

Health Consultation

(EXPOSURE INVESTIGATION)

NORTH HATFIELD ROAD

HATFIELD, HAMPSHIRE COUNTY, MASSACHUSETTS

DECEMBER 19, 2003

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION
(EXPOSURE INVESTIGATION)

NORTH HATFIELD ROAD

HATFIELD, HAMPSHIRE COUNTY, MASSACHUSETTS

Prepared by:

Massachusetts Department of Public Health
Bureau of Environmental Health Assessment
Under a Cooperative Agreement with the
Agency for Toxic Substance and Disease Registry

BACKGROUND AND SITE DESCRIPTION

In the morning of November 8, 2002, a soil fumigant (Telone® C-35) was reportedly applied to a 7-acre tobacco field along North Hatfield Road in Hatfield, Massachusetts (see Figure 1). That evening and the following evening (November 9, 2002), a number of residents, as well as responding Fire Department personnel, reported experiencing irritant symptoms that included respiratory and eye irritation. In response, the town of Hatfield issued a voluntary evacuation order, and some residents elected to leave their homes. One family, who contacted the Massachusetts Department of Public Health (MDPH), Bureau of Environmental Health Assessment (BEHA) on November 14, 2002, reported that they had two children who had experienced exacerbations of pre-existing asthma, and a second family reportedly took a child to a nearby emergency room on the evening of November 8, 2002. Both families evacuated their homes. These homes are located in a range of approximately 250 to 600 feet from the field where the soil fumigant was applied.

Telone® C-35 contains two main active ingredients, chloropicrin (CP) and 1,3-dichloropropene (DCP). Due to concerns about potential health impacts, on Monday, November 11, and Thursday, November 14, the family with two asthmatic children had their home's indoor and outdoor air tested by a private laboratory for DCP and CP. The maximum concentration of indoor DCP was 54 parts per billion (ppb) on November 11 and 14 ppb on November 14, 2002. Outdoor DCP was 2.9 ppb on November 11 and 14 ppb on November 14, 2002. No CP was detected outdoors on either date, but it was detected indoors at 1.2 ppb on November 11, 2002. CP was not detected indoors on November 14, 2002.

A public meeting was held on Saturday, November 16, 2002, sponsored by town officials and attended by representatives of Dow Chemical (the manufacturer of the fumigant product), the Massachusetts Department of Food and Agriculture (DFA), and community residents. Following the meeting, Dow reportedly agreed to conduct additional testing at two "near" residences (approximately ≤ 300 feet) and two "far" (approximately ≤ 600 feet) residences. This testing was limited to DCP only, and indoor and outdoor air samples were taken. DCP is the more volatile of the two main active ingredients.

The residences farther from the field were sampled on November 16 and November 17, 2002. On November 16, DCP was less than 1 ppb indoors and not detectable outdoors. On November 17, DCP was not detected in either indoor or outdoor samples for the distant residences.

One of the near residences tested on Friday, November 15, 2002, was found to have a maximum DCP concentration of 19.3 ppb indoors and 14 ppb outdoors. The second near residence showed a maximum indoor air DCP concentration of 14.4 ppb and no detection in outdoor air. On Sunday, November 17, 2002, the maximum indoor air sampling result from this residence was similar, 14 ppb indoors, and again, no DCP in the outdoor air sample.

Technical Assistance and Child Health Considerations

By the week of November 18, 2002, MDPH/BEHA had been contacted by some other residents and the DFA regarding the incident. In order to assist with determining potential health risks, MDPH/BEHA convened a conference call on Thursday, November 21, 2002, with town officials, DFA, and representatives from Dow Chemical to discuss air testing results to that point as well as the need for additional environmental testing. Town officials also requested that MDPH/BEHA provide technical assistance in helping determine whether the town's voluntary evacuation order should be lifted.

MDPH/BEHA noted that the federal Agency for Toxic Substances and Disease Registry's (ATSDR) intermediate exposure Minimum Risk Level (MRL) for DCP in indoor air was 3 ppb. MDPH/BEHA also reported the results of discussions with ATSDR representatives and with an environmental health physician, both of whom cautioned that because some residences had children, particularly asthmatic children, any detectable level of DCP in the indoor environment could present health concerns for residents with those types of health conditions.

