater and private wells. Given the location and low pumping rates currently proposed for the DAPL pilot pump test, impacts to residential wells are highly improbable. The

DAPL pilot pump test location is located at a distance from private wells where pumping at rates of 0.5 to 2.5 gpm will not affect the residential wells.

3. Q: Explain the persistence of NDMA and how will NDMA be transported?

A: (Response by EPA). Persistence refers to the continued presence of a contaminant over time; in this case, based on sampling results, NDMA has been in the groundwater for years. The highest concentrations of NDMA are within the deep DAPL pools. NDMA is released from the DAPL pools by a process called chemical diffusion, which means molecules seeking equilibrium travel from areas of high to low concentration. It's hard to say how far NDMA will travel within overlying or bedrock groundwater, but so far has been detected in a well one mile from the Olin property. EPA does not have any reason to believe that NDMA will travel as far as Wildwood Street. EPA will continue to require monitoring of area wells to clearly define the boundary of groundwater contamination.

III. OTHER SITE RELATED ISSUES

1. Q: What has prompted EPA to show concern for the North Pond Area?

A: (Response by EPA). There is evidence of some historic discharge from overflow of lagoons into South Ditch and from there via an open culvert into the North Pond area, which was much larger at one time. There appears to be no evidence of a current existing hydraulic connection. EPA's overall concern for the North Pond area is low.

2. Q: Has EPA determined the depth to ledge? How many cubic yards of soil are there at the Site? Why can't EPA simply require Olin to dig out all the soil to the top of ledge and replace with clean fill?

A: (Response by EPA). The depth to ledge is about 40 feet below ground surface. Soil contamination is contained in pockets across the 30 acres of the property. While digging it all out sounds simple, EPA can't require Olin to remove soil that is relatively clean. EPA also has a preference for treatment of contaminated soils. The cleanup plan will focus on those pockets of contaminated soil and will evaluate the best methods to address them.

3. Q: The possibility of three separate clean-ups is a concern (question of separation of the site into three Operable Units). How can we be certain that this approach doesn't allow Olin to develop its property before dealing with the groundwater?

A: (Response by EPA). It is typical in the Superfund process to break up complicated sites into separate study areas, known formally as Operable Units, based on a comprehensive plan for site investigation. All three operable units are progressing concurrently. EPA is aware of the linkage between the Operable Units and will consider these linkages in the cleanup plans. It is uncertain if there will be three separate cleanup plans. If cleanup of the Olin site does move forward in separate actions by Operable Units, it will not be to facilitate Olin's development plans and will also not release Olin from cleanup responsibilities for

all three operable units. Redevelopment will not absolve Olin of the responsibility for the cleanup of the site property.

IV. MISCELLANEOUS ISSUES

1. Q: What responsibility will Olin take concerning impact to property values?

A: (Response by Olin). Olin will submit this question to the appropriate people at the company.

2. Q: Can I have the name of the person at Olin whom I should submit a letter to? Will Olin commit to provide a response within 2 to 3 weeks?

A: (Response by Olin). Email Olin correspondence to: Mr. James Cashwell at JMCashwell@Olin.com with your concerns and he will take those concerns to the appropriate people at Olin. Olin cannot commit to a specific timeframe for response at a Public Meeting.

3: Q: Who is paying GeoInsight?

A: (Response by Town of Wilmington). The Town of Wilmington is paying for consulting services from GeoInsight. They were retained by the Town several years ago prior to inclusion of the Olin property on the Superfund list. The Town believes it is a prudent measure to continue to have independent technical expertise from GeoInsight to ensure the process progresses in the best interest of the community.