In order to provide the best advice possible to residents and town officials, MDPH/BEHA recommended that additional sampling be conducted, given that indoor and outdoor air concentrations of DCP were continuing to be detected at the near residences, that some residents had continued to report health symptoms, and at least two families had children (some with asthma) who were reportedly symptomatic at the time of the incident.

Although DCP is considered a carcinogen, short-term exposures, such as experienced in this situation, are not expected to result in cancer concerns. The principal non-cancer health effects of DCP are irritant symptoms and notably, respiratory irritation. Given concerns about health impacts on asthmatic children, further testing seemed warranted.

CP is a potent lacrimator. No ATSDR guidance value is available for this compound. What made this situation more difficult to evaluate in terms of potential health impacts was the presence of asthmatic children who had already reacted to the initial incident. It is important that families, particularly those with asthmatic children, feel comfortable in returning to their homes without undue concern about potential exposure opportunities that may trigger an asthmatic attack.

Representatives of Dow reported that, because the levels detected in the indoor and outdoor air in and around homes to date did not exceed reportable quantities as established by the U.S. Environmental Protection Agency (EPA), they would not provide further resources for environmental testing. DFA reported that their agency had no available resources to conduct further environmental tests. Thus, MDPH/BEHA offered to ask ATSDR for funding support under the Exposure Investigation (EI) Section to conduct air sampling. ATSDR agreed to support additional sampling. Consent forms were developed, and homeowners reviewed and signed the forms. An example of the form is provided as Attachment 1. The rest of this report discusses the methods and results of air and surface wipe testing conducted with funds provided by the ATSDR.

METHODS

For this exposure investigation, MDPH/BEHA coordinated two, 24-hour air-sampling events and one dust sampling event in and around the affected homes in Hatfield.

Residences Selected

MDPH/BEHA and ATSDR agreed that residential environmental sampling should be targeted at those homes located nearest the field whose residents had expressed health concerns that could possibly be related to or aggravated by DCP or CP and/or for which previous air sampling data or reports of health effects were available. Four residences were selected, and all residences were located on North Hatfield Road within approximately 250 to 600 feet of the field.

Air Sampling

All four residences were sampled for DCP in indoor and outdoor air. Samples were collected by a private environmental consulting firm under contract to MDPH and/or ATSDR. Importantly, samples were analyzed by Spectrum Analytical, the same laboratory that had privately analyzed previous air samples.

Two indoor air samples and one outdoor air sample were collected from each home during the first sampling event (November 22-23, 2002). For the second sampling event (November 26-27, 2002), two indoor air samples were collected from each home. Summa® canisters equipped with 24-hour sampling regulators were used for all air samples. At each home, one canister was placed in the basement, and another one was placed in the first-floor living area. For the sample of outdoor air collected on November 23, 2003, the Summa® canister was placed approximately halfway between the tobacco field and the home. Then, 24-hour samples were taken, and the canisters were hand-delivered to the analytical laboratory for analysis.

Wipe Samples

Following the second air sampling event, wipe or dust samples were taken in the homes to determine whether there were residues of these chemicals in the house dust that might possibly provide an ongoing exposure source. Four 100-cm² (square centimeter) dust samples were taken at each home from surfaces that, as reported by family members, had not been recently dusted or cleaned. Each 100-cm² sample area was outlined with masking tape before collection. Gauze wipes were used to collect each sample. At each home, three samples were preserved in hexane and one sample was preserved in methanol. All samples were then delivered to Spectrum Analytical for analysis.

Analyses

The canisters from the first air sampling event were analyzed for DCP using the standard Gas Chromatography/Mass Spectroscopy-based EPA TO-14A method (USEPA 1997) with a detection limit of 0.5 ppb. The canisters from the second air sampling event were analyzed for DCP using the same method and were also scanned for CP via target ion search procedures, according to the Multi-Media, Multi-Concentration Organics Analysis EPA Contract Laboratory Program method OLM04.2 (USEPA 1999). All air DCP samples were analyzed for both *cis*- and *trans*-DCP; *cis*- and *trans*-DCP concentrations were then added together to get the total DCP concentration. The twelve dust samples preserved in hexane were analyzed for CP (0.05 micrograms (µg)/wipe detection limit) using EPA method SW846 8081 (USEPA 1996a), and the four preserved in methanol were analyzed for DCP (0.25 µg/wipe detection limit) using EPA method SW846 8260B (USEPA 1996b).

Quality Assurance (QA)/Quality Control (QC)

QA/QC was also performed by Spectrum Analytical. Two field blank samples were taken in each of the two rounds of air sampling. The blanks were analyzed for *cis*- and *trans*-DCP. Standard QC procedures were also performed (e.g., percent recovery) for both air sampling and the wipe sampling events.

RESULTS

Round 1 Air Sampling

On Friday, November 22, 2002, a representative from MDPH/BEHA and from Goldman Environmental Consultants, Inc. (GEC) began the 24-hour air sampling event at the residences, returning the following day to collect the canisters for transport to Spectrum Analytical. The range of final pressures on the canisters when they were collected at the end of the 24-hour sampling period was –11 millimeters mercury (mm Hg) to –2 mm Hg.

Table 1 shows results for the first round of air sampling. The concentrations of total DCP in indoor air for the November 22 – 23 air sampling event ranged from 0.81 ppb to 6.0 ppb. Two of the four residences had at least one indoor air sample that exceeded the ATSDR intermediate exposure MRL of 3 ppb. DCP was not detected in any of the outdoor air samples.

Round 2 Air Sampling

Following this first sampling event, in response to MDPH recommendation, the Hatfield Fire Department used large fans and aired out the houses. The houses were then closed, and a second round of indoor air samples was taken approximately 24 hours later, from Tuesday, November 26, 2002, to Wednesday, November 27, 2002. On November 26, canisters were placed at the same two indoor locations as during the November 22 – 23, 2002, event, with one in the basement and one in the first floor living area. On November 27, the canisters were collected and hand-delivered to Spectrum Analytical for

analysis. The range of final pressures on the canisters when they were collected at the end of the 24-hour sampling period was -6 mm Hg to 0 mm Hg.

Table 2 shows results for the second round of air sampling. The concentrations of total DCP in indoor air for the November 26 – 27 air-sampling event ranged from 0.34 ppb to 2.9 ppb, all below ATSDR health-based guidelines. In all four residences, the maximum concentration of DCP was less than it had been in the first sampling round. CP was not detected in any of the samples.

Wipe Samples

The dust-sampling event took place on Wednesday, December 4, 2002. A representative from MDPH/BEHA and a representative from GEC visited each home to collect the samples. The wipe samples showed no detectable levels of either DCP or CP (see Table 3).

DISCUSSIONS/CONCLUSIONS

Results from the first round of air sampling provided by MDPH/ATSDR indicated that DCP was not found in the outdoor air, but was found in the indoor air in all houses tested (i.e., range: 0.81 – 6.0 ppb). Some of these levels exceeded the intermediate exposure MRL established by ATSDR for DCP in air (i.e., 3 ppb) and approached levels associated with health effects, which could possibly explain the types of health symptoms that were reported soon after the release (such as respiratory and eye irritation). Subsequent testing showed that levels of DCP in indoor air had decreased to below ATSDR's intermediate exposure MRL. Wipe testing of household dust showed no detectable levels of either DCP or CP.

ATSDR requires that one of five conclusion categories be used to summarize findings of health consultations and public health assessments. These categories are: 1) Urgent Public Health Hazard, 2) Public Health Hazard, 3) Indeterminate Public Health Hazard, 4) No Apparent Public Health Hazard, and 5) No Public Health Hazard. A category is selected from site-specific conditions such as the degree of public health hazard based on the presence and duration of human exposure, contaminant concentration, the nature of toxic effects associated with site-related contaminants, presence of physical hazards, and community health concerns.

Based on reports from affected individuals and on the results of the first round of testing conducted for this consultation that demonstrated some levels of DCP exceeding the ATSDR intermediate MRL, ATSDR would consider the incident to have presented a public health hazard during and in the days following the fumigant application. Based on the second (and latest) test results, irritant type symptoms such as those initially reported would not be expected to continue. While sensitive populations, such as the very young or very old, are considered when health guidance levels are developed, there is no published guidance that takes into account individual exposure and health status. For that reason, the ATSDR guidance may not apply to a smaller number of hypersensitive

(allergic) individuals. However, because no detectable levels of either compound were found in house dust in any of the four homes tested, MDPH determined that there did not appear to be continuing exposure risks from sources within the homes. Thus, ATSDR would consider that by the end of this exposure investigation, there was no apparent public health hazard in the affected homes.

RECOMMENDATIONS

MDPH recommends that if individuals continue to experience symptoms, they may want to consider being evaluated clinically by a physician trained in environmental medicine.

MDPH recommends that the Massachusetts Pesticide Board discuss the Hatfield situation in light of regulatory requirements, methods of pesticide exposure prevention, and public notification of pesticide applications that should reduce potential exposure opportunities.

PUBLIC HEALTH ACTION PLAN

On Thursday, December 12, 2002, MDPH held a public availability session in Hatfield, coordinated by the Town Board of Selectmen. Two representatives from MDPH formally presented on activities as they related to the Hatfield investigations including results from all testing as described in this report. An informal Question and Answer period followed the presentation which included a poster display and handouts (see Attachment 2 that was distributed to attendees). The meeting was also attended by the Board of Selectmen and a representative of DFA who responded to questions regarding the agency's enforcement investigation. After hearing all of the information, town officials lifted the voluntary evacuation of homes. MDPH also provided residents with a list of Association of Occupational and Environmental Clinics (AOEC) recognized doctors. MDPH also stated that they would be happy to meet with any family and/or their physician to further address more individual concerns.

MDPH asked the Massachusetts Pesticide Board to review the Hatfield pesticide release. The Board agreed and added Hatfield to its January 2004 meeting agenda.

Table 1: Air Sampling Results (ppb) from November 22 – 23, 2002

House I.D.	A	B	C	D
Inside DCP Max	1.8	3.8	6.0	2.2
Inside DCP Min	1.6	1.7	4.5	0.81
Outside DCP	ND	ND	ND	ND

DCP = dichloropropene
Max = maximum concentration
Min = minimum concentration
ND = not detected

Table 2: Air Sampling Results (ppb) from November 26 – 27, 2002

House I.D.	A	B	C	D
Inside DCP Max	1.4	1.7	2.9	1.1
Inside DCP Min	0.94	1.2	2.0	0.34

DCP = dichloropropene
Max = maximum concentration
Min = minimum concentration
ND = not detected

Table 3: Dust Sampling ($\mu\text{g}/100 \text{ cm}^2$) Results from December 4, 2002

House I.D.	A	B	C	D
DCP	ND	ND	ND	ND
CP	ND	ND	ND	ND

DCP = dichloropropene

CP = chloropicrin

ND = not detected

This document was prepared by the Bureau of Environmental Public Health Assessment of the Massachusetts Department of Public Health. If you have any questions about this document, please contact Suzanne K. Condon, Assistant Commissioner, 7th Floor, 250 Washington Street, Boston, Massachusetts 02108.

Certification

The Exposure Investigation for North Hatfield Road, Hatfield, Massachusetts, was prepared by the Massachusetts Department of Health under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the public health consultation was initiated.

Gail Godfrey
Technical Project Officer
Superfund Site Assessment Branch (SSAB)
ATSDR

The Division of Public Health Assessment and Consultation (DHAC), ATSDR, has reviewed this public health consultation and concurs with its findings.

Roberta Erlwein, MPH
Section Chief, SPS, SSAB, DHAC, ATSDR

REFERENCES

USEPA.1997. Method TO-14A, Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Specially Prepared Canisters With Subsequent Analysis by Gas Chromatography, Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, U.S. Environmental Protection Agency, Cincinnati, OH

USEPA.1999. Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration, OLM0444.2. US Environmental Protection Agency.

USEPA.1996a. Method 8081A, Organochlorine Pesticides by Gas Chromatography, Revision 1. US Environmental Protection Agency.

USEPA.1996b. Method 8260B, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 2. US Environmental Protection Agency.

ATTACHMENT 1

Consent for Environmental Testing
Exposure Investigation
North Hatfield Road, Hatfield, Massachusetts

The Agency for Toxic Substances and Disease Registry (ATSDR) of the Public Health Service, U.S. Department of Health and Human Services, in conjunction with the Massachusetts Department of Public Health, Bureau of Environmental Health Assessment (MDPH/BEHA), is conducting an exposure investigation. Participation in this investigation is voluntary. The authority for collecting information in this investigation is the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC 9604). Your participation in this investigation will help to determine if 1,3-dichloropropene or chloropicrin are in your home and if there is any current risk of exposure to these compounds.

In this investigation, samples of indoor and outdoor air samples will be collected and tested for 1,3-dichloropropene. In addition, wipe samples from surfaces inside your home will be collected and tested for chloropicrin.

Participation

Giving any information is voluntary and you may choose to stop participating at any time, even after signing this consent form. If you choose not to participate, or to stop at any time, there will be no penalty.

Results

MDPH/BEHA and ATSDR will provide you with your individual test results and an explanation of their significance. Individual test results will not be made available to the public, but may be shared with other federal, state or local health or environmental agencies. Confidentiality will be protected according to Federal and State

laws. Aggregate test results will likely be released for public information purposes.

After the exposure investigation is completed, MDPH/BEHA and ATSDR will prepare a written report that discusses the findings. The report will not have any personal information, like your name, address, or phone number.

Participant Consent

I have read the description of this exposure investigation. All of my questions have been satisfactorily answered. I voluntarily request that ATSDR test indoor and outdoor air, as well as indoor wipe samples from my property.

Name (print)

Address

Telephone number

Signature

Date

Witness

Date

ATTACHMENT 2



The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
250 Washington Street, Boston, MA 02108-4619

JANE SWIFT
GOVERNOR

ROBERT P. GITTENS
SECRETARY

HOWARD K. KOH, MD, MPH
COMMISSIONER

Exposure Investigation
Hatfield, Massachusetts

Questions and Answers

Bureau of Environmental Health Assessment
Massachusetts Department of Public Health

December 12, 2002

1. Q: Why is MDPH involved in addressing environmental health issues in Hatfield?
 - A. On November 13, 2002, MDPH was notified by the DFA that an incident occurred on November 8, 2002. Residents of the North Hatfield Rod area expressed exposure concerns with regard to the application of a fumigant to a tobacco field on November 8th. Some residents in the adjacent residential areas reported symptoms and had concerns about their families' health. In order to help address these concerns, MDPH participated in a conference call and offered assistance to the town of Hatfield.
2. Q: What chemicals, used in treating the tobacco field, may I have been exposed to?
 - A. The chemicals of concern in the material that was used to fumigate the field were chloropicrin and 1,3-dichloropropene.
3. Q: How might exposure have occurred?
 - A. While all the information is not available yet regarding the specific nature of how these chemicals escaped from the field where they were introduced into the soil, we do know based on the various test results available, that the material did evaporate or volatilize into the air following the field treatment and reached residential neighborhoods via ambient air. We also know that these compounds were measured in indoor air in some of the homes near the area of application.

4. Q: What are the health concerns associated with these chemicals?
 - A. Both of these compounds are very strong irritants. Irritant effects would include such symptoms as runny eyes, sore throat, coughing, tightness in the chest, difficulty breathing, triggering of asthma or aggravation of other respiratory conditions. We believe that the irritant effects are the most important health concerns for an acute event such as this.

5. Q: What testing did MDPH conduct in response to concerns related to the fumigant application?
 - A. Based on the initial information available to MDPH (i.e., exposure and testing information, health complaints), we were able to obtain permission to access federal funds from the U.S. Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is the primary environmental health agency at the federal level and is based in Atlanta. MDPH hired outside, independent environmental testing firms (i.e., Goldman Environmental of Braintree, MA, for the sample collection; Spectrum Analytical of Agawam, MA, for the laboratory analysis) to conduct two rounds of air sampling at four houses that were identified as being of primary concern either due to proximity to the field or to reported health effects (e.g., asthma) to MDPH.

6. Q: What was the specific nature of the testing conducted by MDPH?
 - A. In both rounds of sampling, indoor air samples were collected over a 24-hour period and analyzed for 1,3-dichloropropene, which is the more volatile of the two compounds, and hence more likely to be found in the air. Outdoor samples collected in the first round allowed us to see whether there were still detectable levels of 1,3-dichloropropene in the air that could possibly be from the field. Following the air sampling, wipe or dust samples were taken in the homes to determine whether there were residues of these chemicals in the house dust.

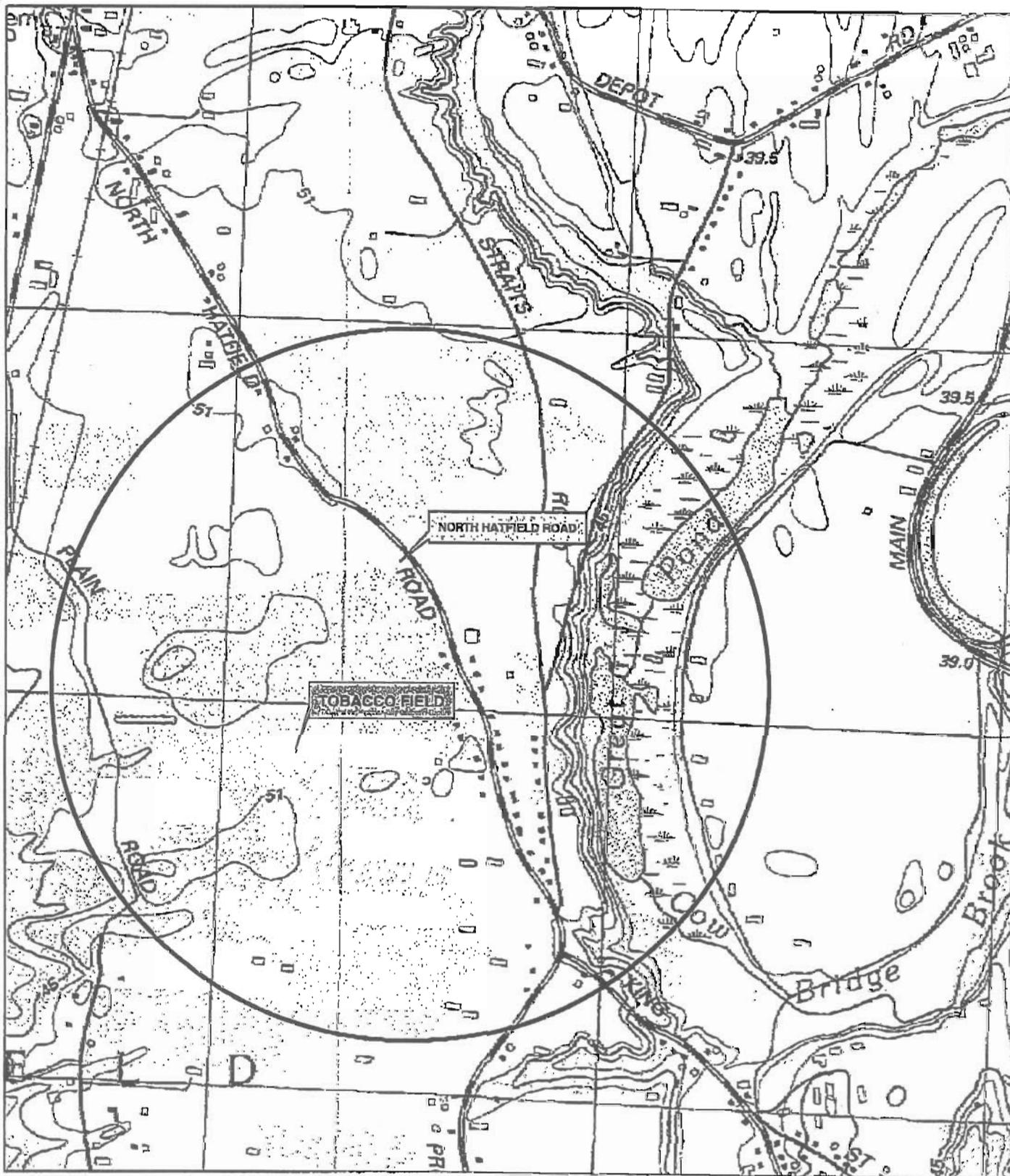
7. Q: What were the results?
 - A. Results from the first round indicated that 1,3-dichloropropene was not found in the outdoor air, but was found in the indoor air in all houses tested (i.e., range: 0.81 – 6.0 ppb). Some of these levels exceeded the federal health guidance level established by ATSDR (i.e., 3 ppb). Following this first sampling event, the Hatfield Fire Department used large fans and aired out the houses. A second round of indoor air samples was taken 24 hours later. The second round found that all results had decreased, and that all samples were below federal health guidance levels. Wipe testing of household dust showed no detectable levels of either 1,3-dichloropropene or chloropicrin.

8. Q: What do the results of the testing mean?
- A. With regard to the concentrations, we applied standard ATSDR guidance to evaluate the potential for health concerns (e.g., respiratory irritation) based on an intermediate-duration exposure (i.e., 15 – 365 days). Because the results of the air testing showed that levels had decreased to below the health based guidance level, we would not expect irritant type symptoms to continue. However, while sensitive populations (e.g., very young or very old individuals) are taken into consideration when health guidance levels are developed, there is no published guidance that can take into account individual health status as it relates to levels of exposure. For that reason, the ATSDR guidance may not apply to a smaller number of hypersensitive (allergic) individuals. That said, because no detectable levels of either compound were found in house dust in any of the four homes tested, we can see that there does not appear to be continuing exposure risks from sources within the homes.
9. Q: Should we expect the chemicals to be in the air when the weather becomes warmer?
- A. At this point we would not expect there to be on-going exposure concerns. This is due to several factors. First, quite a bit of time has elapsed since the field was treated on November 8, 2002. Secondly, air testing done by a variety of parties has shown decreasing concentrations since immediately after the initial incident. The most recent outdoor testing did not find detectable levels of contaminants of concern. Indoor levels are now all below health guidance levels, and no 1,3-dichloropropene or chloropicrin was found in the house dust/wipes. Finally, in an outside environment there are many forces of nature (e.g., sunlight, rain, wind, microbes, temperature etc.) acting on the chemicals. Thus, based on all of these considerations we would not expect there to be ongoing exposure concerns. However, we would be willing to further discuss any of these exposure concerns as part of the review that is being undertaken by the regulatory agencies.
10. Q: What about people who have experienced symptoms and are concerned about returning to the area?
- A. Given that levels of contamination based on the most recent testing are either below federal health based guidance levels or not detectable, it is unlikely that people will continue to experience symptoms.
11. Q: What if my family is still experiencing symptoms?
- A. There are physicians trained in environmental medicine across Massachusetts. MDPH can provide a list of Association of Occupational and Environmental Clinics (AOEC) recognized doctors. These are physicians who are specialists in occupational and environmental medicine and with a referral that you or your

primary care doctor can consult if you believe you or your family members are experiencing symptoms that you feel may be related to exposure to the fumigant.

12. Q: How can we be assured that this won't happen again in the future? Is there anything I can do to be notified as to when spraying will occur?
- A. MDPH believes it is very important for all parties to have follow-up discussions on how to prevent such an incident from occurring in the future. The investigation being completed by the regulatory agency should provide important information that can help inform the planning and/or notification process for preventing further problems. Mechanisms for notification about when spraying will occur is one aspect of the future discussion that should take place.
13. Q: Is MDPH planning any follow-up public health regulatory activities based on the Hatfield incident?
- A. Yes, MDPH will ask the Massachusetts Pesticide Board to discuss the Hatfield situation in light of regulatory requirements, methods of prevention, and notification.
14. Q: Who can I call if I have more questions or concerns?
- A. Staff at the Bureau of Environmental Health Assessment at the Department of Public Health would encourage anyone who wishes to discuss health concerns to call us directly at 1-617-624-5757. Also, if any residents are concerned about continuing symptoms, MDPH will provide them with the Association for Occupational and Environmental Health Clinics (AOEC) referral list for doctors in Massachusetts who specialize in evaluating health in relation to environmental exposures. MDPH staff will provide technical information to health care providers upon request to assist with such efforts.

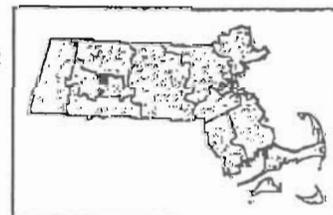
HatfieldQ&A letterhead



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Figure 1



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